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Strengthening local capacity for abortion-related research in contexts with highly restrictive abortion laws: The case of STARS in Mali

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Abstract

Strong local abortion research capacity is missing in many African countries. We report on the Strengthening Abortion Research Capacity in sub-Saharan Africa (STARS) program, an ongoing initiative to strengthen local capacity for abortion research in Mali, West Africa. We highlight the background, context, and methodology of the initiative as well as its achievements, challenges, and emerging lessons. Within a short time, STARS has initiated some key studies on abortion in Mali and created a much-needed platform for nurturing the country's next generation of abortion researchers, institutionalizing abortion research, increasing the quantity and quality of locally generated evidence on abortion, and facilitating evidence-informed abortion policy and programmatic action. The program's learning-by-doing approach has boosted the skills of individual researchers while also enhancing institution-based abortion and sexual and reproductive health and rights (SRHR) research expertise in Mali. Although STARS' capacity to deliver its mandate over time is evident, ultimate results will depend on the sustained commitment of funders to the program in the full realization that capacity building requires long-term investment and support for it to fully bear fruits. *(Afr J Reprod Health 2022; 26[12s]: 110-118).*

Keywords: Abortion, research capacity, Mali, STARS

Résumé

De solides capacités locales de recherche sur l'avortement font défaut dans de nombreux pays africains. Nous rendons compte du programme de renforcement des capacités de recherche sur l'avortement en Afrique subsaharienne (STARS), une initiative en cours visant à renforcer les capacités locales de recherche sur l'avortement au Mali, en Afrique de l'Ouest. Nous soulignons le contexte, le contexte et la méthodologie de l'initiative ainsi que ses réalisations, ses défis et les leçons émergentes. En peu de temps, STARS a lancé des études clés sur l'avortement au Mali et créé une plate-forme indispensable pour nourrir la prochaine génération de chercheurs sur l'avortement du pays, institutionnaliser la recherche sur l'avortement, augmenter la quantité et la qualité des preuves générées localement sur l'avortement et faciliter politique d'avortement fondée sur des données probantes et action programmatique. L'approche d'apprentissage par la pratique du programme a renforcé les compétences des chercheurs individuels tout en renforçant l'expertise de recherche institutionnelle sur l'avortement et la santé et les droits sexuels et reproductifs (SDSR) au Mali. Bien que la capacité de STARS à remplir son mandat au fil du temps soit évidente, les résultats ultimes dépendront de l'engagement soutenu des bailleurs de fonds envers le programme dans la pleine conscience que le renforcement des capacités nécessite un investissement et un soutien à long terme pour qu'il porte pleinement ses fruits. *(Afr J Reprod Health 2022; 26[12s]: 110-118).*

Mots-clés: Avortement, capacité de recherche, Mali, STARS

Introduction

Many African countries lack strong local abortion research capacity. Yet, this capacity is critical for the continent's realization of the United Nations' Sustainable Development Goals (SDGs) that are related to sexual and reproductive health and rights (SRHR). In particular, abortion research capacity is pivotal to the realization of Target 3.7 of the SDGs which charges all countries to "ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes"[1] Robust research evidence on abortion can shape investments and guide policymaking to improve the

delivery of SRHR services and interventions. The need for greater abortion research capacity is most urgent in African contexts with highly restrictive abortion laws, where abortion is riskier; where most abortions are unsafe; where robust evidence is needed to urgently guide policy, shape advocacy, and inform interventions; and where the voice and expertise of local scholars and researchers can be influential in advancing reproductive rights and justice[2,3]. While the legal grounds for abortion, the safety of abortions, and the quality and reach of postabortion care have continued to expand in Africa, the reproductive health and autonomy of the region's 255 million women of reproductive age remains at risk[3]. An estimated 92% of women of reproductive age in Africa currently live in countries with restrictive abortion laws — where abortion is either prohibited altogether or restricted to cases of incest or rape and where a woman's life or health is endangered[2]. In Africa, 33 abortions occur each year per 1,000 women aged 15–49, adding up to about eight million abortions yearly. Many of these abortions are unsafe and result in complications that are sometimes severe, even fatal[4]. How, then, can high-level capacity for abortion-related research be built, strengthened, and supported in African contexts with highly restrictive abortion laws?

This paper reports on an ongoing initiative to strengthen local capacity for abortion research in Mali, West Africa. It highlights the background, context, and methodology of the initiative as well as its achievements, challenges, and emerging lessons to facilitate dialogue and learning among SRHR stakeholders interested in supporting local research capacity on some of the thorny SRHR issues in the region. Previous efforts to strengthen abortion research capacity in Africa by merely involving the region's researchers in studies that have been exclusively designed by global north-based institutions failed to create a critical mass of abortion researchers or institutionalize abortion research in Africa. In some instances, research findings from studies conducted by global north institutions and scholars have been contested and challenged by stakeholders in the global south countries where the studies were implemented[5–7] . As calls continue for more actionable evidence on several critical issues related to induced abortion in African contexts with highly restrictive abortion laws[8], the need for local researchers to take the lead in generating and disseminating evidence on abortion has become urgent.

In what follows, we briefly highlight the Malian context, focusing specifically on abortion and SRHR. We then describe our abortion research capacity strengthening program model and discuss its achievements, challenges, and lessons. Finally, we reflect on the future of our model in the context of the unfinished business of ensuring greater research capacity to continually address the multiple unanswered questions related to abortion in several African settings.

Mali

Once one of the world's richest nations, Mali is currently Africa's 19th poorest and eighth largest country. Located in West Africa, Mali's estimated population of 20 million people is projected to double by 2035. The country's population is predominantly rural and 67% of the country's population are below the age of 25 years. Women comprise half of the population of Mali. Prolonged insurgency in the country's north and political instability have displaced over 300,000 people, severely straining health and other infrastructure. Currently, there are only 3.14 skilled health professionals per 10,000 people in Mali[9]. The country's physician-to-population ratio stands at 0.1 per 1,000 and 0.43 per 1,000 for nurses and midwives[10]. The COVID-19 pandemic exacerbated challenges related to health in Mali. Fears of the pandemic, movement restrictions, and reduced earnings shrank care-seeking and service provision, particularly among the country's most vulnerable populations, including millions of women and people in hard-to-reach settings[10]. Cone and Lamarche suggest that lapses in SRHR care during the pandemic increased unintended pregnancies, maternal deaths, and sexually transmitted diseases[11]. The maternal mortality ratio in Mali currently stands at 562 deaths for every 100,000 live births[12]. With 106 deaths per 1,000 live births, the country has one of the world's highest rates of infant mortality. Women in Mali commonly experience gender-based violence, including female genital mutilation, forced marriage, beatings, forced pregnancy, and rape.

Before 1992, married women in Mali were required to use contraceptives only with their husbands' permission. Sidibe, Kadetz and Hesketh

note that the total fertility rate in Mali has only decreased slightly in a decade, from 7.1 in 1987 to 6.3 in 2018 — the world's third highest rate and which remains significantly higher than the sub-Saharan African average of 4.8[13]. Modern contraceptive use among married women in Mali is 16% while unmet need stands at 25.2%[14]. Adolescent sexual activity is also common in Mali, often occurring in secrecy. Currently, the adolescent fertility rate in Mali stands at 164.6. The Malian government's efforts to reduce early and unwanted pregnancy have been hampered by policy instability, an emphasis on abstinence, pervasive gender inequities in access to formal education and economic opportunities, high levels of illiteracy, religious and cultural conservativism, and a lack of robust formal sex education programs[15].

Until 2002, abortion in Mali was regulated by a proscriptive law passed in 1920. A new law, approved in 2002, did not legalize abortion, but permitted it only when the continuation of the pregnancy threatens the life and health of the woman; when an illness of gravity is diagnosed in the fetus; and when the pregnancy is the established consequence of a rape or incest, at the request of the pregnant woman. In Mali's law, women who abort, providers who offer the service, and persons who assist the woman are at risk of heavy prison sentences, fines, residence bans or license suspensions. Legal restrictions notwithstanding, abortion is not uncommon in Mali, and most of it is unsafe. It is the country's fifth-leading cause of maternal death, and responsible for 9% of direct complications of pregnancy. Women seeking abortion in Mali generally do so clandestinely, relying largely on informal social networks. These clandestine abortions are often unsafe, performed crudely and under unsanitary conditions. An estimated 80 percent of abortions in the country occur outside the formal health system and involve the ingestion of dangerous chemicals or high doses of medicines, the introduction of foreign objects into the cervix; or procedures performed by unqualified persons[11]. Legal restrictions also mean that many women who experience abortion-related complications must self-medicate or seek clandestine heath care to avoid prosecution, persecution, and stigma.

However, Mali's government has flagged its appetite for more evidence-based interventions related to abortion through the launch of a National Standards and Protocols for Abortion Care in 2012. But there is yet no nationally representative research on any aspect of abortion in Mali, limiting understanding of the dynamics of the practice there. Mali is also a signatory to international legal treaties and development agendas, such as the Maputo Action Plan, the Protocol of the African Charter on Human and Peoples' Rights and the Convention on the Elimination of all forms of Discrimination Against Women. These agendas consistently emphasize the need for sound evidence to guide programs and interventions on women's health and rights.

Currently, Mali lacks strong local capacity to generate nationally relevant evidence to guide more informed abortion policymaking. Consequently, locally generated research on sensitive SRHR and gender issues is limited, and research institutions focused specifically on abortion do not exist. Many of Mali's highly qualified researchers have little motivation to live and work in the country due to limited opportunities for research, poor working conditions, and insecurity[16]. SRHR researchers who remain in the country have little support for research, limited connection to the research community, and a weak enabling environment for research on sensitive SRHR issues. Yet, actionable evidence, generated by local researchers and experts, is increasingly considered key to addressing Africa's thorniest development challenges, including unsafe abortion[7]. With the Malian government's publicly stated commitment to the use of contextually relevant evidence to address the country's worsening SRHR and maternal health indicators[17], an urgent need exists for strategies to support the country's researchers to lead, design, conduct, and disseminate research in their own context.

The STARS Program

The Strengthening Abortion Research Capacity in sub-Saharan Africa (STARS) Program was established in 2019. The program is a bold effort to support the emergence of a critical mass of skilled abortion researchers in African countries with highly restrictive abortion laws. Initially developed for implementation in three African countries, the program could only be piloted in Mali due to limited

resources. STARS' core goals are to support the production and retention of a critical mass of skilled abortion researchers in the country, boost the number and quality of abortion studies, and advance the availability of robust, nationally generated evidence to improve abortion policymaking. The program adopts a multi-pronged strategy that includes establishing multidisciplinary teams of researchers in academic and research institutions in Mali; equipping research teams and institutions with transferable skills to identify and investigate urgent, abortion-related, research questions in their contexts; and strengthening individual and team skills in abortion research methodologies, scientific and academic writing, and donor and policy-maker engagement. The program also prioritizes direct support to local researchers in grant applications, linkage to networks of abortion researchers and relevant advocacy groups, manuscript and proposal development workshops, and training in evidence dissemination. These strategies are intended, in the long-run, to secure and foster the career paths of researchers interested in pursuing social and public health research on abortion-related issues[7].

STARS applies a multifocal competency-based pre-and post-program intervention methodology to monitor its impacts. At the inception of the program, a need assessment established the number of researchers with experience in abortion-related research in participating institutions. Participating researchers were themselves surveyed to establish, *inter alia*, their skills and competency levels related to software/method/analysis method, abortion research experience, familiarity with abortion research methodologies, proficiency in qualitative and quantitative software, referencing software, academic writing, and sampling skills. These researchers were also further assessed on their advocacy and policy engagement, grant writing, and PowerPoint presentation skills. Participating organizations were also assessed, among other things, on whether they currently conduct abortion research, see abortion research as important to national development, have a critical mass of staff with skills and experience to conduct rigorous research on abortion, can develop competitive research proposal on issues related to abortion, and have published research on abortion. Ongoing monitoring assesses changes in the above indicators that can be attributed to the institutions and individual researchers' participation in the STARS program.

Led jointly by Mali's Center for Vaccine Development (CVD-Mali) and the International Center for Research on Women (ICRW), STARS brings together two institutions with a history of making a difference in women's health issues. CVD-Mali conducts research on the burden of preventable diseases, tests the safety and efficacy of relevant new medical interventions, and leads training for future Malian health researchers. A semi-autonomous agency of the Ministry of Health, CVD-Mali has a mandate to bring research evidence and solutions to the attention of the country's public health policymakers. With a long history of policy-relevant research on avertable health conditions that affect marginalized populations, particularly women and children, CVD-Mali has access to the country's political corridors, uniquely positioning it for policy and programmatic impact. Currently led by a respected former Malian minister of health, CVD-Mali has several young researchers with high-level interest in maternal health issues.

For 45 years, ICRW has been the world's leading nonprofit building evidence on how to improve the lives of women, girls, and other marginalized people[18]. The organization's work uncovers the intersections of vulnerability and inequity that diminish opportunities for some in society and documents proven solutions that create and sustain equity, social inclusion, and shared prosperity. ICRW collaborates with partners at all levels to conduct empirical research; strengthen capacity for research and programming; implement programs; and undertake monitoring, learning and evaluation, and knowledge management.

Progress

STARS has recorded several major strides and achievements. Within two years of its establishment, the program has implemented one major study to understand the impact of COVID-19 on the provision and use of SRHR services, including post-abortion care, in Mali. This first study has been critical in setting the stage for future work, building local stakeholders' understanding of the goals of STARS, and helping gauge local appetite for more focused research on abortion. In the build-up to the study, the program team worked assiduously to

understand the context of SRHR and abortion in the country, build alliances with local gatekeepers, recruit potential new researchers, and communicate the program's mission to multiple stakeholders. In coordination with CVD-Mali, the program has identified and established a team of researchers and institutions in Mali to form the program's in-country abortion research team. The team is multidisciplinary, comprising both established and emerging researchers, quantitative and qualitative researchers, health and social scientists, men, and women. Team members have undergone a rigorous values clarification exercise related to abortion research. By focusing on both researchers and their institutions, STARS is facilitating the institutionalization of abortion research in Mali and supporting the emergence of a critical mass of researchers who, with time, will form the nucleus of excellence in abortion research in Mali.

In keeping with its emphasis on experiential learning and hands-on training support, STARS adopted a collaborative approach to the development and implementation of its first field study. The identification of the questions explored in STARS' first study was led by CVD-Mali and Malian researchers in active collaboration with ICRW researchers. The final research topic, identified through rigorous scoping research and consultations with government agencies and SRHR leaders, was f urther jointly elaborated by the STARS partner-institutions in collaboration with the in-country research team. The design and the analysis plan for the study were also collaboratively developed by team members. The direct and active participation of researchers in Mali in identifying and answering research questions strengthened their skills and ownership of the research and contributed to capacity strengthening processes. Team debates and discussions related to the design and implementation of the study also promoted understanding of methodological tradeoffs, study designs, and analytical considerations. Following the completion of data collection for the study, data analyses and scientific writing support sessions have been provided to prepare data and manuscripts for publication. The results of the study have also been written up and submitted for review in an international peer-reviewed journal. The development of the research paper was led by young members of the Malian research team, many of whom had never published in an international journal. Data systems personnel, particularly at CVD-Mali, have also undergone training on the development and deployment of electronic data collection tools and data monitoring, cleaning, and protection.

Consistent with STARS' emphasis on building transferable research skills, the program has held several training sessions in critical research skills including qualitative and quantitative interviewing, and use of qualitative and quantitative analytical software and referencing applications. Software such as STATA, NVIVO, and Endnote have also been procured for research team members. STARS has also held workshops on research ethics, protocol development, sampling, tool development, and research report writing. Some 50 researchers have been reached in these workshops. STARS' workshops have targeted participating Malian researchers with foundational skills to engage in methodological and multidisciplinary discussions on abortion research; reflect on the choice of study design; and develop research tools and ethically sound protocols. Direct involvement of Malian researchers in the design and implementation of the research on abortion provided them with ongoing first-hand and experiential learning in identifying and answering contextually relevant abortion research questions, laying the foundations for abortion research as a key research theme among Malian researchers and institutions.

STARS has also developed an online database of research, tools, training materials and other resources related to abortion. This database hosts materials and training resources generated by the program as well as related research and evidence on abortion in Mali. Aimed at improving the visibility of abortion as an urgent research issue in Mali, the database is also benefiting the larger SRHR research, policy and advocacy community in Mali and others who may not be currently within the STARS network. The platform is actively curating relevant publications, blogs, methodological resources, grant opportunities, conferences, and workshops. As STARS progresses, we intend to transform the online database into a one-stop shop for new research and evidence on abortion in the country and more forcefully deploy it as a web-based knowledge and information-sharing platform to publicize relevant current evidence as well as

workshops and seminars. Growing traffic on the site suggests its current and potential future value to the wider SRHR and research community in Mali.

The STARS program has also finalized arrangements to implement its second study on the provision of post-abortion care in Mali's public health facilities. This multimethod study will assess the capacity of Malian health facilities to provide post-abortion care services, provide insights into the quality of the services provided, and highlight challenges to quality and access. The identification of the study topic also followed a rigorous process of landscaping and prioritization, led by Malian researchers, and supported by ICRW. The upcoming study has also been an opportunity to conduct additional training sessions and workshops using learning-by-doing techniques on issues related to multimethod research, selection of appropriate study designs and sampling techniques, electronic data collection procedures, data presentation and application of tests of significance. During consultations with health policy makers on the forthcoming study, the Ministry of Health, Mali, in recognition of the importance of the proposed study, formally requested STARS to include additional survey questions that align with existing national needs on information and monitoring of the state and quality of maternal care in public health facilities. This development, which deepens the value of the STARS program to maternal policymaking in Mali, indicates its growing positive reception among policy stakeholders as well as the potential long-term importance of the program.

Lessons and challenges

Several lessons and challenges have emerged during the implementation of STARS. A major lesson observed during the period is that restrictive abortion laws do not translate into a lack of interest in research on the subject. Programs interested in building capacity for research on socially tabooed or sensitive issues must be bold in disregarding assumptions and in focusing learning locally. Going into STARS, we worried a lot about the willingness of researchers to engage with the theme of abortion as a public health and development issue. We were concerned that religious conservativism and political trends in Mali would dampen the interest of researchers and policy actors to engage with abortion. In many contexts, the stigma associated with abortion is often extended to people who research the topic, to facilities that provide related services, and to advocates for access to these services. Attacks and assaults on abortion researchers, activists, providers, and facilities are common even in contexts with permissive laws[19,20]. It has been inspiring, therefore, to see the enthusiasm of Malian researchers across disciplines to not only generate evidence on abortion in Mali, but also to use it to promote improved access to life-saving interventions for women and girls. Yet, widespread cultural and religious conservativism continues to be a challenge. Team members continue to express the need for caution in a politically charged context, where religious and cultural beliefs may be mobilized in attacks on individuals and institutions. However, the program's reliance on respected local researchers and scientists to engage with key stakeholders and institutions, including the University of Bamako, medical researchers, university professors and public leaders in Mali, has created a new wave of interest in the topic. Further, CVD-Mali's longstanding recognition as a public health research agency and its history of supporting the country's fight against major threats such as Ebola and COVID-19 have been key in improving the reception of STARS and promoting support for abortion research within policy circles. Persons and institutions with deep grounding in the context of work on sensitive research matters, if properly supported with necessary skills and resources, have important roles in driving research and policy engagement in those settings.

The COVID-19 pandemic posed another major challenge for STARS. The launch of the program coincided with the emergence COVID-19 globally. Mali, like many other countries in the Sahel region, has battled COVID-19 against a background of widespread insecurity, fragility, and strained health systems. Movement restrictions and shelter-in-place directives meant that planned in-person training workshops could not proceed. During the period, some STARS team members in Mali were deployed by the national government to support response and control efforts, including community education and the design and rollout of pandemic control efforts. However, the pandemic also resulted in critical debates about access to care including contraception, maternal health, care for HIV and STD patients, and perinatal health services in Mali,

where SRHR service provision was already fragile. Taking advantage of these debates, STARS' first study explored how post-abortion services, as part of the government approved package of available maternal services, were being affected by the pandemic and its attendant shifts in scare resources. Researchers addressing or studying sensitive issues should be alert to the opportunities offered by dire and emerging situations and realities.

The pandemic also created the need for additional infrastructural strengthening within CVD-Mali and for the program to extend resources to participating researchers to enable them to participate in online activities and training. In other words, the pandemic offered STARS an opportunity to harness and deploy emerging technologies in ways that promoted program goals and created mutual learning within its team. Our ability to reorganize resources to meet these unforeseen developments was made possible by the commitment of program partners as well as by a supportive program funder. Without partner commitment and supportive funders, the resilience and ability of programs to deliver their anticipated goals in situations of dramatic changes can be hampered. A great deal of future capacity strengthening activities will be online and bolstering the capacity of institutions and researchers to deploy and fully harness the power of online learning and training is critical.

The importance of open communication and clearly stated program goals is another important lesson from our work to date. STARS has maintained an active communication policy among its partners, researchers, and leaders. This has ensured that there is healthy and ongoing understanding and knowledge of development, deliverables, targets, activities, challenges, and needs. Meetings are held regularly among the core team to assess progress and to plan for contingencies. Critical policy stakeholders are frequently kept abreast of ongoing work. Participating researchers and program staff have regular updates on upcoming activities. Efforts by the program to expand its resources, and to apply for grants to support additional work have, however, also been frustrated by the COVID-19 pandemic and further by the reluctance of funders to invest resources in Mali given the current climate of political instability and insurgency in the country. There are also very few funders investing in research capacity strengthening on sensitive social issues in the most marginalized countries of Africa. Further, STARS' ambitious agenda and the enormity of the resources required to bring to scale its research capacity strengthening activities notwithstanding, resources available to the program remain very limited. For instance, we have had to frequently reshuffle the program's limited resources to meet unanticipated but emerging critical needs on the ground.

Conclusion: An unfinished mission

STARS is unfinished business, with a great deal of potential. While the program is evolving satisfactorily, it also continues to experience some challenges. Within a very short time, the program has completed one study and is currently finalizing logistics for a new one. It has also linked well with Mali's health policy community and stakeholders and engaged a growing number of social and health researchers supporting them to develop and deploy new research skills. Many of these scholars are currently looking forward to opportunities to demonstrate their newly acquired skills through various research projects. In the future, and resources permitting, STARS will conduct additional capacity strengthening workshops, pursue new projects that permit hands-on capacity strengthening, publish new studies, and add new researchers and institutions to its network.

But much ground remains uncovered. Various key issues related to abortion in Mali remain uninvestigated, and studies on these could provide additional capacity strengthening opportunities for more researchers. For example, evidence is currently lacking on the incidence of induced abortion, the magnitude of abortion-related complications, and the household-level and public health cost of unsafe abortion in Mali. Resources to address all these themes in Mali are currently lacking but would offer STARS the opportunity to enlarge both the evidence base for abortion policymaking and the available skills and expertise in abortion research in the country. Further, an increasingly important ethical obligation in contemporary research is to ensure that research findings reach critical stakeholders, including policymakers, on time and in forms that they can easily digest and use. However, very few

programs support African researchers to develop their skills in policy engagement. There is also a growing need to robustly connect researchers and their institutions to key national and regional advocacy movements and organizations. Currently, STARS has insufficient resources to achieve this at the scale it would like. Researchers in the network also continue to express concerns about abortion stigma in the country and its implications for them, suggesting the importance of research on how to address abortion stigma at multiple levels.

At a time when African policymakers are ever more apprehensive of research and data on sensitive issues solely generated and disseminated by global north-based researchers[17,18]. STARS has emerged to create a much-needed platform for local researchers to take charge of the future of Mali by institutionalizing abortion research, increasing the quantity and quality of locally generated research evidence on abortion in the country, and facilitating evidence-informed policymaking on abortion. While the capacity of STARS to deliver its mandate over time is not in doubt, ultimate results will depend on the sustained commitment of funders to the program in the full realization that capacity building requires long-term investment and support for it to achieve anticipated results or fully bear fruits.

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