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Grace Saul

Waimar Tun

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LEARNINGS FROM PAST INTERVENTIONS IN THE DIGITAL ERA: EVIDENCE-BASED CONSIDERATIONS FOR ADOLESCENTS' PROGRAMMING USING INFORMATION AND COMMUNICATION TECHNOLOGIES

Grace Saul and Waimar Tun

In this commentary, we examine key lessons from evidence-based adolescents' programs – related to intentional recruitment, the role of mentors, and multi-level intervention strategies – and examine how the adoption of digital technologies can create opportunities to strengthen programs, provided that evidence-based lessons remain at the core of intervention strategies.

KEY TAKEAWAYS:

- Existing evidence should inform program design, even as programs move to adopt new information and communications technologies (ICT)-based methods.
- Key lessons from evidence-based programming can be integrated into interventions using digital technologies. Such lessons include:
 1. Young female mentors play an essential role in working directly with adolescent girls to help them build social support networks, develop core assets, and learn new skills that can expand opportunities.
 2. Young female mentors play a key role as role models for adolescent girls, effectively demonstrating alternative choices and life paths and advocating for girls' rights and expanded access to resources, services, and entitlements within their communities.
 3. Working simultaneously at the girl-level and at the community-level can help shift social norms about the value of girls and expand opportunities available to girls and women.
- As adolescent programs move to incorporate ICT-based methods, great care will need to be taken to ensure that such innovations that are meant to reach girls do not further exacerbate the gendered digital divide.

EXPANSION OF DIGITAL TECHNOLOGY-BASED APPROACHES IN ADOLESCENT PROGRAMMING

Over the past decade, the use of digital technologies has become widespread in programs aiming to improve social and physical well-being of adolescents and young people in low- and middle-income countries (LMICs) across sectors. The World Health Organization (WHO), in particular, has developed a multitude of tools and resources for digital health interventions in LMICs, to support implementation of interventions ranging from health education and reminders to diagnostic results notifications.¹⁻³

The education sector has seen a proliferation in the number of educational technology (EdTech) tools and

programs to improve young learners' educational outcomes using information and communications technologies (ICTs).⁴⁻⁶ These tools and programs encompass computer- and internet-based learning strategies and tools, as well as behavioral interventions targeted at both learners and teachers. Programs in LMICs have also leveraged digital platforms to improve livelihoods, particularly of adolescent girls and young women (AGYW).^{7,8}

Since 2020, the COVID-19 pandemic has hastened the push toward the adoption of digital technologies in international development programs. With this fast pace of digital transformation across sectors in LMICs, it is ever more important to incorporate lessons learned from programs that have proven effective in improving the lives of AGYW. We also risk increasing the digital divide

whereby underserved groups with limited access to digital technologies are left behind, particularly girls and young women. As such, evidence and lessons learned must continue to inform programs aiming to reach vulnerable girls.

LESSON 1: INTENTIONAL RECRUITMENT – REACHING VULNERABLE POPULATIONS

While many programs purport to target 'vulnerable populations', many often fall short in reaching the most marginalized segments of the population. Without strategies to intentionally select program sites and to identify, recruit, and retain individuals who are often rendered 'invisible' outside of their homes, interventions aiming to reach vulnerable populations will inadvertently end up serving community members who are relatively advantaged at the outset of the program, limiting the program's ability to achieve maximum impact. This phenomenon is known as "elite capture." In the digital age, many programs are using ICTs and social media to reach young beneficiaries.⁹⁻¹¹ While such digital outreach and recruitment strategies present benefits in terms of convenience and efficiency, these approaches present challenges related to elite capture as they are more likely to reach higher income populations and those with greater access to technology.

In anticipating these challenges, we propose to integrate digital tools in the process of identifying hotspots of vulnerability and recruiting key population segments into programs. Intentional efforts to select intervention sites with high concentrations of vulnerable individuals and to recruit community members most in need can help avoid elite capture.

The [Intentional Design Guide](#) by the Population Council GIRL Center's [Adolescent Girls Community of Practice](#) offers evidence-based, step-wise, technical guidance for practitioners. The Guide enables them to: 1) identify priority "hotspots" where needs for intervention are the greatest, 2) systematically gather information that enables visualization of the full population of adolescent girls in those areas and identification of those facing key vulnerabilities, 3) intentionally recruit girls falling into key categories of risk early enough to prevent negative outcomes, and 4) track program coverage of vulnerable sub-sets of the adolescent girls over time.

Additionally, the GIRL Center's [Adolescent Atlas for Action \(A3\)](#) is a useful tool for examining overlapping vulnerabilities at the subnational level for the purposes of identifying "hotspots" where programs stand to have the greatest impact. We suggest that household- and individual-level access to ICTs be considered key indicators of vulnerability and be integrated into the [Girl Roster](#) tool in order to give a fuller picture of who will be left out of programs with digital components if strategies

to bridge access gaps are not put in place from the outset.

LESSON 2: WORKING DIRECTLY WITH GIRLS – SAFE SPACE GIRLS GROUPS AND MENTORS AS ROLE MODELS

Evidence shows that investing in group mentorship structures that work directly with vulnerable adolescent girls helps influence even the most stubborn of human development outcomes. Group mentorship helps girls gain new knowledge and skills, build social capital and peer support networks, and acquire key social, economic, and cognitive assets that enable them to make healthy transitions to adulthood.

For example, the Bangladeshi Association for Life Skills, Income, and Knowledge for Adolescents ([BALIKA](#))—which involved weekly group meetings for adolescent girls in girl-only safe spaces, facilitated by young female mentors living in the same communities as the girls—demonstrated success in preventing child marriage and school drop-out among adolescent girls. Such interventions have the potential to challenge internalized gender norms and roles, expand girls' aspirations for their futures, and equip girls with the skills they need to claim their rights and pursue their goals.

As programs aiming to improve key outcomes for adolescents move to incorporate ICTs, the demonstrated benefits of working directly with girls through a group mentoring model should be considered during the program design process. Fortunately, circumstantial evidence suggests that girl group mentoring programs can be adapted to digital implementation models while still achieving impact on key development indicators.

For example, in response to the onset of the COVID-19 pandemic, the girls' group mentoring initiative Keeping Girls in School ([KGIS](#)) adapted its previously in-person life skills and livelihood sessions to short 15-minute lessons that could be delivered remotely. They also retrained program mentors to administer content remotely and facilitate remote group mentoring sessions via WhatsApp and Zoom. An impact evaluation showed that the KGIS intervention succeeded in reducing the incidence of child marriage and school dropout, increasing girls' knowledge of and access to sexual and reproductive health services, and reducing girls' learning loss, among other key outcomes.¹²

Further research has shown the potential of digital mentoring interventions for influencing a number of key outcomes. For example, a mobile phone-based educational program utilizing Interactive Voice Response technology to deliver short interactive audio lessons had significant effects on improving learning outcomes among participants.¹³ Evidence-based adolescents

programming suggests that programs utilizing ICTs will be most effective if they preserve the important role young female mentors play as key resources and role models for adolescent girls.

LESSON 3: WORKING AT THE COMMUNITY LEVEL – BUILDING SOCIAL NORMS SUPPORTIVE OF AGYW

In addition to reaching and working directly with adolescent girls to build skills and assets, social norms and practices must be supportive of AGYW to thrive through expanded roles and opportunities. Empowering girls and young women can have greater impact if the community provides the social environment and opportunities for them to play a role in the digital transformation. To foster such an environment, programs must intervene at all levels of the community, including with girls' parents and other family members, social institutions such as schools, religious institutions, government authorities, and private companies.

There is a clear body of evidence showing that girls are less likely than their male counterparts to have access to the internet and mobile phones and that boys are often prioritized for access to educational technology platforms within households.^{14, 15} Inhibitive norms shaping technology access and use--as well as gendered assumptions about girls' technical competences and enjoyment of technology--reduce girls' digital literacy and by extension self-efficacy in the digital era.¹⁶

Interventions that use ICTs must therefore work at the community-level to combat conscious and unconscious biases and stereotypes that constrain girls' and women's opportunities related to digital technologies. Community dialogue on how to ensure girls' safety in online spaces is additionally necessary to alleviate fears related to girls' engagement with digital technologies and to open up new opportunities for girls. More research is needed on effective intervention strategies for influencing social norms related to girls' access to and use of digital technologies.

As more opportunities open up for young women via digital platforms, young female mentors have a crucial role to play in advocating for AGYW's rights to build digital competencies and to engage with ICTs. Mentors are essential as role models, combating stereotypes and embodying expanded possibilities for AGYW within their communities, including the possibility of AGYW taking on leadership or entrepreneurial roles. As past programming to improve the lives of AGYW and anchor sustainable development has shown, investing in young female mentorship structures is an essential strategy for empowering girls and creating a social environment that enables their elevation and meaningful contributions

within their communities. This core lesson remains true in the era of expanding digital interventions.

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