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COVID-19 school closures in Latin America: untangling approaches impacting student health and wellbeing

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Abstract

Purpose – This study compared approaches to school closures in four Latin American countries (Bolivia, Colombia, Ecuador, Peru), describing the impact on the health and educational wellbeing of school-age children and youth, and evaluating their approaches in regard to continuing education through the pandemic.
Design/methodology/approach – We collected 75 publicly available documents including scientific and gray literature (government documents and news releases), that referred to school closures and their impact on children's health and wellbeing. We did thematic analyses using open, axial, and selective coding and applied the latest Health Promoting Schools standards and indicators to the findings.
Findings – Results showed that countries followed epidemiological reasons for prioritizing school closures while adopting some policies that abide by Health Promoting School principles. While they emphasized the need to reopen schools so that instruction could continue, school closures were among the longest in the world. The most significant impacts on wellbeing identified in the four countries were related to food security and mental health.
Research limitations/implications – This study focused on a particular set of documents, and it may not capture the full spectrum of relevant information in different contexts or regions.
Practical implications – By comparing school closures approaches among four Latin American countries, this study highlights the importance of context-specific interventions. In a post-pandemic era, lessons learned from these experiences should help foster more resilient and inclusive educational systems and explore the paths forward for following the new Health Promoting Schools framework in the region.
Originality/value – Cross-country qualitative analyses on this topic are rare. This study adds to the knowledge base by eliciting lessons for future health education research and policy efforts.

Keywords Pandemic response, COVID-19, Student health, Mental health, Latin America
Paper type Research paper

Background

In a health promoting school (HPS), the whole school (including the curriculum and the environment, and the immediate and broader school community) becomes engaged to promote health through school policies, learning activities and access to health services (World Health Organization, 2023; World Health Organization and UNESCO, 2021). In a HPS context, the goal is that all schools around the world become a health promoting school

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(World Health Organization, 2023). Together with the United Nations Educational, Scientific and Cultural Organization (UNESCO), WHO has established eight global standards for HPS that are applicable to whole-school approaches to health in educational settings (World Health Organization and UNESCO, 2021). The Americas WHO regional office, the Pan American Health Organization launched an HPS initiative that, according to their own assessment, showed the framework was "firmly embedded" in legal and policy documents in many countries across the region (Pan American Health Organization, 2022).

In Latin America, the HPS approach has been applied to address the health and well-being of school-age children. There are a few examples of different ways that health education has become integrated in schools in the region. In Colombia, for instance, the Ministry of Social Protection spearheaded a HPS initiative in 2003, approving the National Guidelines for Healthy Schools with the aim of promoting local development (Guzmán Barragán *et al*., 2020). Projects linking indigenous education systems with intercultural health systems illustrate innovative approaches within indigenous communities (Ruiz Suárez *et al*., 2021). In addition, evaluations in rural areas highlight critical health and environmental challenges in school settings (Guzmán Barragán *et al*., 2020). Similarly, Brazil's experience in Belo Horizonte, Minas Gerais, highlights efforts to integrate health and education through federal and municipal regulations, albeit with challenges such as low utilization of mechanisms and sectoral logic dominance (Chiari *et al*., 2018). Meanwhile, municipalities in Mexico, including Guerrero, Jalisco, Morelos, and Sonora show positive results in oral health care and hygiene from the successful collaboration between the education and health sectors (Caballero-García *et al*., 2017). Across these examples, the need for broader community involvement is emphasized to extend the impact beyond individual schools In Argentina, the Healthy Schools Program (PMES, for its abbreviation in Spanish) focuses on nutrition education to improve students' eating habits. Challenges such as inadequate teacher training and a lack of educational resources underscore the complexity of addressing health issues in school settings in the region (Rossi *et al*., 2018). Despite these hurdles, recognition of the relevance of nutrition in school life underscores the importance of fostering environments that encourage healthy eating. Through collaborative efforts and innovative strategies, HPS initiatives in some of the countries in the region have strived to promote the holistic well-being of school communities.

The COVID-19 pandemic had a profound impact on school-age children and youth (SACY) (Bracco *et al*., 2024). The impacts have been multifaceted, affecting many different aspects of their lives. In Latin America, implementation of school closures varied. At the onset of the COVID-19 pandemic SACY faced school closures, remote learning, and/or hybrid models of education which have disrupted the learning process for millions of students around the world (Conto *et al*., 2021) The transition to online learning has created disparities in access to education, with many children lacking necessary technology or a suitable environment for effective remote learning. There is growing evidence that the pandemic exacerbated existing disparities in access to education, creating significant challenges for many students, particularly those from marginalized or low-income backgrounds (Warren and Bordoloi, 2020; Azevedo *et al*., 2022; Benza and Kessler, 2022). First, not all students had access to the necessary technology required for remote learning, such as computers, laptops, tablets, or even a reliable internet connection. This digital divide has widened the gap between students who have access to these resources and those who do not. Hence, families without the means to afford such technology faced an uphill battle trying to have their children participate effectively in remote classes. Inadequate internet access in rural or underserved areas has limited students' ability to fully participate in virtual learning (Tadesse and Muluye, 2020).

Second, not all students would have a conducive home environment for effective remote learning. They may lack a proper space, supplies/resources, or parental supervision and

support, which can significantly impact their ability to access, focus or engage in online classes. In a context of precarious remote learning combined with limited outdoor activities have led to increased screen time among SACY, impacting their physical and mental health, sleep patterns, and overall wellbeing (Munir, 2021). Third, students with special needs or those requiring personalized support faced additional challenges in accessing appropriate resources and services in an online learning environment (Ferri *et al.*, 2020; Stenhoff *et al.*, 2020). The lack of in-person support and specialized services made it harder for these students to receive the needed accommodation and assistance. These inequities in learning environments have affected students' academic performance and overall growth.

Fourth, there is growing evidence that the COVID-19 pandemic led to increased levels of stress, anxiety, depression, and feelings of isolation among children and adolescents (Deolmi and Pisani, 2020; Loades *et al.*, 2020; Marques de Miranda *et al.*, 2020; Orgilés *et al.*, 2021). A scoping review conducted at the height of the pandemic found that loneliness/depression, anxiety, grief, stress-related disorders, child abuse, family conflict, and stigma were commonly found among children, particularly female, migrant, and children with a disability (Merrill *et al.*, 2021). Lack of social interactions, disruption of routines, and uncertainty have contributed to mental health challenges. Absence of in-person schooling, co- and extra-curricular activities, and social gatherings added to this issue. SACY missed crucial in-person social interactions and peer-to-peer relationships, which could also impact their social and emotional development (Rodman *et al.*, 2022; Siegel *et al.*, 2024). While children seem to be less susceptible to severe COVID-19 illness (Sinaei *et al.*, 2021) concerns about the virus's transmission in school communities (including teachers, students and their families) led to heightened anxieties and extended closures. Moreover, pandemic-related restrictions limited access to routine healthcare services for children and youth, while many families faced pandemic-related financial hardships which made it harder for them to support SACY's educational and emotional needs (Chaabane *et al.*, 2021; Rajmil *et al.*, 2021).

In Latin America, school closures have meant that millions of children and youth were left without schooling. In fact, by March 2021 UNICEF reported that 114 million Latin American SACY underwent among the longest school closures in the world: 158 days, on average (UNICEF, 2021a). Across the region, students had to study from home and adapt to lesson plans and assignments submitted via available software platforms (e.g. Zoom, WhatsApp). The challenges of connectivity were further exacerbated given the wide digital divide. A 2020 report pointed out that over 40 million households in the region did not have access to the internet (CEPAL-UNESCO, 2020). In one of the most unequal regions in the world, economic hardships, and lack of access to technology limited the ability to adapt to remote learning for large segments of the population, leading to poorer academic outcomes, and decreased overall wellbeing. Many students faced difficulties in staying engaged with remote classes, resulting in disengagement, and ultimately dropping out of school. A recent report pointed out that almost two-thirds of child-focused sustainable development goals are off-track to meet 2030 targets, due in part to pandemic impacts (UNICEF, 2023). This concern is further amplified by a recent Economic Commission for Latin America and the Caribbean (ECLAC) report, which concluded that public health measures most countries in the region implemented to contain the spread of the virus (e.g. school closures) have restricted children's access to feeding and vaccination programs, regular health check-ups (including food and nutrition monitoring), timely diagnosis, medical referrals, and opportunities for free play with peers, all of which are critical for their development (Castillo and Marinho, 2022).

In this context, the aim of this study was to compare approaches to school closures in four South American (Andean Region) countries: Bolivia, Colombia, Ecuador, Peru. More specifically, we sought to: (1) describe the COVID impacts on the health and educational

wellbeing of school-age children and youth; (2) evaluate countries' approaches in regard to continuing education through the pandemic; and (3) discuss the rationale behind COVID-related school closures and each countries' approach to school closures.

Methods

Analytical framework

The Health Promoting School (HPS) approach aims to integrate health education and promotion to improve the wellbeing of students, staff, and the broader school community. The HPS framework is based on the World Health Organization's Ottawa Charter concept of health promotion (World Health Organization, 1986). Health promoting schools aim to provide a healthy environment through different means, including the school physical and social environment, school-based or -linked health services/programs, and school/community projects and outreach (Mannix-Mc Namara and Simovska, 2015). The approach is founded on the understanding that schools can serve as a setting for health, also in connection to the broader community, including health service providers, as a pathway to addressing the social determinants of health.

Analytic sample

We sought to include scientific and gray literature, including government documents and news that referred to school closures and their impact on children's health and wellbeing. We considered school to include primary and secondary schools, which excluded early childhood and higher education settings. To identify the documents, we conducted a wide internet search and an in-depth hand search in government websites of the four countries (Peru, Bolivia, Ecuador, and Colombia), in Spanish and English. We identified 97 documents, which were read and summarized independently by two team members in a database. Then, to select the documents for analysis, we met periodically to iteratively assess the relevance of each document in agreement by four team members. The final sample of documents included 75 documents (56 in Spanish and 19 in English), which were classified by country, geographical focus, type of school being referenced, population being referenced, and type of document (see Supplementary Table A1).

Content analysis

Qualitative analysis. To analyze the policy documents, we used an inductive approach, using thematic analysis (Braun and Clarke, 2006) through qualitative coding three steps (open, axial and selective coding). NVivo software Version 14 was used to facilitate the extraction and coding of text. Open coding involved analyzing text line-by-line to categorize it creating nodes for each of the following domains: (1) Reasons for and approaches to Covid-related school closures; (2) Approaches to continuing education throughout the COVID-19 pandemic; (3) Impacts of school closures on the health and wellbeing of school-age children. At this stage, the highlighted text was translated into English. In the next stage, we did axial coding, which involved relating categories by finding relationships and patterns. In the final stage of thematic analysis, we did selective coding, refining, and integrating categories to respond in narrative form to each research question, informed by the HPS framework on the role of schools and the relevance of the school setting to students' health and wellbeing.

Quantitative analysis. In addition to thematic analysis, we quantitatively assessed the frequency of mentions regarding the impacts of school closures on the health and wellbeing of school-age children in the documents. To describe the chronology of events and understand the policy decision, we produced the timeline of school closures (full or partial) and reopenings, using the UNESCO data dashboard (UNESCO, 2023) and information from the documents/public information available on government websites.

Results

Reasons for and approaches to COVID-related school closures

Across countries, the primary reason for closing schools was the risk of COVID-19 transmission (Aguirre Rea *et al.*, 2020; Ministerio de Educación de Colombia, 2020a; Ministerio de Trabajo y Promoción del Empleo de Peru, 2021; Ministerio de Educación de Bolivia, 2022f). However, each country had different protocols and specific reasons for closures—whether complete, partial, or through alternative measures. We did not find any information on economic or community wellbeing reasons unrelated to COVID-19 spread protection.

After the World Health Organization declared the pandemic on March 11, 2020, countries initiated COVID-19 prevention measures, including the closure of schools. Bolivia closed schools on March 12, Ecuador on March 13, and Colombia and Peru on March 16. Colombia was the only country that didn't implement a complete closure of schools. Colombia experienced a total closure for 23 weeks, followed by Peru with 34 weeks, Ecuador with 40 weeks, and Bolivia with 43 weeks (UNESCO, 2023).

In relation to partial closures, all four countries implemented strategies such as virtual, televised, and radio-broadcasted lessons (UNESCO, 2023). The country with the longest duration of partial school openings was Colombia with 54 weeks, followed by Ecuador with 51 weeks, and Peru and Bolivia with 47 weeks each. This is in line with the duration of school closures in each country. Figure 1 shows a timeline of COVID-19-related school closures across the four countries.

Approaches to continuing education throughout the COVID-19 pandemic

Continuing education throughout the pandemic proved to be a global challenge. Peru, Ecuador, Colombia, and Bolivia implemented various approaches to address this issue, all with the same understanding that education is a fundamental right for all children (Ministerio de Educación de Colombia, 2020b, 2020c; Ministerio de Educación de Bolivia, 2022f). The documents reviewed in this study highlight specific strategies employed at the time, and reflect variation in infrastructure, socioeconomic conditions, and regional disparities between the four countries. Table 1 provides an overview of approaches to continuing education during the COVID-19 pandemic.

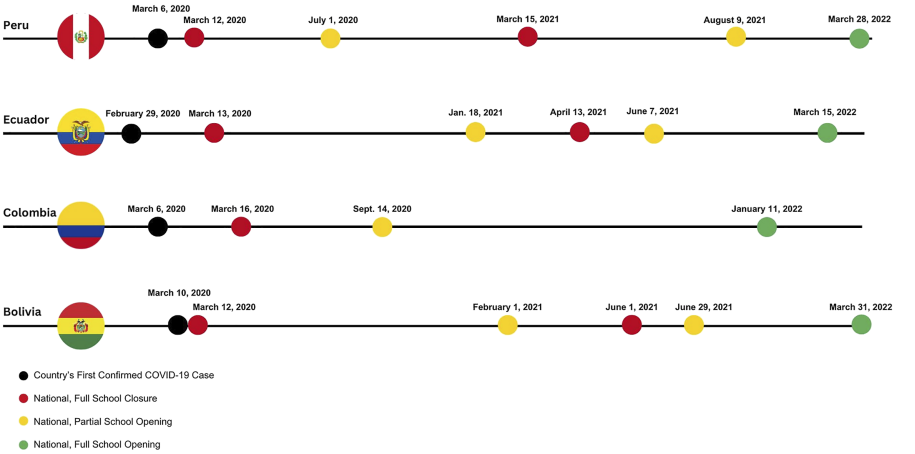

Figure 1.
Timeline for COVID-19 Related School Closures Across Four Countries

Source(s): UNESCO (2023a); figure created by authors

Approaches to continuing education	Peru	Ecuador	Colombia	Bolivia
Learning format				
Virtual classroom	✓	✓	✓	✓
Technological support during at-home learning				
Develop guidelines for improving home learning	✓	✓		
Distribution of paper materials for home learning		✓		✓
Distribution of tablets/computers for home learning	✓		✓	
Teaching via radio and TV	✓	✓	✓	✓
Teaching via smartphone		✓		✓
Additional supports for teachers and students				
Family-school communication spaces	✓		✓	✓
Recognizing rural and indigenous needs	✓	✓		✓
Reconnect isolated students	✓		✓	
Mental health promotion programs	✓		✓	✓
Expansion of school psychologist support	✓			
Home delivery of school lunch program			✓	

Source(s): Table created by authors

Table 1. Approaches to continuing education throughout the COVID-19 pandemic

For instance, Peru prioritized holistic education, focusing on family involvement and creating healthy communication spaces to address the diverse needs of students in rural areas, indigenous communities, people with disabilities, and migrants (Ministerio de Trabajo y Promoción del Empleo de Perú, 2021). To better identify and support students in need, Peru implemented measures for socio-emotional care for both students and teachers. Their comprehensive response targeted the recovery and continuity of students who had become disconnected from the educational system in the early stages of the pandemic (Ministerio de Trabajo y Promoción del Empleo de Perú, 2021). Their strategy titled, *Aprendo en Casa* ("I Learn at Home"), involved leveraging online learning platforms, including virtual classrooms, webinars, and digital resources such as Whatsapp (Hossain, 2021). Recognizing limited internet access for some students, Peru also tapped into television and radio programs for widespread educational outreach (Hossain, 2021). The transition to a virtual and long-distance learning environment was successfully executed, utilizing a robust infrastructure. Both rural and urban students unable to continue education through pre-existing home technologies were eligible to receive tablets from the Peruvian government (Hossain, 2021).

Peru's approach concentrated on student wellbeing, encouraging diverse learning experiences both inside and outside traditional settings (Ministerio de Educación de Perú, 2021). This approach recognized the individuality of students' learning styles and aimed to provide opportunities for all students (Ministerio de Trabajo y Promoción del Empleo de Peru, 2021; Ministerio de Educación de Perú, 2022b). Learning experiences incorporated a mix of face-to-face and virtual learning, while utilizing various spaces to enhance students' skills (Ministerio de Educación de Perú, 2021, 2022b; Ministerio de Trabajo y Promoción del Empleo de Peru, 2021). Pedagogical guidelines established by the Ministry of Education emphasized emotional intelligence within the learning process, promoting skills consolidation for greater socio-emotional support (Ministerio de Educación de Perú, 2021, 2022b; Ministerio de Trabajo y Promoción del Empleo de Peru, 2021). Additional measures addressed the unique needs of vulnerable student groups during shift to remote and/or hybrid learning, including students in key points of transition (ex: graduating from primary to secondary school), as well as students with limited access to radio, television, or internet (Ministerio de Trabajo y Promoción del Empleo de Peru, 2021; Ministerio de Educación de Perú, 2022a).

Recognizing mental health impacts of the pandemic, specialists in Peru recommended an increase in psychologists and/or tutors in schools to further support students, especially those dealing with separation anxiety due to COVID-19-related losses (Gobierno del Peru, 2022). Schools played a fundamental role in mental health support, establishing a community network of health care providers, teachers, and community members to provide necessary care to at-risk students.

In response to the evolving COVID-19 pandemic, Ecuador implemented the *Aprendemos Juntos en Casa* ("We Learn Together at Home") educational plan (Ministerio de Educación de Ecuador, 2020; Asanov *et al.*, 2021) Like Peru, Ecuador's Ministry of Education established guidelines for pedagogical and psycho-pedagogical support, focused on building and strengthening community (OECD, 2020). Ecuador developed a distanced education plan that included virtual classes on Zoom and Google Meet, complemented by television and radio programs (Aguirre Rea *et al.*, 2020). Printed texts were also delivered to remote communities to ensure a more inclusive approach to education. Some teachers also choose to send homework via email, though this approach required students without internet access to pay for downloads (OECD, 2020; Asanov *et al.*, 2021; Oviedo Oviedo, 2021).

Vulnerable populations in Ecuador, including indigenous populations, low-income families, rural and isolated communities (Napo and Orellana regions), and female students shared challenges with their counterparts in Peru (Asanov *et al.*, 2021). Digital access inequalities hindered socialization and inclusion, particularly for Ecuador's isolated indigenous communities, where about 10% had internet access at the pandemic's onset (OECD, 2020; Asanov *et al.*, 2021). Many of these students relied on in-person schooling not only for education but also as a fundamental source of food and care (OECD, 2020). To address these challenges, small, localized community schools were established to cater to their unique needs while providing support, care, and education through volunteer efforts (Alarcon and Collyns, 2021).

Preparing for a return to in-person schooling, Ecuador prioritized a comprehensive program for rural classroom water, sanitation, and hygiene improvement (UNICEF, 2020, 2021b). By January 2022, voluntary in-person classes resumed in urban areas (Primicias, 2022). However, the pandemic prompted many families to explore alternative education, such as YouTube or homeschooling, catering to the immediate needs of low-income families and those in remote communities (Oviedo Oviedo, 2021).

Similar to Peru and Ecuador, the Colombian government and the Ministry of Education swiftly developed a plan to continue education during the COVID-19 pandemic while prioritizing student, teacher, and family wellbeing. Circumstances of the time called for flexible, yet sustainable pedagogical strategies that addressed diverse needs of students, while minimizing health impacts from school closures.

In Colombia, families faced challenges during the transition to continued education during the pandemic, exacerbating existing inequities (Ben Brik *et al.*, 2022). Economic hardships led many youths to work, increasing responsibilities to support their families (Departamento Administrativo Nacional de Estadística – DANE, 2022). Additionally, the digital divide became increasingly apparent as some lacked access to essential technology and internet connectivity, hindering remote learning (Departamento Administrativo Nacional de Estadística – DANE, 2022). The necessary shift to online learning and homeschooling was guided by the collaborative efforts of teachers and parents. A more flexible education system was developed, alternating between in-person and remote schooling (Ministerio de Educación de Colombia, 2021; Secretaría de Educación del Distrito de Bogotá, 2022). Notably, support from education unions and organizations such as The Solidarity Fund for Education aided school closures and prevented pandemic-related dropouts (Presidencia de Colombia, 2020b).

Early in the COVID-19 pandemic, Colombia also prioritized its legal obligation to ensure the physical and psychological growth of primary and secondary students (Ministerio de

Educación de Colombia, 2020b; Presidencia de Colombia, 2020a). The country adjusted its school feeding program to ensure the physical and psychological growth of primary and secondary students. The modification extended the program to a home-based setting, providing pre-prepared school meals, rations for home preparation, and food vouchers (Galindo, 2020; FAO, 2023). While this expansion improved access to nutritious meals, challenges persisted for indigenous populations due to pre-established agreements and monitoring inadequacies. Furthermore, some students were unable to be supported through this expanded program due to various monitoring and tracking inadequacies (Galindo, 2020).

Recognizing the prevalence of smartphones, Bolivia emphasized mobile learning during the pandemic (Gallego *et al.*, 2023). However, establishing sufficient infrastructure for remote education, especially for rural and socioeconomically disadvantaged students, posed many challenges. Ideally, expanded, and widespread internet access would have greatly bolstered remote learning, yet the economic viability of state-funded internet posed an insurmountable hurdle, ultimately worsening the digital divide (McCommons, 2022). Bolivia addressed these issues (similarly to their other South American counterparts) through radio and television broadcasts, online learning modules, and initiatives to distribute paper materials and computers (Ministerio de Educación de Bolivia, 2022b). Furthermore, the Bolivian government and the Ministry of Education continued to urge municipal governments to take a lead role in ensuring the educational wellbeing of their communities (BolNews, 2022).

Despite various remote education modalities, Bolivia prioritized a swift return to in-person learning, considering student wellbeing and rights recognized by the Convention on the Rights of the Child (BolNews, 2022; Ministerio de Educación de Bolivia, 2022a, 2022d, 2022e, 2022b). Their approach to resuming in-person classes involved effective communication, teacher training, and psychological and socio-emotional support for students in all learning settings. Comprehensive health measures were implemented to avoid being "paralyzed" by the effects of COVID-19 pandemic (Ministerio de Educación de Bolivia, 2022f).

In line with these priorities, Bolivia allowed in-person classes to resume in areas without COVID-19 infections, particularly in rural regions of the country (Ministerio de Educación de Bolivia, 2022a). However, areas with high infection rates continued hybrid and remote learning. This decision was made to alleviate economic strain on families and reduce food insecurity, as students at home lacked access to the school feeding program (Aguilar and Chirino, 2021). For instance, a rural school with limited internet access reopened in February 2021, with biosecurity protocols developed in consultation with community stakeholders. Return to in-person classes prioritized vaccinating school personnel (Ministerio de Educación de Bolivia, 2022a, 2022c, 2022f).

During the COVID-19 pandemic, all four countries faced challenges in continuing education, particularly due to the digital divide, which emerged as a significant issue particularly in rural and low-income areas. Simultaneously, overcoming obstacles in teacher's virtual expertise proved challenging, necessitating additional initiatives to equip educators with essential skills for effective remote and hybrid teaching.

In the subsequent section of this paper, we explore the distinct impacts of school reopening on the health and wellbeing of students. Notably, some policies and practices of this time disproportionately affected vulnerable populations, including rural communities, lower-income families, indigenous groups, migrants, and female students. Limited internet access and the added responsibility of contributing to family support added layers of complexity to the reopening of schools in these areas.

Impacts of school closures on health and wellbeing of school-age children

Table 2 provides a summary of how many documents consider the impact of school closures on the health and wellbeing of school-age children. Economic impacts were frequently

Table 2.
Impacts of school closures on school-age children*

	Peru (19 total)	Ecuador (20 total)	Colombia (19 total)	Bolivia (17 total)	Total Documents
Economic impacts	5.3% (1/19)	40% (8/20)	10.5% (2/19)	23.5% (4/17)	20% (15/75)
Learning impacts	26.3% (5/19)	40% (8/20)	36.8% (7/19)	47% (8/17)	37.3% (28/75)
Mental health impacts	57.9% (11/19)	35% (7/20)	31.6% (6/19)	29.4% (5/17)	38.7% (29/75)
Physical health impacts	36.8% (7/19)	25% (5/20)	21% (4/19)	35.3% (6/17)	29.3% (22/75)

Note(s): * Counts are based on total *documents* mentioning each impact. Please note that documents may count towards one or more of the impact categories
Source(s): Table created by authors

mentioned in Ecuadorian (40%) and Bolivian (24%) documents, while learning impacts were more common in Bolivian (47%) and Ecuadorian (40%) documents. Mental health impacts were predominant in Peruvian (58%) and Ecuadorian (35%) documents, while physical health impacts were more frequent in Peruvian (37%) and Bolivian (35%) documents. Overall, mental health (39%) and learning (37%) were the most mentioned impacts.

Schools serve not only as places for formal education but also as crucial spaces for the socialization and recreation of youth and adolescents. Global studies indicate that during COVID-19 lockdowns, young individuals experienced heightened levels of irritability, worry, fear, inattention, motor restlessness, nervousness, loneliness, and sleep difficulties (Panda *et al.*, 2021). In Peru, a cross-sectional study from March to April 2021 found that approximately 60.3% of secondary students experienced post-traumatic stress during the pandemic (Fernandez-Canani *et al.*, 2022). Another study among Peruvian students aged nine to eighteen revealed a significant increase in depressive symptoms during the pandemic (Barendse *et al.*, 2023). The absence of schools highlighted the traditional role they play in identifying students' mental health needs, emphasizing the vital role of community networks in providing essential support (Fernandez-Canani *et al.*, 2022).

> The COVID-19 outbreak has generated closures of playgrounds, schools, recreational areas, and beaches. That, in addition to character, age, and underlying health conditions of adolescents, predispose them to a higher risk of posttraumatic stress. [(Fernandez-Canani *et al.*, 2022), Peru]

> Schools play a fundamental role, so consideration should be given to establishing a community support network, especially identifying children and adolescents at higher risk of mental disorders. [(Fernandez-Canani *et al.*, 2022), Peru]

The COVID-19 pandemic has impacted approximately 9.9 million students in Peru, with certain groups, including those in rural areas, indigenous communities, migrants, and individuals with physical or intellectual disabilities, experiencing disproportionate effects. Students encountering academic challenges or struggling with the shift to remote learning face an elevated risk of mental health issues. A survey by Peru's Ministry of Health revealed that 32.8% of parents reported their school-age child did not enjoy virtual learning, and 11.2% encountered difficulties adapting to virtual platforms (Ministerio de Salud de Perú, 2021).

Resilience of parents emerged as a crucial factor in predicting the psychological wellbeing of children (Caballero-Peralta *et al.*, 2022). However, the lasting economic impact of COVID-19 created instability in some families, causing financial strain on parents. Structural issues, including unemployment, chronic poverty, inequality, and insufficient public spending on education and health, influenced family dynamics and impeded students' successful

participation in continuing education at home. Moreover, financial difficulties faced by families with students in private education led to a surge in transfer requests to the public school system in Peru, placing additional pressures on their limited resources (Ministerio de la Mujer y Poblaciones Vulnerables, 2021).

In Ecuador, school closures impacted approximately 4.5 million students. Children, adolescents, and families from vulnerable populations, akin to the situation in Peru, bore the brunt of adverse effects, particularly those living in poverty, lacking internet access, having disabilities, being migrants, or women (Castro, 2021). Moreover, students confronted barriers to accessing education digitally, raising concerns about socialization and inclusion for these students as they navigated virtual education (Cedeño-Solorzano *et al.*, 2021).

While internet access was available in many Ecuadorian (particularly among urban, upper-middle income) households, students with restricted access to in-person education and limited resources for engaging in virtual learning at home faced many difficulties (UNICEF, 2021b). Moreover, some students lacking internet access had to spend several hours each week traveling to meet with teachers and collect course materials (Castro, 2021). In urban areas with typically better internet connectivity, financial constraints hindered the affordability of internet services for some families, further impeding students' ability to meet coursework requirements (Castro, 2021). These challenges not only affected academic performance but also took a toll on students' mental health, adding an extra layer of stress and uncertainty to their educational experiences.

In a phone survey conducted among Ecuadorian secondary students from March to April 2021, the primary concern identified by respondents was disruptions in schooling due to the pandemic, closely followed by feelings of social isolation (Asanov *et al.*, 2021). While the survey suggests that most respondents were coping with changes to education, 16% reported mental health scores indicating major depression, with a higher prevalence among individuals from vulnerable populations (Asanov *et al.*, 2021).

> We do see higher levels of depression for females, and for indigenous students. Happiness does have a statistically significant wealth gradient, with students from wealthier households, with internet access, and more educated mothers being more likely to be happy. [(Asanov *et al.*, 2021), Ecuador]

Furthermore, the COVID-19 pandemic in Ecuador led to observed losses in interpersonal relationship skills, attributed to disruptions in face-to-face interactions due to lockdowns and school closures. The limitations on in-person socialization, spanning educational settings and community gatherings, have likely impacted crucial social skills, including communication, empathy, and teamwork.

> We've seen students who lost relationship skills. They suffer from panic attacks, and struggle with anxiety when speaking in front of their peers. They fear not having friends and not being accepted in the group. [(UNICEF, 2022), Ecuador]

The emotional challenges observed among students in the region, marked by heightened levels of anxiety and stress amid significant educational changes, are reflective of a broader trend. Mirroring findings in Peru, studies conducted in Colombia revealed that parental resilience and financial stability significantly influenced student wellbeing during the pandemic. Parental unemployment, low educational attainment, family income, and even parental physical activity levels contributed to students' mental health during this period. As primary caregivers for primary and secondary students, parents acknowledged the mental health challenges faced by their children throughout the pandemic.

> Socio-economically disadvantaged families fared worse in mental health during the early phases of the COVID-19 pandemic compared with families with more social and economic resources. [(Ben Brik *et al.*, 2022) Colombia]

Results from the June to August 2021 Large Integrated Household Survey (GEIH) found that 33.6% of households cited not being able to pay the school fees or tuition due to reduced financial income. 3.2% reported children needing to work to better support the household (Departamento Administrativo Nacional de Estadística – DANE, 2022). In this context, many students faced greater difficulties in concentration and anxiety related to school responsibilities, putting additional stress on themselves and their families.

> Families with adolescents may be especially vulnerable to mental health sequelae stemming from the pandemic, as both parents of adolescents and adolescents themselves fared worse with respect to the psychological outcomes examined than families with younger children. [(Ben Brik *et al.*, 2022) Colombia]

These challenges were amplified for vulnerable populations. Approximately 21.8% of Colombian households lacked internet access for virtual classes, and 14.8% faced barriers to education, not having technological devices in the home. A smaller percentage (2.6%) lacked access to a radio or television, limiting participation in distance education initiatives (Departamento Administrativo Nacional de Estadística – DANE, 2022).

School closures disrupted not only formal instruction but also other institutional efforts such as school meal programs. The absence of school meals placed an additional financial burden on households and highlighted the interconnected nature of education and child wellbeing during the pandemic. In Bolivia, school closures similarly had far-reaching repercussions on the health and wellbeing of children. Particularly noteworthy was the impact on students who were unable to attend school, as they were deprived of access to the *Alimentación Complementaria Escolar* ("Complementary School Feeding") or ACE program. This program played a crucial role in delivering essential food and nutrition to primary and secondary students. Our study identified this as one of the most significant challenges to wellbeing. Across countries, there was a notable rise in the concern for food insecurity among students and their families during the pandemic.

In Bolivia, there was evidence of broader societal impacts, particularly in the country's economy and the wellbeing of women (Escalante and Maisonnave, 2021). The pre-existing gender disparities in the labor market were further exacerbated, with sectors predominantly occupied by women, such as food services, education, health, social services, and private domestic activities, facing increased vulnerability. Additionally, the surge in illness, coupled with measures like social isolation and school closures, led to a rise in unpaid work within the non-commercial sphere, disproportionately affecting women. The ripple effect of economic strains and increased unpaid work has implications for the families and children of affected women, potentially impacting access to resources and support for students in times of crisis.

Similar to reports from Peru, Ecuador, and Colombia, mental health emerged as a noteworthy concern in Bolivia during the pandemic. The closure of schools and the imposition of social isolation were observed to significantly elevate rates of depression and anxiety across countries, especially within more vulnerable households, including those of economically disadvantaged children and indigenous communities. In Bolivia, children expressed feelings of sadness toward the new "normal" that came with the COVID-19 pandemic (Gallego *et al.*, 2023).

> One of the most recurrent feelings expressed by the children during the interviews was sadness. This sadness was the result of the realization that the activities they used to do before and the world they knew was changing. There was also sadness and fear of losing their family members. [(Gallego *et al.*, 2023), Bolivia]

Amidst these formidable challenges, the same study unveiled certain positive outcomes stemming from the upheavals caused by the COVID-19 pandemic (Gallego *et al.*, 2023). Notably, there has been a discernible increase in family time, as individuals and households

adapted to new norms and restrictions. Moreover, the constraints on traditional activities led to a surge in time spent outdoors as families sought alternative ways to engage with each other and their surroundings. Table 3 provides additional representative quotes from the documents reviewed regarding impacts of school closures.

Discussion

This study traversed the educational landscapes of Peru, Ecuador, Colombia, and Bolivia during the challenging times of the COVID-19 pandemic, shedding light on both shared experiences and distinctive features across these countries. Our study encompassed the various ways countries employed for continuing education, along with discernible impacts on student and family economics, learning, mental and physical wellbeing.

The findings of this study underscore that for the most part countries prioritized epidemiological reasons throughout the pandemic, rather than centering the wellbeing of children. The COVID-19 pandemic highlighted pre-existing health inequities among countries, emphasizing the necessity for interventions and strategies to counteract the pandemic while considering each country's preconditions. An example of this was the use of television and radio to disseminate classes due to the limited coverage of the internet and electronic equipment in certain countries. These findings are similar to those of Garcia *et al.* (Instituto Nacional de Salud, 2024), who analyzed the pandemic response based on GDP.

The interventions aimed at continuing children's learning were similar in all four countries (e.g. virtual learning). However, recognizing the importance of the wellbeing of the child and the family, mental health, and the needs of populations, such as indigenous or rural communities, did differ among them. Each country prioritized these aspects according to available resources, as evidenced by the distribution of school meals at home to children in Colombia or the increased support from psychologists for children in Peru.

We categorized school closure impacts into economic, learning, and health and wellbeing domains. The main economic impact involved changes in budgeting and family dynamics. Shifts in the allocation of household resources were noted as children stayed at home. For example, in Colombia, households adjusted expenses, allocating more resources to nutrition as children no longer received school meal subsidies. In Bolivia, increased unemployment and unpaid work among women resulted from new caregiving needs at home.

The major health and wellbeing impacts in the four countries centered on food security and mental health. School closures, especially in nations where children received meals at schools, led to rising malnutrition rates, particularly among vulnerable populations. This emphasizes the broader role of schools in addressing inequalities in vulnerable populations beyond academics. Our findings also support Lustig *et al.*'s theory that the long-term impact of school closures during the pandemic will lead to a reduction in opportunities for the region, increasing inequality by placing more people in vulnerable conditions (Lustig *et al.*, 2023). In the countries studied here, disruptions in education due to holidays, protests, or political events are common. They lack a systematic approach to handle such educational disruptions and, therefore, faced greater challenges during the COVID-19 pandemic (Gallego *et al.*, 2023). This was particularly concerning with regard to educational access and equity, with the potential of widening the learning gap between socioeconomic groups.

Applying the HPS standards 6, 7 and 8 (Table 4) (World Health Organization and UNESCO, 2021), focusing on school social-emotional and physical environment, and school health services, it is possible to see what were the priorities of governments that upheld the HPS principles. The four countries had some policies in common such as those aimed at providing social-emotional support (Standard 6) for students, although only Peru hired additional tutors to give the support and created a community network for at-risk students.

Economic impacts
"The global and national economic crisis caused by COVID-19 has lingering effects. Structural problems predominate such as: (i) unemployment and job insecurity, (ii) chronic poverty and inequality, high incidence of criminal acts; (iii) low levels of public spending on education and health." [Peru]
"The lack of smartphones, internet connectivity and a drop in income for their parents became a major obstacle to their continued schooling." [Ecuador]
"However, the persistent digital divide could especially penalize the poorest individuals or those who live in rural areas in their access to teleworking and online education." [Ecuador]
"In the moving quarter June–August 2021, 33.6% of households reported not being able to pay the pension due to reduced economic income." [Colombia]
"In 3.2% of households, children and adolescents need to work to support the household economy." [Colombia]
"Measures such as social isolation and school closures lead to an increase in unpaid work in the non-commercial sphere, overburdening women." [Bolivia]
Learning impacts
"This is how the proposal of the "new school" arises, which has as its center the well-being of the student and seeks to broaden the vision towards the development of diverse experiences, inside and outside school, that promote students to build their own learning, put their skills into play and become increasingly autonomous in their learning processes." [Peru]
"In the most disadvantaged households, parents tend to have lower skills to accompany and support the learning process." [Ecuador]
"The lowest wealth quartile, indigenous students, students whose mothers have secondary education or lower, and students without internet access – have less access to remote learning technologies, and are less likely to be doing schoolwork." [Ecuador]
"The most vulnerable children and adolescents – those with disabilities, those living in poverty, refugees and migrants, and especially girls – face greater barriers to education." [Ecuador]
"26.8% of households reported that they were unable to pay tuition due to reduced economic income as a result of the pandemic . . . 21.7% of households reported that the educational institution offers virtual classes, but the household does not have Internet access . . . 20.6% of households have children who need to work." [Colombia]
"For the Recovery of the Right to Education for all", since this constitutional right was arbitrarily violated by the early closing of the school year in 2020, a negative impact that caused serious consequences in the educational process of the students." [Bolivia]
Mental health impacts
"Schools play a fundamental role, so consideration should be given to establishing a community support network, especially identifying children and adolescents at higher risk of mental disorders." [Peru]
"We do see higher levels of depression for females, and for indigenous students." [Ecuador]
"We see that 16% of students have mental health scores that indicate major depression, while 68% are happy. Although we do not have pre-COVID-19 measures for these same students, this level of depression is substantially higher than the 6.2% rate." [Ecuador]
"Socio-economically disadvantaged families fared worse in terms of their mental health during the early phases of the COVID-19 pandemic compared with families with more resources. Factors such as parental unemployment, low parental educational attainment, low family income, single parenthood, and residing in a very small living space." [Colombia]
"Caregivers from higher class backgrounds are more likely to report feeling anxious about students in their homes." [Colombia]
"One of the most recurrent feelings expressed by the children during the interviews was sadness. This sadness was the result of the realization that the activities they used to do before and the world they knew was changing. There was also sadness and fear of losing their family members." [Bolivia]
"A common feeling experienced by the children as a result of their inability to see, play and hug friends and relatives as they used to. They also expressed deep fears and anxieties about the pandemic including getting sick or losing people they love." [Bolivia]
Physical health impacts
"The specialist said that the school, in addition to being the place of formal education, is one of the most important spaces for socialization and play for boys, girls and adolescents between 3 and 17 years old." [Peru]
"For students from the most vulnerable families, going to school is a fundamental source of food and care." [Ecuador]

Table 3.
Impacts of school closures on school-age children

(*continued*)

"Children, adolescents, and their families have suffered the main consequences of the closure, especially those who live in poverty, do not have internet access, have disabilities, are migrants or are women." [Ecuador]
"School feeding is a guarantee of access and permanence of children and adolescents in the educational system, recognized in the Colombian legal framework; (ii) one of its main objectives is to guarantee classroom attendance in decent conditions, without students being exposed to hunger and malnutrition and, therefore, avoiding school dropouts; Likewise, it contributes to adequate physical and psychological growth and development; it promotes the highest possible level of health; it enhances the attention of minors to learning and increases school enrollment." [Colombia]
"The students, who are unable to carry out their educational activities normally, do not have access to the Alimentación Complementaria Escolar ("Complementary School Feeding") (ACE) program." [Bolivia]

Source(s): Table created by authors

Table 3.

Peru	Ecuador	Colombia	Bolivia
Standard 6: School social-emotional environment			
6.1. School policies set clear directions for the desired social–emotional environment in the school, including how to make any necessary improvements and feedback			
Policy stressing schools must provide social-emotional support for students Creation of a community network for at-risk students	Policy stressing schools must provide social-emotional support for students	Policy stressing schools must provide social-emotional support for students	Policy stressing schools must provide social-emotional support for students
6.2. The school has made adequate investment and has resources to promote a safe, supportive social–emotional environment			
Government hired additional tutors to give support to students			
Standard 7: School physical environment			
7.1. School policies ensure a safe environment for all members of the school community that is aligned with national policy			
Use of television and radio broadcasts, and printed materials for students	Use of television and radio broadcasts, and printed materials for students	Return to in-person lessons where transmission rates were low in rural areas and with a hybrid schedule in urban areas	Use of television and radio broadcasts, and printed materials for students
Standard 8: School health services			
8.4. The school has made dedicated investment (e.g. resources, training, funding) in school health services, including school nutrition and food provision			
	Some localized, community-based efforts to provide food to schools students	Central government made efforts to provide food in alternative ways to students (including, e.g. vouchers)	Some rural schools reopened with the aim of reducing food insecurity

Source(s): Table created by authors

Table 4.
Health promoting school standards 6, 7 and 8 applied to the analysis of school policies during the COVID-19 pandemic in Peru, Ecuador, Bolivia and Colombia (empty spaces denote lack of evidence)

Colombia had a more flexible approach than other countries to in-person lessons in a safe physical environment (Standard 7), with students returning to school when transmission rates were low in rural areas and using a hybrid schedule in urban areas. Peru, Ecuador, and

Bolivia used alternative means to provide didactic resources to students, which in middle-income countries such as these had the potential to reduce school-related anxiety. In Peru, Bolivia and Colombia, governments-initiated actions to provide school-based nutrition (Standard 8) (Pan American Health Organization, 2022).

Recognizing the importance of student perspectives, future research should include dedicated spaces (both in-person and virtual) for students to share their experiences during the pandemic and throughout their continuing education. Reduced interactions between students and teachers, compounded by geographic and cultural diversity and varying access to technology, contribute to this complexity. As future research assesses the long-term impact of the pandemic on student resilience and learning development, incorporating student perspectives not only enriches our understanding of the challenges faced, but also provides insights for future educational strategies.

This study has several limitations. First, our research focused on a particular set of documents, and it may not capture the full spectrum of relevant information in different contexts or regions of the countries studied. Second, our study included four different coders, utilizing NVivo14 software, with diverse language backgrounds and coding capabilities, which may introduce bias into our findings. The nuances of language and coding expertise among coders may have influenced the consistency and accuracy of our coding process, but these processes were double-checked by the researchers to ensure uniformity. However, our research team included speakers of both Spanish and English languages, expanding the reach of the documentation we could include in our analysis. Accessing primary sources might yield more precise and nuanced insights. These limitations are crucial to consider when interpreting the results of our study. Future research endeavors should address these constraints to enhance the robustness and applicability of findings in the field.

Conclusion

School closures have been described as "catastrophic" to the health and wellbeing of children around the world (UNESCO, 2021; UNESCO, 2023). Until recently, a *health promoting schools* (HPS) perspective did not consider the impossibility of in-person teaching at a global scale. In unraveling the approaches and impacts of the COVID-19 pandemic in the four countries of the study(Peru, Bolivia, Ecuador and Colombia), the study highlights the direct and broader implications of school closures for the health and wellbeing of school-aged students.

Document analysis suggests that governments expressed concern about HPS principles, but economic constraints hindered compliance. Given that schools were considered potential sources of community-wide infection, education shifted to predominantly virtual methods for more than two years. A few attempts were made to reintroduce face-to-face teaching during that time Recent updates to the HPS framework (World Health Organization and UNESCO, 2021) are laudable, but the study underscores the difficulty of implementing such ambitious standards in middle-income countries due to resource limitations and within-country disparities.

Our study highlights the importance of context-specific interventions and the apparent absence of approaches specific to geographical location type of school and population. As we navigate the post-pandemic era, lessons gleaned from these diverse experiences should inform policies and practices aimed at fostering resilient and inclusive educational systems. The pandemic exacerbated issues such as food insecurity, highlighting the importance of Health Promoting Schools (HPS) in bringing into focus and addressing such vulnerabilities. In the Andean region, where virtual education has been relied upon for educational access and safety, high levels of anxiety, connectivity issues and dissatisfaction with virtual learning highlight the need to consider face-to-face teaching as a fundamental aspect of the HPS framework. Reintegration strategies for students who drop out during the virtual phase are also crucial. While digital technologies are emphasized in the HPS standards, exploration of complementary

media such as television and radio could benefit less digitally-resourced countries. Special attention should be given to vulnerable groups, such as migrant children, who continue to attend school despite challenges. Finally, this study suggests that even without the explicit adoption of HPS, governments should prioritize the integration of health services into the school system.

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	Peru (19 total)	Ecuador (20 total)	Colombia (19 total)	Bolivia (17 total)	Total
Region					
Country-wide	16	15	16	15	62
Urban	3	2	3	0	8
Rural	0	3	0	1	4
Suburban	0	0	0	1	1
Institution being referenced					
Public education	14	15	17	13	59
Not specified	5	2	1	1	9
Remote education	0	3	1	3	7
Private education	0	0	0	0	0
Population being referenced					
General population	18	15	18	12	63
Low-income	1	1	0	3	5
Indigenous	0	2	0	1	3
Afro-descendant	0	2	0	0	2
Women	0	0	0	1	1
At-risk health	0	0	1	0	1
Literature classification					
Government news source	5	2	6	10	23
Official government document	10	3	5	2	20
Journal	4	6	3	5	18
News source	0	7	2	0	9
International NGO	0	2	1	0	3
Local NGO	0	0	2	0	2

Source(s): Table created by the authors

Table A1. Document classifications overall and by country

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