

Characteristics of Community Change Agents to Promote Equitable Health Services and Combat Harmful Gender Norms among Climate-Affected Communities in Sindh

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Abstract

The province of Sindh, Pakistan, faces heightened vulnerability to natural disasters due to its low-lying location in the flood-prone Indus floodplain. Pathfinder International implemented the Surmi project aimed at strengthening the resilience to climate shocks and emergencies by female volunteers called "Climate Champions" (CC) and trained them to support and provide women and girls with the tools, knowledge, and resources they need to advocate for equitable health services and to combat harmful gender norms, including gender-based violence. A knowledge, attitude, and beliefs survey was conducted among 600 CCs aged 18-50 years residing in five intervention districts, including Thatta, Badin, Sanghar, Umer Kot, and Kamber Shahdad Kot. The results show that climate awareness is moderate among CC volunteers. Self-efficacy was strong within the group; 57% showed a fair or firm level of confidence in achieving life goals despite challenges. Unfortunately, strong gender norms remain prevalent among CCs; close to three-quarters (74%) had limited or no confidence in their ability to refuse a marriage that they did not desire. The qualitative data results show that CCs can be the change agents in climate-affected communities.

Keywords: Climate Champions, gender, innovations-based adaptation, quantitative survey, Gender-responsive infrastructure

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1. INTRODUCTION

Pakistan is in the top ten countries adversely affected by climate change as per the Global Climate Risk Index due to its geographical location around the equator – the region most affected by climate change (UNFAO, 2021). The current climatology and seasonal forecast suggest that the drought, torrential rain, and flood situation in Sindh will worsen in the future. This has already and will continue to impact agriculture and livestock in Sindh's districts negatively. The latest Integrated Phase Classification acute food insecurity analysis by the

Food and Agriculture Organization classified most of the Sindh districts in either stressed or crisis phases at present and shortly. Food insecurity due to climate shifts would directly impact the overall well-being (health, livelihood, education) of the population at risk (Reliefweb, 2021).

In addition to already existing challenges faced by Pakistan, there is the unavailability of clean drinking water and sanitation, where around 70% of the households still consume bacterially contaminated water. At the same time, 25 million people still practice open defecation (UNICEF, 2022). These introduce an added burden to the health and nutrition situation of the country, as they are interrelated. Since women are primarily responsible for familial matters in Pakistan, the health of mother and child is intertwined and is affected by women's ability and liberty to make an informed decision and seek help. With the shocks and risks associated with climate and disease, the health landscape of Pakistan can further deteriorate, especially for women, because of not being able to speak up or decide on the proper treatment for their own and their children's health.

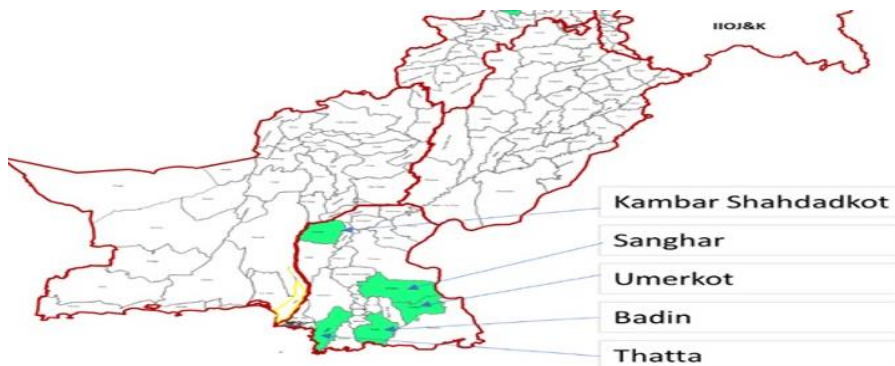
Pathfinder's Initiative on Climate and Health through Women-Led Climate Resilience (WLCR) Project

According to the United Nations Population Fund (UNFPA, 2022), 650,000 pregnant women and young girls have been affected by the 2022 floods, and approximately 73,000 women among them were expected to give birth. Climate change is increasing the vulnerability of women and girls and expanding the gender gap. Building upon Pathfinder's experience in climate programming through the *Dharti Ammar* project where women and girls' resilience to drought was increased through systems and practices that promote climate adaptive practices (including demand and access to SRH services), Pathfinder embarked on implementing a four-year project titled, 'Advancing the Leadership of Women and Girls toward Better Health and Climate Change Resilience'. This Takeda Pharmaceuticals-funded WLCR project, led by Pathfinder, aims to ensure that women and girls in low-resource settings have reliable access to quality health services, including antenatal care, institutional delivery, postnatal care, and family planning services. Additionally, it seeks to ensure that communities and health systems are resilient to emergency shocks, particularly drought. The project targets families and individuals through improved community health workers and health facilities, and would develop an integrated framework among multiple stakeholders for collaborative learning and informed decision-making. Overall, the project emphasizes women as change agents, strengthening their knowledge and access to equitable

quality health services alongside building community resilience to future shocks.

Pathfinder, in partnership with the government of Sindh, is implementing a Women-led Climate Resilience (WLCR) project in five districts of Sindh: (1) *Badin*, (2) *Kambar Shahdadkot*, (3) *Sanghar*, (4) *Thatta*, and (5) *Umerkot* (Figure 1).

Figure 1: Project Area in Sindh Map



Female climate champions were purposively selected based on specific criteria: being residents of the project area, having a minimum education of eight years of schooling, aged between 18 and 50 years, preferably married, having family support to perform assigned duties, willingness to conduct house-to-house visits, willingness to attend training and stakeholder meetings, and willingness to accompany referrals when applicable.

Based on the above criteria, 600 climate champions (120 from each district) were selected for four years of the project. The TAKEDA *Surmi* project is on a mission to empower climate champions by enhancing their skills and knowledge in various critical areas. These areas include Disaster Risk Reduction (DRR), Sexual and Reproductive Health and Rights (SRHR), Family Planning (FP), the impact of climate change, and gender-based violence (GBV), with a particular focus on preventing child marriages.

The *Surmi* team is actively connecting these climate champions with government officials through Multisectoral Committee (MSC) meetings. In these forums, the climate champions have the opportunity to voice the concerns of their communities to relevant stakeholders. Climate champions will receive training on Gender sensitivity, climate, and health to work in their community, raising awareness on climate and health. They will also influence the community through community meetings, individual counseling, and other

means to reduce repressive gender norms towards women and girls. Once trained, these champions will return to their communities to share their knowledge. They will educate both men and women on these vital topics, ensure referrals to hospitals for necessary services, and serve as representatives in MSC meetings to continue advocating for their communities' needs.

After onboarding the Climate Champions, a baseline study was conducted among 600 climate champions in five intervention districts in Sindh Province to estimate their knowledge, attitudes, and behaviors towards climate change and drought, adaptation and mitigation to climate change, maternal healthcare, family planning (FP) and seeking sexual and reproductive health (SRH) services during crisis. This paper describes their knowledge on the above-mentioned areas with background characteristics of climate champions in the Pathfinder WLCR project to promote equitable health services and combat harmful gender norms in climate-affected communities in Sindh province.

2. METHOD AND MATERIALS

As a part of the project '*Surmi*' in Pakistan, a Baseline study was conducted among all 600 recruited climate champions through a structured questionnaire in five project intervention districts of Sindh province, namely *Kambar Shahdadkot, Sanghar, Umerkot, Badin, and Thatta*. The number of climate champions is equally distributed among all five districts, 120 each.

Data was collected through a structured questionnaire which was divided into different sections covering the demographics of respondents, knowledge of existing health services, self-efficacy, agency, and knowledge attitudes. The questionnaire was developed and deployed using the Kobo Toolbox, a digital data collection platform that helps maintain data quality and enables real-time validation. Trained female enumerators conducted the data collection, obtaining informed consent from each participant before proceeding with interviews.

Constant data quality assurance was the key to obtaining accurate data in the field, and the MEL team ensured data quality through regular checks and daily reviews of uploaded forms on the Kobo Toolbox on a regular basis, and monitoring personnel made systematic visits to the field to ensure data reliability.

Ethical approval for the study was obtained from Institutional Review Boards (IRB) in accordance with Pathfinder International's policy, ensuring that the research adhered to ethical standards and protected the rights and well-being of the participants. The study obtained IRB certificates from the National

Bioethics Committee for Research on November 14, 2023. Data was exported from the Kobo Toolbox into Microsoft Excel for cleaning and then imported into SPSS for analysis, with results presented in tables, graphs, and comprehensive narratives for the final report.

This paper employs simple statistical methods to analyze the data through descriptive analysis, utilizing a Likert scale (in ordinal scale on likability/agreement) based on the responses from the study participants. This analysis is conducted at both the aggregate and disaggregated levels, specifically at the project level and the district level, respectively, to demonstrate the diversity of respondents and their environmental impact. To estimate the economic status of the respondent a self-reported Likert scale where the question was asked on their perceived current economic status on a five-point scale (1 as poor to 5 as rich). This was not assessed through any other methods and considered as perceived/reported economic status.

2.1 Key Survey Findings

There are 120 *Surmi* climate champions who were recruited from the community from each project district, which constituted a pool of 600 climate champions for the project. The sociodemographic characteristics of the *Surmi* Climate Champions are diverse across the districts (Table 1). When looking at all Climate Champions surveyed, the majority were adults 25 years and older (69%) who had a secondary education level or higher (71%) and were married (81%). Half of Climate Champions had three or more living children, and the majority were in the middle and lower steps of the socioeconomic ladder (86%). Similar sociodemographic characteristics were seen across the five project districts. However, *Umer Kot* had the highest proportion of youth climate champions (45%). In addition, *Thatta* had the highest proportion of study participants with only a primary education level (30%). Finally, *Thatta* and *Badin* had the highest proportion of climate champions among the middle and lower socioeconomic steps, at 96% and 95%, respectively.

Table 2 presents climate change awareness among the *Surmi* Climate Champions. Among all surveyed climate champions, most agreed that permanent changes in the environment were consequences of global warming (67%) and believed that floods would occur if the world's temperature increased (62%). Scientific understanding of climate change was quite strong in this group: close to three-quarters agreed that CO₂ emissions by humans are caused by using fossil fuels (73%) and that N₂O from gasoline or engines used in vehicles increases global warming (72%).

Table 1: Percentage of Surmi Climate Champions by their Sociodemographic Characteristics

Sociodemographic characteristics	Badin	Kambar Shahdad Kot	Sanghar	Thatta	Umer Kot
Age (in completed years)					
<25 years (youth)	28	33	18	27	45
25-34 years (young adults)	36	31	39	38	33
35+ years (adults)	36	37	43	35	23
Educational level					
Primary	26	33	16	39	24
Secondary	48	33	63	43	49
Higher Secondary	18	21	10	11	22
University	8	13	11	8	5
Marital Status					
Never married	18	29	12	14	18
Currently Married	82	71	85	86	82
Divorced	0	0	1	0	1
Widow	0	0	3	0	0
No. of Living Children					
0	9	6	12	10	8
1	12	14	19	7	16
2	18	11	16	19	10
3	21	20	19	16	15
4+	39	49	34	49	51
Economic Status					
Step 1 (Poorest)	8	13	11	14	1
Step 2	59	30	28	38	40
Step 3	27	39	38	43	44
Step 4	6	14	18	4	15
Step 5 (Richest)	0	3	5	1	0
Total No. of Climate Champion	120	120	120	120	120

Notably, most study participants would like to improve their knowledge of combating climate change (83%). Similar climate change awareness was observed among climate champions across the five project districts; however, study participants from the Thatta district appear to have a higher proportion (above the total average) who agreed with the different climate change statements.

Table 2: Percentage of *Surmi* Climate Champions Having Climate Change Awareness

Can you tell me if you agree with these statements*:	<i>Badin</i>	<i>Kambar Shahdad Kot</i>	<i>Sanghar</i>	<i>Thatta</i>	<i>Umer Kot</i>	Total
Permanent changes in the environment - consequences of global warming	68	41	69	91	67	67
Floods will occur if the temperature of the world's temperature increases	58	64	43	82	64	62
CO2 emissions by humans are caused by the use of fossil fuels	69	53	68	93	84	73
N2O from gasoline or engines used in vehicles increases global warming	54	67	67	91	84	73
I would like to improve my knowledge on combating climate change	84	83	78	98	73	83
Total No. of Climate Champions	120	120	120	120	120	600

*Study participants who respond with agree and strongly agree

Table 3 presents self-efficacy among the *Surmi* Climate Champions. Among all the climate champions surveyed, most were confident in achieving life goals despite challenges (58%), speaking about women's and girls' problems in the community (61%), and working for money if they wanted to (64%). About half of the study participants were confident in achieving the desired education (51%) and accessing healthcare if ill (54%). A smaller

proportion of Climate Champions were confident about accessing psychosocial support if needed (39%), leaving home if needed without permission (35%), refusing marriage if not desired (28%), and working for money if the family objected (43%). Similar self-efficacy levels were observed among climate champions across the five project districts; however, study participants from the *Thatta* district appear to have a higher proportion (above the total average) who were confident in all self-efficacy statements.

Table 4 presents agency among the ` Climate Champions. Among all surveyed climate champions, a slight majority were confident in deciding their daily schedules (63%), their job or paid work (56%), and attending community meetings (59%). Close to half of the study participants were confident in deciding whether to visit friends or family (47%) or attend a social gathering within the community (49%). About one-third were optimistic in their ability to decide on agricultural work (34%). Similar agency levels were observed among climate champions across the five project districts; however, study participants from the *Thatta* district appear to have a higher proportion (above the total average) who were confident with most of the agency statements.

Table 5 presents knowledge of select health topics among the *Surmi* Climate Champions. Among all surveyed climate champions, the great majority were quite knowledgeable about statements related to reproductive health and family planning – most have heard about the term menstruation (95%), injectable (88%), implants (89%), IUDs (83%), and know where they can obtain family planning methods (86%). Topics related to sexually transmitted infections (STIs) were not as well known within this group – less than half have heard about HIV/AIDS (46%) and the term STIs (44%). Similar health knowledge was seen among climate champions across the 5 project districts; however, study participants from the districts of *Thatta* and *Umer Kot* seem to have a higher proportion (above the total average) who were more knowledgeable about the topics related to reproductive health and family planning.

Table 6 presents family planning attitudes and beliefs among the *Surmi* Climate Champions. Among all the climate champions surveyed, the great majority agreed that using contraceptives is much more desirable than having an abortion (64%) and that couples should talk about contraception before intercourse (73%). Less than half of study participants believe that it is wrong to use contraceptives (41%) and would feel embarrassed discussing contraception with friends (46%). A minority of climate champions agreed that contraceptives encourage promiscuity (33%), reduce sex drive (20%), and are

difficult to obtain (38%). Similar family planning attitudes and beliefs were seen among climate champions across the 5 project districts; however, half of study participants from the district of *Sanghar* believe that it is wrong to use contraceptives (50%) while a slight majority of study participants from the district of *Umer Kot* believe that contraceptives are difficult to obtain (57%).

Table 3: Percentage of Surmi Climate Champions who have shown Self-Efficacy

Can you tell me how confident you are about*:	<i>Badin</i>	<i>Kambar Shahdad Kot</i>	<i>Sanghar</i>	<i>Thatta</i>	<i>Umer Kot</i>	Total
Achieving life goals despite challenges	43	56	51	87	55	58
Achieving the desired education	36	54	48	70	50	52
Accessing healthcare if ill	41	49	58	63	64	55
Accessing psycho-social support if needed	28	42	47	46	37	40
Leaving home if needed without permission	29	25	48	45	32	36
Speaking about women and girls' problems in the community	48	58	59	86	54	61
Refusing marriage if not desired	24	28	23	37	29	28
Working for money or in income generation if wanted	54	67	57	79	65	64
Working for money or in income generation if the family objected	52	27	46	57	38	44
Total No. of Climate Champion	120	120	120	120	120	600

* Study participants that respond with fairly confident and strongly confident

Community Change Agent and Gender Norms

Table 4: Percentage of *Surmi* Climate Champions Agency

To what extent do you decide on the following activities*	<i>Badin</i>	<i>Kambar Shahdad Kot</i>	<i>Sanghar</i>	<i>Thatta</i>	<i>Umer Kot</i>	Total
Your daily schedule	46	53	69	78	74	64
Your agricultural activities	24	34	44	23	48	35
Your job or other paid work	45	52	52	77	57	56
Visiting a friend or family member	38	56	53	49	42	48
Attending a social gathering within the community	35	68	48	50	48	50
Attending a community meeting	46	67	53	75	58	60
Total No. of Climate Champion	120	120	120	120	120	600

**Study participants that respond with medium extent and high extent*

Table 5: Percentage of *Surmi* Climate Champions who have shown Knowledge of Health Topics

Have you heard of / do you know about:	<i>Badin</i>	<i>Kambar Shahdad Kot</i>	<i>Sanghar</i>	<i>Thatta</i>	<i>Umer Kot</i>	Total
The term "menstruation" or "having one's period"	99	98	88	100	93	96
HIV or AIDS	43	37	54	50	49	47
STI	33	23	48	58	60	45
Injectables or Depo-Provera	86	73	92	99	93	88
Implants	89	71	93	97	96	89
IUD	82	65	88	89	91	83
A place where you can obtain a method of family planning	88	77	83	96	90	87
Total No. of Climate Champion	120	120	120	120	120	600

Table 6: Percentage of *Surmi* Climate Champions who have shown Family Planning Attitudes and Beliefs

if you agree with these statements*:	<i>Badin</i>	<i>Kambar Shahdad Kot</i>	<i>Sanghar</i>	<i>Thatta</i>	<i>Umer Kot</i>	Total
I believe that it is wrong to use contraceptives	43	39	50	32	43	41
Contraceptives encourage promiscuity	37	19	35	17	56	33
Contraceptives reduce the sex drive	38	17	24	6	13	20
Using contraceptives is much more desirable than having an abortion	65	40	75	63	74	64
I would feel embarrassed discussing contraception with my friends	43	40	41	49	58	46
Contraceptives are difficult to obtain	39	23	42	31	57	38
Couples should talk about contraception before having intercourse	65	47	70	92	89	73
Total No. of Climate Champion	120	120	120	120	120	600

3. DISCUSSION AND WAYS FORWARD

Under the *Surmi* project, Pathfinder has been designed to build the capacity of climate champions on SRH including Contraceptive methods, GBV, Nutrition, and referral mechanisms to generate referrals to the health facilities. This is a community-led approach to raising awareness in the community through community-based activities. Results of the baseline study clearly show that more than fifty percent of climate champions are aware of climate change. However, there is a spatial difference in knowledge and attitude and in self-efficacy including agency. Badin has on the lower scale for climate champions self-efficacy and agency compared to other districts. A similar study in Canada also shows deploying climate champions in the community and assessed their knowledge and attitude towards climate change. The paper also focused on changing self-efficacy and knowledge of climate champions over time with efficient communication (Gislason et al., 2021). Moser and Pike (2015) also discussed growing capacity need for the community on climate change adaptation.

As the results revealed, only 40% of study participants in *Kambar Shadad Kot* agree that permanent changes in the environment are consequences of global warming while only 43% of study participants in *Sanghar* agree that floods will occur if the temperature of the world increases. These findings are in line with the hypothesis of the program that the region required intervention to raise awareness of climate change in the community. Therefore, the program has designed several awareness-generation activities in the community through these climate champion during intervention.

In addition to that self-efficacy is found low among the climate champions who are also from the community. Only 28% of study participants feel confident they can refuse marriage if not desired and only 34% feel confident to leave home if needed without permission. To improve the self-efficacy among the climate champions, Pathfinder has designed training with gender transformative approach sessions with their male allies. Including male partners in the Gender transformative approach has been found useful in other countries to improve self-efficacy among women.

Only half of the climate champions have heard of HIV/AIDS therefore the program has focused on building capacity through training the Climate Champion and then increasing the awareness among individuals and communities related to this important health topic. This training also includes promoting positive attitudes toward family planning beliefs and attitudes and

providing social support as 38% of study participants believe that contraceptives are difficult to obtain – this should be much lower (<20%) to promote better access to FP methods.

Overall, there is a difference between the region and among the districts on different aspects like self-efficacy, knowledge of climate, family planning, HIV among climate champions. This is also correlated with the background characteristics of climate champions. The program has designed the implementation plan through training of climate champions in the above areas to build their capacity, but the implementation also considers the diversity of climate champions' background characteristics and knowledge to provide supportive supervision and handholding to complete their tasks.

4. CONCLUSION

The results from the baseline survey show the current scenario where the community needs awareness of climate and health. The program intends to train Climate Champions from the community through this program who will play the role of change agents in climate-affected communities. These women climate champions will be working to reverse deeply entrenched gender norms that are pervasive in this community. This will require concerted efforts to address, both for CCs and the communities that they support. As the program desires to create a favorable environment through these climate champions in the community with gender transformative approaches and improve self-efficacy among women and girls. This is not possible without support from the local government. Therefore, the program will work closely with the local government to encourage climate champions to raise awareness in the community. Additionally, the local health facility preparedness for adverse climatic conditions is also required as the climate champion will refer the community in the nearby health facilities for emergency. This women-led climate resilience model needs multi-sectoral support for sustainability and scalability in the future. These results also revealed that within Sindh there are differences in awareness and self-efficacy among the climate champions. This also calls for targeted intervention within the project geography. This baseline survey results show a glimpse of the community's awareness of climate and health, which will be evaluated at the end of the program.

The baseline study is conducted with climate champions from the community. This was based on certain selection criteria and expected to have their willingness to work on climate and health. This had a probability of bias of selection as the climate champions may have higher knowledge and

understanding than the entire community. Their self-efficacy may be on the higher side of the scale than the women living in the community with different socio-demographic backgrounds. As this is a cross-sectional study and found that the majority of climate champions belong to poorer and middle economic sections of society and have up to the secondary level of education, the responses may be biased and need further examination at the community level. Therefore, the results from the study are used for the capacity building of the climate champions rather than generalizing the knowledge, attitude, and practice of the women living in the entire project area.

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