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The Impact of COVID-19 on the Dynamics of Sexual and Reproductive Health Education in Government Schools in Sri Lanka

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Original Article

Abstract

Introduction: Sexual and reproductive health (SRH) education is vital for youth well-being. The COVID-19 pandemic severely disrupted this crucial school-based service, creating unprecedented, lasting challenges for its delivery.

Objectives: The aim was to elucidate the specific challenges encountered in teaching SRH during the COVID-19 pandemic, and to assess its impact on the provision of SRH knowledge in schools.

Methods: An online survey was conducted from August 2021 to February 2022, as part of a broader study on the SRH of Sri Lankan youth across five selected districts. A cross-sectional study design was employed, involving 60 government school teachers who teach subjects that incorporate SRH components to students in Grades 6 to 11. Convenience sampling method was used, and the data were summarised using tables. Associations were explored using the Chi-Square and Fisher's exact test (significance level- $p<0.05$).

Results: Of the SRH teachers surveyed, 81.7% were female and 51.7% had over 11 years of teaching experience. In 2019, only 55% of teachers covered at least 75% of the SRH syllabus, which dropped substantially to 35% in 2020. Four in five teachers reported struggling with online delivery, and 45% expressed dissatisfaction.70% of teachers believed that students completing grade 11 in 2021 would face future challenges due to inadequate SRH education. In 2020, no rural or estate sector teachers, nor any outside the Western province, covered at least 75% of the syllabus, compared to 46.7% of urban teachers ($p=0.014$) and 35% of Western province teachers ($p=0.001$). Teachers aged 40 and above were significantly more likely to have covered the syllabus ($p=0.009$).

Discussion: The COVID-19 pandemic disproportionately affected SRH education in state schools, particularly in rural, estate, and non-Western province areas. Future strategies must prioritise strengthening teacher capacity and skills in these underserved regions. Planning for potential disruptions like COVID-19 is crucial to ensure the equitable and effective delivery of SRH education.

Key Words: Sexual and reproductive health, COVID-19, Schools, Education, Sri Lanka

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Introduction

The provision of sexual and reproductive health (SRH) education in schools represents a vital long-term investment in the health, well-being, and future development of young people globally [1-3]. As articulated by the Sustainable Development Goals (SDGs), universal equitable access to health, including for often marginalized youth, is paramount [4]. Comprehensive sexuality education (CSE), as defined by the World Health Organization (WHO), is a curriculum-based process that equips children and adolescents with the cognitive, emotional, physical, and social understanding of sexuality [3, 5, 6]. It aims to empower them to realize their health and dignity, develop respectful relationships, make informed choices, and understand their rights throughout their lives [5]. Schools, therefore, serve as a critical platform for delivering this essential education, playing a pivotal role in shaping young people's ability to navigate their sexual and reproductive lives responsibly and safely.

However, the unprecedented onset of the COVID-19 pandemic brought about significant disruptions to education systems worldwide, fundamentally altering traditional modes of learning and delivery [7]. This global upheaval posed substantial and unforeseen challenges to the continuous provision of essential services like SRH education [7, 8]. The rapid shift to remote learning modalities, school closures, and strained resources created a complex environment that threatened the effective dissemination of critical SRH knowledge, which inherently often benefits from face-to-face interaction and sensitive discussion facilitated by trained educators [9].

In Sri Lanka, the landscape of SRH education in schools faced considerable challenges even prior to the pandemic. Despite policy recognition of its importance, implementation gaps have historically hindered comprehensive delivery [10]. A 2019 survey conducted among never-married youth in Sri Lanka revealed that a significant proportion of males (10% in the 15-19 age group, 7% in 20-24 age group) reported that SRH was "not at all discussed" in their school environments [1]. Furthermore, the study highlighted that 40% of youth primarily sought SRH information from the internet via mobile phones, indicating a reliance on less regulated and potentially less accurate sources [1]. Concerningly, the same survey identified substantial rates of premarital sexual intercourse among unmarried youth, with more than one-third engaging in unprotected sex [11]. Earlier reviews had also pointed to discrepancies between adequate laws and policies and their inadequate implementation, along with insufficient legal protection for vulnerable youth and instances of discrimination [10]. These pre-existing deficiencies underscore a system already struggling to adequately provide SRH education to its youth.

Given these baseline challenges, the COVID-19 pandemic was poised to exacerbate existing fragilities within Sri Lanka's SRH education framework. The sudden shift to online learning and the prolonged periods of school closures inevitably created new barriers for both teachers and students [12]. Sensitive topics like SRH require a supportive and confidential environment, which can be difficult to replicate in remote settings, potentially leading to reduced engagement, technical difficulties, and discomfort in addressing personal queries [13]. The pandemic's impact on resource allocation and educational priorities may have further sidelined SRH education [14], despite its heightened importance during a period of widespread social disruption.

Understanding the specific consequences of this global health crisis on a fundamental aspect of youth development is therefore crucial. This study was initiated to provide

empirical insights into how the COVID-19 pandemic affected SRH education in Sri Lanka. Specifically, the primary aim of this survey was twofold: firstly, to elucidate the specific difficulties encountered by teachers in delivering SRH content during the COVID-19 pandemic, and secondly, to assess the overall impact of the pandemic on the provision of SRH knowledge to students in government schools across Sri Lanka

Methods

A descriptive cross-sectional study was conducted among teachers who are teaching sexual and reproductive health in public schools from Grades 6 to 11 in five selected districts of Sri Lanka. The sample was limited to 60 respondents. We conveniently selected all three districts of the Western province of Sri Lanka, where the bulk of the Sri Lankan population resides, namely the capital district-Colombo, Gampaha and Kalutara [15]. For comparison, we included two other districts: Anuradhapura from the North Central Province and Galle from the Southern Province. An online questionnaire developed in Google Forms was selected as the data collection method. Following the COVID-19 pandemic, teachers had become comfortable with online communication tools, as these were widely used for teaching during the extended period of movement restrictions [16]. Public school teachers who had taught SRH in at least one of the years in 2019 or 2020 were eligible for the study. Informed consent was obtained online maintaining anonymity of the respondents.

A convenience sampling method was used to select participants, specifically employing the snowball technique. This approach was chosen because most schools had only one or two teachers teaching SRH, and the logistical and financial costs of approaching each school individually were prohibitive. The link to the Google form was disseminated among groups of government teachers via WhatsApp, Viber, and email. No personally identifiable information was collected during the survey to ensure the privacy and confidentiality of the participants. Ethical approval was obtained from the Ethics Review Committee of ChildFund, Sri Lanka (2019/01).

The study tool consisted of a pretested and validated concise questionnaire. Judgmental validity was assessed [17]. The questionnaire, translated into Sinhala, included sections on sociodemographic characteristics, details of SRH teaching before and during the COVID-19 pandemic, and perceptions of issues and outcomes related to the disruption of SRH teaching during the COVID-19 pandemic.

Patient and Public Involvement

The development of the questionnaire was conducted through consultative meetings with all stakeholders, including teacher representatives.

Analysis

Data were initially transferred from Google Sheets to Microsoft Excel, then coded and analyzed using the Statistical Package for Social Sciences (SPSS), version 22. The collected data were summarised using graphical representations and tables. Rates are presented as proportions. Associations were explored using Chi-square and Fisher's exact test. Statistical significance was calculated based on a p-value of less than 0.05.

Results

This section presents the findings from the survey conducted among 60 government school teachers in Sri Lanka regarding the delivery of SRH education during the COVID-19 pandemic. The results are organized into four tables, each detailing different aspects of the respondents' characteristics, teaching coverage, perceptions, and associated factors.

The mean age of the teachers was 40 years (SD = 10), with a majority being female (81.7%) (Table 1). Most respondents were from the Colombo district (45%), followed by Gampaha (20%), Anuradhapura (15%), Galle (10%), and Kalutara (10%). Regarding the type of school, 65% taught in mixed-gender schools, 18.3% in girls-only schools, and 16.7% in boys-only schools. The majority of teachers (85%) were based in urban areas, with 10% in rural areas and 5% in estate sectors. 70% of the teachers worked in schools with 800 or more students. In terms of teaching experience, 51.7% had 11 or more years of general teaching experience, while 70% had 10 years or less experience specifically in teaching SRH (Table 1).

Table 1. Comparison of Basic Characteristics of Study Respondents in Selected Districts in Sri Lanka (N=60)

Basic Characteristics		Number	%
Age		40 years (mean)	10 years (SD)
Gender	Female	49	81.7
	Male	11	18.3
District	Colombo	27	45.0
	Gampaha	12	20.0
	Anuradhapura	9	15.0
	Galle	6	10.0
	Kalutara	6	10.0
Type of school*	Mixed	39	65.0
	Girls only	11	18.3
	Boys only	10	16.7
Geographical location/ sector of the school*	Urban	51	85.0
	Rural	6	10.0
	Estate	3	5.0
Number of students at school*	800 or more	42	70.0
	200-799	12	20.0
	Less than 200	6	10.0
Experience as a teacher	0 – 5 years	13	21.7
	6 – 10 years	16	26.7
	11 – 15 years	11	18.3
	16 – 20 years	5	8.3
	More than 20 years	15	25.0
Experience in teaching SRH**	0 – 5 years	27	45.0
	6 – 10 years	15	25.0
	11 – 15 years	0	0
	16 – 20 years	12	20.0
	More than 20 years	6	10.0

*Characteristics of the schools in which the study respondents are teaching
**Sexual and reproductive health

In 2019, 55% of teachers reported covering 75-100% of the SRH syllabus, while 30% covered 50-74% (Table 2). In contrast, in 2020, only 35% of teachers covered 75-100% of the syllabus, and 13.3% covered 50-74%. When disaggregated by mode of delivery in 2020, 15% of teachers covered 75-100% of the syllabus through physical classes, whereas only 5% achieved the same coverage through online teaching. Overall, 80% of teachers delivered SRH content online in 2020 (Table 2).

Table 2. Delivery of sexual and reproductive health education to students from Grades 6 to 11, in selected districts 2019 vs 2020 (N=60)

Coverage		2019		2020					
		Total		Physical in class		Online		Total	
		No	%	No	%	No	%	No	%
Percentage of SRH* syllabus covered	0 - 24%	**9**	**15.0**	33	55.0	48	80.0	**21**	**35.0**
	25 - 49%	**0**	**0**	3	5.0	0	0	**10**	**16.7**
	50 - 74%	**18**	**30.0**	15	25.0	9	15.0	**8**	**13.3**
	75 - 100%	**33**	**55.0**	9	15.0	3	5.0	**21**	**35.0**

*Sexual and reproductive health

Forty-eight teachers (80%) reported facing difficulties in teaching SRH online, while 12 (20%) did not (Table 3). Thirty-three teachers (55%) were satisfied with their online teaching, whereas 27 (45%) were not. All respondents (100%) indicated that there were no other avenues within schools for students to obtain SRH knowledge. Forty-two teachers (70%) believed that students would face issues due to poor SRH inputs, and 39 (65%) believed that Grade 11 students in 2021 would leave school with little or no SRH education. Additionally, 48 teachers (80%) anticipated that students would seek SRH knowledge from alternative sources due to disruptions in school-based teaching (Table 3).

Table 3. Perception of teachers on delivery of sexual and reproductive health education to students during COVID-19 pandemic (N=60)

Stem		Number	%
I am satisfied with my online teaching of SRH*	Satisfied	33	55.0
	Unsatisfied	27	45.0
There are other avenues to obtain SRH* knowledge in schools outside my teaching	Yes	0	0
	No	60	100.0
I faced difficulties teaching SRH* online	Yes	48	80.0
	No	12	20.0

(Continued)

Stem		Number	%
I believe that students will face issues due to poor SRH* input in schools	Yes	42	70.0
	No	18	30.0
I believe that the Grade 11 students will leave school in 2021 with no/ little SRH* inputs	Yes	39	65.0
	No	21	35.0
I think students will look for different avenues to gain SRH* knowledge due to interferences in SRH teaching during COVID-19 pandemic	Yes	48	80.0
	No	12	20.0

*Sexual and reproductive health

Statistically significant associations were observed for coverage of SRH syllabus by teachers in 2020 (Pandemic year) with teacher age, school location, and province (Table 4). Among teachers aged 40 and above, 51.7% covered 75% or more of the syllabus, compared to 19.4% of those below 40 years. Teachers aged 40 years and above were significantly more likely to have covered the SRH syllabus compared to their younger counterparts (p=0.009). Similarly, teachers based in the Western Province demonstrated significantly higher syllabus coverage (46.7%) compared to those in other provinces, where none achieved this threshold (p=0.001). Urban schools also fared better, with 41.2% of teachers covering at least 75% of the syllabus, whereas none in rural or estate sectors reached this benchmark (p=0.014). In contrast, no significant associations were found with gender, school type (mixed vs. single-gender), or total student population. While teaching experience showed a trend toward higher coverage among more experienced teachers, this was not statistically significant (Table 4).

Table 4. Relationship of teachers' characteristics with the percentage of sexual and reproductive health content coverage at schools by teachers in selected districts of Sri Lanka, 2020 (N=60)

	Coverage of SRH** content			
	75% or more (%)	Less than 75% (%)	Total (%)	χ^2 (P)
Gender				
Female	18 (36.7)	31 (63.3)	49 (100)	0.354 (0.552)
Male	3 (27.3)	8 (72.7)	11 (100)	
Age				
Below 40 years	6 (19.4)	25 (80.6)	31 (100)	6.901 (0.009)
40 & above years	15 (51.7)	14 (48.3)	29 (100)	
School location*				
Western province	21 (46.7)	24 (53.3)	45 (100)	10.77 (0.001)
Other provinces	0 (0.0)	15 (100.0)	15 (100)	

(Continued)

	Coverage of SRH** content			
	75% or more (%)	Less than 75% (%)	Total (%)	χ^2 (P)
Total number of students*				
800 or more	12 (28.6)	30 (71.4)	42 (100)	2.543 (0.111)
Less than 800	9 (50.0)	9 (50.0)	18 (100)	
Type of school*				
Either girls or boys only	7 (33.3)	14 (66.7)	21 (100)	0.039 (0.843)
Both boys and girls	14 (35.9)	25 (64.1)	39 (100)	
Geographical area of the school*				
Urban	21 (41.2)	30 (58.8)	51 (100)	(0.014) [a]
Rural or estate	0 (0.0)	9 (100.0)	9 (100)	
Experience as a teacher				
Less than 11 years	7 (24.1)	22 (75.9)	29 (100)	2.911 (0.088)
11 years or more	14 (45.2)	17 (54.8)	31 (100)	
Experience in teaching SRH**				
Less than 11 years	12 (28.6)	30 (71.4)	42 (100)	2.543 (0.111)
11 years or more	9 (50.0)	9 (50.0)	18 (100)	
Faced difficulties in teaching SRH online				
Yes	18 (37.5)	30 (62.5)	48 (100)	0.659 (0.417)
No	3 (25.0)	9 (75.0)	12 (100)	

*Characteristics of the schools in which the study respondents are teaching
**Sexual and reproductive health
[a]Fisher's Exact Test

Discussion

This study was conducted to assess the delivery of SRH education during the COVID-19 pandemic. While 55% of teachers covered 75-100% of the SRH syllabus in 2019, this dropped to just 35% in 2020. Notably, only 5% achieved this level through online teaching. A substantial majority (80%) reported difficulties with online SRH instruction, and 70% believed students would suffer due to inadequate SRH education, with 65% fearing that Grade 11 students would leave school with insufficient knowledge. All surveyed teachers reported a lack of alternative in-school sources for SRH knowledge, leading 80% to anticipate that students would seek information elsewhere. Furthermore, the survey found that older teachers (40+ years), those based in the Western Province, and those teaching in urban schools were significantly more likely to have covered a higher percentage of the SRH syllabus during the pandemic.

Older teachers often possess more years of general teaching experience and, crucially, specific experience in teaching SRH (Table 4). This prolonged exposure and practice lead to greater comfort, confidence, and a more developed teaching approach when handling sensitive topics like SRH [3, 18]. Furthermore,

older teachers have a more robust understanding of the curriculum and how to adapt it to various learning environments, including online platforms, even if the technology itself is new to them [19]. While younger teachers are more digitally native, older, and more experienced teachers often demonstrate greater professional adaptability and resilience, developed through years of navigating diverse educational challenges [18, 19]. They may be more adept at creatively leveraging existing knowledge and resources to overcome the limitations of online teaching, rather than being solely dependent on new digital tools. Further, experienced teachers might have stronger professional networks, allowing them to share best practices, resources, and problem-solving strategies related to online SRH delivery [20].

While specific studies directly linking teacher age to SRH syllabus coverage during COVID-19 in Sri Lanka are limited, general research on teacher perceptions of distance learning in Sri Lanka points to challenges such as inadequate technological infrastructure and the need for enhanced professional development in digital pedagogical skills [21].

While teacher experience plays a crucial role, the effectiveness of SRH education delivery is also heavily influenced by regional disparities in infrastructure and support. The Western Province, particularly Colombo, is the most urbanized and economically developed region in Sri Lanka. Urban areas generally have superior access to reliable internet connectivity, necessary digital devices (computers, smartphones), and consistent electricity [22, 23]. Rural and estate sectors often face significant infrastructural limitations, including poor internet penetration and device scarcity, making online learning and extensive syllabus coverage extremely challenging for both teachers and students [22,23]. This digital divide has been widely acknowledged as a major challenge for online education in rural Sri Lanka during COVID-19 [24]. In addition, schools in urban areas and the Western Province are more likely to have better access to institutional support, including IT infrastructure, technical assistance, and professional development programmes focused on online teaching methodologies [25]. They have better-resourced libraries or access to online educational platforms [25]. Further, teachers in more developed regions have had better opportunities for professional development and training on online teaching before or during the pandemic, enabling them to transition more effectively [25]. Students in urban areas are more likely to have the means and environment conducive to online learning, including quiet spaces at home and parental support, which indirectly facilitates teachers' ability to cover the curriculum effectively [26].

Studies within Sri Lanka consistently highlight the significant challenges faced by rural students and teachers in accessing quality online education during the pandemic. Issues such as a lack of internet connectivity, insufficient devices, and financial constraints for data packages are repeatedly cited as major barriers [27]. This aligns with our finding of lower coverage in rural and estate sectors, and outside the Western Province during the COVID-19 pandemic.

Global studies confirm that pandemics, including COVID-19, severely disrupted access to essential SRH services and education, particularly in developing countries. This is often due to service disruptions, resource diversion, movement restrictions, and fear of contagion [28]. The challenges faced by Sri Lankan teachers mirror these broader global trends of reduced SRH education during the pandemic. Across many developing countries, the pandemic exposed and exacerbated

existing educational inequalities [29]. Rural and marginalized populations often bear the brunt of limited access to technology, trained teachers, and appropriate learning materials, leading to significant disparities in learning outcomes, including for sensitive subjects like SRH [29]. This aligns with the observed disparities in this study across provinces and school locations in Sri Lanka.

The observed decline in SRH education during the pandemic in Sri Lanka, coupled with findings that younger teachers, those in rural areas, and outside the Western Province covered less of the syllabus, carries significant implications (Tables 2, 3 & 4). Inadequate SRH education can lead to a host of adverse outcomes for young people, as evidenced both in Sri Lanka and globally [30]. For instance, the 2012–2013 National Youth Health Survey in Sri Lanka found that 50% of post-secondary students lacked awareness of SRH issues, with only 1% of rural students having adequate knowledge, highlighting a pre-existing vulnerability that the pandemic likely exacerbated [31]. More specifically, a study by Kumarasinghe and De Silva (2022) on sexual behaviour and contraceptive use among unmarried youth in Sri Lanka revealed significant knowledge gaps and risky behaviours [11]. Their findings indicated a high occurrence of unprotected sexual intercourse among both boys (26%) and girls (35%) [11]. Among sexually active unmarried youth under 20 years old, 10% had sexual intercourse with an unknown person [11]. This lack of comprehensive SRH knowledge and safe practices contributes to higher rates of unintended pregnancies and sexually transmitted infections (STIs), including HIV, among adolescents [2]. Sri Lanka has already seen a worrying trend in sexual offences and teenage pregnancies, with a study noting 28 cases of teenage pregnancy in the first half of 2024 and 112 HIV cases among 15-24-year-olds in 2024 [32, 33]. Globally, comprehensive sexuality education is consistently linked to positive health outcomes, including delayed sexual debut and safer sexual practices [34]. Conversely, limited SRH education can result in misinformation, increased vulnerability to sexual abuse and exploitation, and long-term consequences for physical and mental well-being, as well as educational and economic opportunities, perpetuating cycles of poverty, particularly for young women [35].

In summary, there is an urgent need to reform SRH education delivery at schools in the wake of the COVID-19 pandemic, particularly in light of the growing vulnerabilities faced by young people, including rising rates of teenage pregnancies and STIs. To better prepare for future disruptions and ensure continuous SRH education, a multi-faceted approach is essential focusing on teacher-centric and system-wide preparedness for future crises. Firstly, investing in resilient digital infrastructure and addressing the digital divide, especially in rural and underserved areas, is paramount [36]. This includes providing access to reliable internet, affordable devices, and free data for educational purposes, drawing lessons from global efforts to bridge digital equity gaps [36]. Secondly, comprehensive and ongoing teacher training programmes are crucial, not only in digital pedagogy but also in developing confidence and skills to deliver sensitive SRH content in various formats, including online [37, 38]. Leveraging older, experienced teachers as mentors and providing tailored support for younger teachers can strengthen the overall teaching force [39]. Thirdly, exploring innovative and culturally sensitive delivery methods beyond traditional classroom settings, such as community-based initiatives, partnerships with NGOs, and the use of diverse media (radio,

television, mobile applications like UNFPA's TuneMe), can ensure broader reach [40, 41]. Finally, fostering a supportive environment through increased parental engagement and community dialogue around the importance of SRH education can help overcome socio-cultural barriers and stigma, ensuring that young people receive the knowledge and support they need to make informed decisions about their sexual and reproductive health, regardless of external circumstances [42].

Limitations

The small sample size and the use of convenience sampling limit the generalizability and representativeness of the findings. This sampling method likely introduced selection bias, excluding teachers with limited digital access or those not connected to specific online networks. Furthermore, the sole reliance on an online questionnaire may have further excluded teachers with poor internet access or digital literacy, further skewing the sample. These factors collectively limit the study's ability to extrapolate findings to the broader population of Sri Lankan SRH teachers.

Conclusion

The findings strongly corroborate that the COVID-19 pandemic indeed disproportionately impacted the delivery of SRH education in Sri Lankan state schools, with a marked disparity observed in areas outside the Western Province and within the estate and rural sectors. This is evident in the significant drop in syllabus coverage during 2020, the widespread difficulties teachers faced with online SRH instruction, and the subsequent concern among educators regarding students' inadequate knowledge. The greater resilience in SRH education delivery by older teachers, and those in urban and Western Province schools, underscores the critical role of teacher experience, robust digital infrastructure, and better institutional support in mitigating educational disruptions. Addressing these existing disparities through targeted interventions in infrastructure, teacher training, and community engagement will be crucial for ensuring equitable and continuous SRH education for all Sri Lankan youth, safeguarding their well-being against future crises.

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Conflict of Interest

Authors declare that there are no conflicts of interest.

Data Availability Statement

Data is available on reasonable request. Raw data without personal identifiers is available from the corresponding author upon reasonable request.

Use of AI

Use of Artificial Intelligence Assisted Technologies

During the preparation of this work, the authors used generative AI in order to improve the language and readability. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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Author Contributions

MK, SG and IDS developed the study protocol and overall work plan. MK, SG, IDS and LG was responsible for data collection, extraction, cleaning, and analysis. MK led the writing with SG reviewing the final manuscript. IDS supervised the overall project.

Disclaimer

The views expressed are those of the authors and not necessarily those of the University of Tasmania, University of Colombo or the Ministry of Health, Sri Lanka

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