POLICY BRIEF
Mujer Saludable-Promotora: Addressing Sexual and Reproductive Health Needs to Reduce Adolescent Pregnancy on the U.S.-Mexico Border

Principal Investigators:

1. Rosi Andrade, PhD; University of Arizona's Southwest Institute for Research on Women. rosia@email.arizona.edu
2. Martha Miker Palafox, PhD; El Colegio de la Frontera Norte. mmiker@colef.mx

Co-Investigator:

1. Elizabeth Salerno Valdez, PhD, MPH University of Arizona, esalernovald@umass.edu (current)

BACKGROUND

Binational partnerships founded in community based participatory research (CBPR) principles can help remediate identified health inequities in U.S.-Mexico border communities. Severe poverty and lack of basic health services in the region, combined with unique socio-cultural factors, often result in poor health indicators on both sides of the border (Ruiz-Beltran & Kamau, 2001). Initiatives on both sides of the U.S.-Mexico border continue to fund, promote, and strengthen binational collaborations. Especially relevant are CBPR-based approaches, to address health inequities in the border region through research and teaching. An example is that of the University of California Berkeley's Research Program on Migration and Health (PIMSA for its Spanish acronym) (The California Endowment) and Mexico's Consejo Nacional de Ciencia y Tecnología (CONACYT)-funded La Red Temática Binacional en Salud Fronteriza / Binational Thematic Network (Instituto Nacional de Tecnología). The academic institutions and governmental organizations behind these binational initiatives recognize the symbiotic relationship of U.S.-Mexico border communities. Often shared across borders are the culture, economy, history, and social ties within the border region. Notwithstanding the political and physical boundary of the border fence, community members living on opposite sides of the border cross daily for work, school and social events. Binational research can expand our understanding of border health and offers critical insights into the processes affecting health outcomes in both the U.S. and Mexico (Handley & Sudhinaraset, 2017). However, despite an identified need for binational approaches, there is a paucity of literature on how to form and sustain such binational research collaborations to address health disparities in the border region.

One such health indicator, of particular interest in this study, is the high rate of adolescent pregnancy among border residents (Health and Human Services Administration, 2009; McDonald, Mojarro, Sutton, & Ventura, 2013). There are national initiatives, in both the U.S. and Mexico, to decrease these rates (Department of Health and Human Services, 2013; Programa de Acción Específico, 2008). Yet adolescents living on either side of the border continue to experience higher birth rates compared to non-border adolescents in both countries (73.8/1000 women ages 15-19 vs. 64.6 in the U.S.; 86.7/1000 vs. 72.5 in Mexico, respectively) (Mojarro et al.). Recognized regionally as "los dos Nogales," Nogales, Arizona is located directly across the U.S.-Mexico border from Nogales, Sonora, Mexico (MX). The state of Sonora experiences one of the highest rates of adolescent births in Mexico, with one in five births attributable to adolescent mothers (10,689 annual adolescent births out of 46,485 total annual births) (Martha, 2016). Nogales, MX with an average rate of 1,000 annual births attributable to adolescent

mothers, accounts for 10% of adolescent births in the state of Sonora (10,689 annual adolescent births), despite comprising only 7% of the state's population (Martha, 2016).

METHODS

Setting

Focused on the potential of cross-border collaboration and CBPR, the Mujer Saludable-Promotora project sought to bring together effective interventions such as the Promotora model and the Mujer Saludable curriculum in the context of the mother-adolescent daughter dyads' exploration of reproductive health. The project took place in Luis Donaldo Colosio, a young *colonia* (unincorporated neighborhood founded by community members some 15 years prior) in Nogales, MX. Originally established to live outside the congestion of the inner city, the colonia is now overcrowded and experiences related social issues including high rates of adolescent pregnancy, limited access to health care and other public services, and high rates of violence (Miker & Alejandro, 2012). Most residents of this *colonia* are recent immigrants (within the last 10 years) from other parts of Mexico, who are primarily engaged in the *maquiladora*, or factory industry (Miker & Alejandro, 2012). Nogales is well suited for the CBPR and *Promotora*-based approaches for two reasons. CBPR is not new to Nogales, employed successfully in a variety of community-based and healthcare settings to address a diversity of health issues and effect policy change (Cohen & Ingram, 2005; Ingram, Piper, Kunz, Navarro et al., 2012). The local municipality of Nogales employs an existing network of *promotoras*.

Process: Developing a Binational CBPR Partnership

According to Israel and colleagues, CBPR is a collaborative partnership approach to research that equitably involves community members, organizational representatives, and researchers in all aspects of the research process (Israel, Schulz, Parker & Becker, 1998; Israel, Schulz, Parker, & Becker, 2001). Partners contribute their expertise and share responsibilities and ownership of the research. This collaborative process then increases the understanding of a given phenomenon, incorporated into action to enhance the health and well-being of community members (Israel et al., 1998; Israel et al., 2001).

The project relied on existing *promotoras* as community partners. The *promotora* or community health worker, as defined by the American Public Health Association (APHA), is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served (American Public Health Association, 2016). The *promotora* can serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality of and cultural competence in service delivery (APHA, 2016).

The academic partners, the University of Arizona's Southwest Institute for Research on Women (UA-SIROW) and *El Colegio de La Frontera Norte,* the College of the Northern Border (El COLEF) met while attending the Binational Collaboration for Healthy Communities in the Arizona-Sonora Border Region Network. The academic partners developed a proposal to embark in Mujer Saludable-Promotora, funded by the University of California Berkeley's PIMSA program to address rising adolescent pregnancy rates in Nogales, MX (The California Endowment).

Existing professional networks, infrastructure, and community relationships contributed to the development of mutual trust, respect and commitment to the project. UA-SIROW and El COLEF offered complementary skills and resources to the project. UA-SIROW is a research institute whose mission is to improve the lives of women and girls – particularly those living in the

Southwest U.S. – through inter-disciplinary and inter-institutional research and action projects. El COLEF is a Mexican institute of higher education, specializing in teaching and research in the social sciences with a focus on border issues. UA-SIROW and El COLEF have reputable histories and extensive experience using CBPR and *Promotora*-based approaches. El COLEF engaged the Coordinator of Community Centers (CCC) for the Municipality of Nogales, MX (a governmental agency, with whom El COLEF has a long-standing relationship) to join the research team as a community partner. The CCC supervises the *promotoras de desarrollo social* (social development community health workers) and oversees access to the community centers. The CCC's role was to identify and discuss resources and recruitment of *promotoras*, as well as lend her unique knowledge to the curriculum adaptation in the next phase of the project. Together, the project partners worked to develop the human subjects' protection program institutional review board approval for both sides of the border. The adaptation of the Mujer Saludable intervention incorporated the tenets of CBPR to establish a collaborative between partners in the pursuit of mutually agreed goals (i.e., improve dialogue between mother and daughter regarding reproductive health, identify access to resources, and familiarize and train promotoras on the theory and methodology of the Mujer Saludable-Promotora). A series of workshops dedicated to this purpose while also make cultural or contextual adaptations prior and during the Promotora training workshops.

Qualitative Data Collection

The team facilitated a series of ten qualitative interviews that explored perceived factors influencing adolescent pregnancy in the Sonoran city of Nogales-MX. A binational research team from the U.S. and México interviewed ten key informants (community health workers, health care providers, community members) to explore: (1) Local reproductive health care needs; (2) Perceived barriers and solutions to accessing reproductive health care on the border; and (3) How these factors influence adolescent pregnancy rates on the border.

Curriculum Adaptation

To recruit Community Advisory Board (CAB) members, the partners facilitated an informational session open to the *colonia* at the local community center. Sixteen women and their adolescent daughters attended the session and were extremely receptive to the project. Participants reported no comprehensive sexual and reproductive health education program were implemented in their community, and expressed an urgent need for this information. The CAB consisted of the two academic partners from UA-SIROW, two academic partners from EL COLEF, the CCC, five local *promotoras de desarrollo social*, and three women living in the *colonia*.

CAB meetings centered on the adaptation of the *Mujer Saludable* curriculum, a sexual health education curriculum developed by UA-SIROW for Latina immigrant women living in Tucson, Arizona (Israel et al, 1998). The weekly sessions held over the course of three months, consisted of an introductory session and five adaptation and training sessions. The academic partners delivered the existing curriculum to the other CAB members and requested community feedback after each session, a process described in a forthcoming manuscript. Curriculum adaptation and expansion integrated knowledge and action of mutual benefits to all project partners. In order to sustain the crucial involvement of the community members in the CAB and in the adaptation process, CAB meetings were held in the *Colonia's* community center (e.g., at agreed-upon dates and times) to address potential barriers (e.g., time, transportation, childcare). The community center is located in the *colonia* and accessible by foot or car. CAB members were welcome to bring their children to all meetings.

Research Findings
Researchers conducted qualitative interviews with 11 key informants in Nogales, MX. Demographic details in Table 1, describe informants as: 1) four female parents, two are adolescent mothers; 2) three physicians, 1 female, two males; 3) three community health workers, all female; and 4) one adolescent female.

Table 1. Key Informant Characteristics*

	Role	Gender	Age	Age at first pregnancy
1.	Adolescent Parent	female	20	15
2.	Adolescent Parent	female	16	14
3.	Adolescent	female	16	N/A
4.	Parent	female	40	17
5.	Parent	female	37	19
6.	Physician	male		
7.	Physician	female		
8.	Physician	male		
9.	CHW	female		
10.	CHW	female		
11.	CHW	female		

* All key informants live and/or work in the community of Luis Donaldo Colosio

The following are summaries taken from the interviews and adaptation sessions:

Sexual and reproductive health issues in the community:
- High rates of STIs, especially at young ages
  - HPV
  - Gonorrhea
  - Syphilis
- Cervical cancer
- Adolescent Pregnancy
- Sexual coercion of minors by older men

Perceived barriers to accessing reproductive health care on the border
Socioeconomic barriers
- Low income: Parents work long hours, multiple jobs, consequently children and adolescents often have little supervision or lack of quality time with their parents.
- Lack of education.
- Lack of health insurance: The community of Luis Donaldo Colosio has a large immigrant population from southern Mexico and Central America, who are largely unskilled, without documentation, and experience high unemployment or participate in the informal economy, which provides no health insurance benefits.
- Lack of community-based prevention programming: Lack of comprehensive, in-depth education provided by the state.
- Lack of transportation: Many women live in remote, isolated parts of the city without access to well-maintained roads and/or public transportation. This poses significant barriers to accessing local clinics, hospitals, etc.
- Lack of access to health care, overburdened health care system, high cost of gynecological services: Those individuals covered by the state-funded health insurance, Seguro Popular, reportedly must wait long periods to see a specialist, which poses significant risks to women with infection and complex reproductive health conditions.

Seguro Popular does not cover HPV treatment, however relies on private donors. Even when women access Seguro Popular services, all key informants reported that education about STI prevention and pregnancy prevention is superficial. Many times, they simply ask women what type of contraception they want, without providing any subsequent education.

Sociocultural barriers: *"Me Da Vergüenza" I feel embarrassed*
Sexual and reproductive health care is a taboo topic and not discussed openly.

- Veiled messages: "take care of yourself" or "don't do too much." Supplant sexual and reproductive health topics.
- All women key informants reported that they did not learn about menstruation from their parents. Some reported that they heard about it from friends, school, or television, but all argued that none of these sources prepared them adequately for their first period.
- Key informants reported that they knew little about healthy relationships, consensual sex, pregnancy prevention, or STI prevention prior to their first sexual experience.
- Parents do not talk to their children about sex, largely because they do not know what to tell them due to their own lack of education/information about the topic.
    - One community health worker stated that she had heard parents tell their children to seek that information from their teacher or school, effectively closing communication on the topic and transferring the responsibility to an already burdened system.

Impact of Taboos
Base on key informants professional and personal experiences, taboos lead to a lack of communication, lack of information, and lack of knowledge about sexual and reproductive health, consequences and prevention strategies, as well as lack of knowledge about available health care services.

- CHWS reported that women receive the STI diagnosis while seeking prenatal care in pregnancy.
- It is not common practice to seek gynecological care, including pap smears.
- Mothers reported that prior to their first pregnancy, they did not know where to go for STI screening or contraception. They only began using contraception after their first unplanned pregnancy.
- Women do not seek health care in a timely fashion, which can lead to untreated infections.
    - Two community health workers reported experiences of patients with severe complications because they waited too long prior to receiving care. One participant reported losing a late term pregnancy due to lack of medical attention for an advanced STI.

Perceived facilitators to accessing reproductive health care on the border

- Existing programs where sexual and reproductive health care is provided:
    - Centro de Salud
    - Foundations
    - Private clinics
    - Hospital General

- Existing programs where sexual and reproductive health education are provided:

- Próspera- government social assistance program to target poverty. It provides cash assistance in exchange for participation in health education, regular school attendance, nutrition support, and health care visits.
- School-based education programs.
- Desarrollo Integral de la Familia (DIF).
- On the job training (at maquiladoras/factories).
- Community health workers provide community-based education and connection to resources.

Still others reported not being aware of any existing programs.

Curriculum Adaptation Results: Mujer Saludable-Promotora

Based on the qualitative findings, the CAB conducted surface and deep level cultural adaptation of the curriculum, as follows.

Surface level adaptations:

- Provide information about resources where sexual and reproductive health care is provided
- Inclusion of local jargon
- Inclusion of local issues (interpersonal violence)

Deep level cultural adaptation:

- Intergenerational approach (parent-child communication), including:
  • role play
  • increased communication
  • decreased taboos
  • increased gender equity
  • increased health care engagement

Policy Recommendations

- Need for funding for culturally and regionally appropriate sexual education programming for youth.
- Need for increased public awareness campaigns of the availability of sexual and reproductive health care.
- Need for an intergenerational approach to increasing communication, decreasing taboos, and increasing health care engagement and access for sexual and reproductive health care.
  - Focus on parent-child communication

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