



Original article

Coping Strategies Among Adolescents During the COVID-19 Pandemic: A Cross-Cultural Exploration



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A B S T R A C T

Purpose: To identify the patterns of stressors associated with the COVID-19 pandemic among adolescents living in different cultural settings and to explore how adolescents cope with such stressors, particularly by type of stressor, site, and gender.

Methods: The study was based on focus group discussion data from 9 urban poor communities in Kinshasa (Democratic Republic of Congo), Blantyre (Malawi), Shanghai (China), Semarang and Denpasar (Indonesia), New Orleans (USA), Ghent (Belgium), São Paulo (Brazil), and Santiago (Chile). Translated transcripts from the focus group discussions were uploaded into ATLAS.ti (Version 9.1) and analyzed using an inductive thematic analytical approach to code and identify themes related to the primary objectives.

Results: Adolescents in Blantyre and Kinshasa reported stressors primarily related to economic constraints and hardships, whereas adolescents in other sites were more likely to report stressors related to school lockdowns. Patterns of coping strategies also loosely aligned with these differences, as adolescents in Blantyre and Kinshasa were also more likely to report using religious coping strategies compared to any other site. Still, the most common coping mechanism mentioned across sites was obtaining social support, with support from friends and family being the most dominant.

Discussion: A comprehensive understanding of adolescent stressors and coping mechanisms is valuable for promoting internal resources and positive outcomes for adolescents. Given that adolescents' stressors and types of coping strategies varied primarily by socioeconomic factors, interventions that aim to bolster positive coping among adolescents need to consider the local context and available resources.

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IMPLICATIONS AND
CONTRIBUTION

Sources of stress from the COVID-19 pandemic vary primarily based on cultural and socioeconomic environments. To cope, adolescents utilize various strategies that align with their stress patterns. The most frequently mentioned coping strategy was reaching out to family and friends, highlighting the importance of supportive relationships for adolescents during times of crises.

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The COVID-19 pandemic has had enormous impacts on the lives of adolescents around the world in an unprecedented manner. In January 2020, various countries started implementing national and regional lockdowns and social distancing strategies to protect from the risk of infection. As part of these lockdown strategies, the closure of schools, educational institutions, and activity spaces has been particularly impactful on children and adolescents in stressful, potentially traumatic ways. The home confinement of adolescents has already been attributed to several adverse health outcomes, including increased depression, anxiety, and stress [1,2]. A study conducted in China 2 weeks after the outbreak, reported that nearly 15% of adolescents exhibited post-traumatic stress disorder symptoms [3]. Indeed, previous studies have shown that compared to adults, adolescents are more vulnerable to traumatic and stressful events and are prone to developing mental health problems when faced with such experiences [4].

Coping is essential in understanding how adolescents react to the changes and stressors they experience. The relationship between adolescent coping skills and health risk behaviors has been extensively studied, demonstrating consistent risks when adolescents lack specific coping abilities, including psychological distress, suicide attempts, substance use, and high-risk sexual behaviors [5]. *Coping* has been defined as an act (behavior) and effort (cognitive) to prevent or diminish threat, harm, or loss or to reduce the distress that is often associated with stressful experiences [6]. While many different coping measures exist, they are often categorized as problem-focused, emotion-focused, social support, religious coping, and cognitive reframing [7].

Problem-focused coping describes direct efforts to solve the problem, whereas emotion-focused coping involves attempts to regulate the emotional responses to a stressful situation [8]. Social support, or the support received from others that provide stress-related interpersonal aid, has been found to function as coping assistance in the sense that active participation of significant others can influence individuals to better manage the stressors in their lives by opting for certain positive, more effective, coping strategies [9]. Religious coping, meanwhile, includes religiously framed cognitive, emotional, or behavioral responses to stress [10], and cognitive reframing is a psychological technique that consists of identifying and then changing the way situations, experiences, and/or emotions are viewed [11]. Among the studies that have so far been conducted among adolescents during the pandemic, researchers have noted that different types of positive coping strategies (e.g., positive appraisal and thinking, distancing, problem-solving, and help-seeking) are associated with improved mental health status and well-being [12,13]. Yet, culture can often shape the type of stressors an individual is likely to experience and the type of coping strategies that an individual utilizes in any situation [14,15]. To date, there is limited understanding of how adolescents across different cultural settings use different coping strategies to deal with the stressors of the pandemic.

This paper addresses this gap using data from the Global Early Adolescent Study (GEAS), a longitudinal study conducted in 9 countries across 5 continents among adolescents in low-income urban settings. To specifically examine the impact of COVID-19 on the health and well-being of adolescents, a substudy of the GEAS was awarded in 2020. Drawing on the qualitative data gathered from focus groups included in the GEAS COVID-19 substudy, the primary objectives for this paper are to (1)

identify the patterns of stressors associated with the pandemic among adolescents across different cultural settings and (2) explore the various coping strategies that adolescents employed to help alleviate their stressors. Even in a postpandemic world, as societies continue to adapt to the changing aftermath and start to prepare for a possible emergency crisis that may come in the future, it remains essential to understand the primary stressors and coping strategies employed by adolescents across different settings to promote a healthier global future.

Methods

Sampling and recruitment

This study uses focus group discussion (FGD) data from 9 urban poor communities in Kinshasa (Democratic Republic of Congo), Blantyre (Malawi), Shanghai (China), Semarang and Denpasar (Indonesia), New Orleans (USA), Ghent (Belgium), São Paulo (Brazil), and Santiago (Chile). In all sites except Shanghai, São Paulo, and Santiago, the sampling frame was GEAS participants who were already part of the longitudinal study. In Shanghai, the younger group (14–15 years) were GEAS participants, and older (16–18 years) adolescents were from a nearby high school since the older GEAS participants had changed schools across the city. Adolescents were eligible to participate in the FGDs if they were 14–18 years. A total of 4 FGDs were conducted in almost all sites, except for Ghent, which conducted 2 mixed-sex FGDs, and São Paulo, which conducted 7 (5 mixed-sex, one with boys-only, and one with girls-only). Each FGD in all sites had between 6 and 10 participants, yielding a total of nearly 250 adolescents.

All sites followed a standard protocol and used the same FGD guide, but recruitment and data collection procedures varied by site. Data collection for the FGDs occurred in 2020 and 2021 in schools, community centers, or online. In Kinshasa, Blantyre, Shanghai, Santiago, and São Paulo, since the COVID-19 cases were relatively low during data collection, the FGDs were conducted in person in accordance with all COVID-19 precautions and national or local regulations. In Semarang, Denpasar, New Orleans, and Ghent, the FGDs were conducted online using the Zoom video conferencing platform (Table 1).

Data collection

Trained facilitators in each site conducted the interviews. All conversations were audio-recorded, transcribed, and translated from the local language to English. The FGDs elicited information about adolescents' experiences during the COVID-19 pandemic relating to their knowledge, attitudes, sources of information, preventative behavior practiced, current and future impact of COVID-19, and types of support needed. For this study, we focused on questions asking adolescents about their primary stressors resulting from the pandemic and how they were coping with them.

All partner sites applied for and received ethical approval from their local ethical boards, with the exception of Kinshasa where IRB approval was obtained from both Johns Hopkins Bloomberg School of Public Health and the Kinshasa School of Public Health.

Analysis

All translated transcripts were uploaded into ATLAS.ti (Version 9.1) for analysis [16]. An inductive thematic analytical

Focus group stratification and participants by site

Site	# Of FGDs	Stratification	# Of participants	Modality	Timing
Ghent, Belgium	2	N/A	10	Online	September–October, 2020
São Paulo, Brazil	7	Sex	35	In person	September, 2021
Santiago, Chile	2	Sex	16	Online	February, 2021
Shanghai, China	4	Sex and age	40	In person	June, 2020
Kinshasa, DRC	4	Sex	31	In person	November, 2020
Denpasar and Semarang, Indonesia	8	Site, sex, and SES	59	Online	August, 2020
Blantyre, Malawi	4	Sex and age	37	In person	June–July, 2021
New Orleans, USA	4	Sex and SES	21	Online	November 2020

approach was used to code and analyze emerging themes across different cultural contexts and assess similarities and differences based on the study's objectives [17,18]. Two coders each read through 4 transcripts to develop an initial set of codes; these codes were then revised as more transcripts were read and coded. After all relevant text was assigned to a code and saturation was achieved, codes were further discussed with each site team to ensure they were reflective of the correct nuances and interpretations. Feedback from each site was then used to finalize the codes and develop an overarching code tree. Once coding was completed, individual country and cross-site matrices were created for each code based on stratification to identify thematic patterns across sites and gender. For further details about the methods, please refer to Ramaiya et al. 2024 [19].

Primary stressors associated with the pandemic

In Shanghai, most male focus group participants reported that the primary source of stress was online schooling and the fear of academic decline.

Additionally, adolescent boys and girls in both sites mentioned the fear of dying as a significant source of stress.

Types of key stressors among adolescents by city

[illegible]

has been particularly stressful for her that some of her relationships have been negatively impacted during the pandemic.

Types of coping

To cope with the sources of stress mentioned above, adolescents discussed various coping mechanisms often aligned with the stress patterns. [Table 3](#) highlights the key strategies reported by adolescents across different sites.

Problem-focused coping

Problem-focused coping includes activities aimed at directly removing the source of stress. In Shanghai, adolescents discussed the importance of being mentally prepared and setting goals for themselves to cope with the fear of academic decline.

We should relax first and then we can study when we are energetic (girl, Shanghai)

In Indonesia, adolescents mentioned using the internet to search for clarity and specific help with their homework, and if they could not find the answers on Google or YouTube, they would often ask their friends and family.

Sometimes I watch YouTube to see tutorials. And there's a source on YouTube, and it helps so much. And, the explanation helps us so much, unlike the ones sent by the teacher (girl, Denpasar)

One adolescent also mentioned joining a tutoring session to help her gain more understanding of the homework topics. Some adolescents described needing to use a family member's internet connection (i.e., hotspot) to access online resources.

In Blantyre and Kinshasa, where the primary sources of stress were poverty-related, adolescents mentioned external organizations providing food and necessities to help with their difficulties.

Table 3
Most reported types of coping strategies by city

[illegible]

We had rice bags that Mom and Dad had brought to the house to help us through this period, and it was not easy for my brothers because eating rice was like doing nothing for them. (girl, Kinshasa)

Emotion-focused coping

Emotion-focused coping, involving strategies to regulate the emotional responses to stressors, was common among adolescents in New Orleans, Indonesia, Shanghai, Santiago, São Paulo, and Kinshasa. Most of these coping mechanisms involved listening to music, eating snacks, playing games, singing, reading books, developing new hobbies (e.g., crafting), or spending time on their phones to distract them from the stresses they were experiencing.

When I am sad, what I like to do is just listen to music that represents me at the moment. There is this saying that when you are sad, you should listen to joyful music to make you happy. But I listen to sad music because when I cry, I feel like I let out everything I have, and the problems go away. (girl, Santiago)

Sometimes I like to tell a story in a draft to vent out so I will not be preoccupied with the pandemic. So, I write it in a draft, but I do not publish that. But it is good enough to calm me down. (girl, Denpasar, Indonesia)

I would play with [my nephew] to distract my head. Then I would be in the backyard with my cousin, watch a movie, do something, play something, and try to distract myself as much as possible so as not to focus on sadness because when you do that, you look around and "Wow, everything is stuck here." (girl, São Paulo)

Finding humor in social media posts also helped to ease fear and anxiety in Kinshasa. Both boys and girls reported laughing at some of the new preventive measures people used to protect themselves from COVID-19.

Wearing masks. It is as if people were in a ninja movie. So, it made me laugh so hard. Also on social networks, we would post images of people who wore all sorts of masks made of leaves, etc., and when we added gloves, it made me laugh a lot. (girl, Kinshasa)

Social support

Of all the types of coping mechanisms discussed among adolescents across sites, receiving support from family members and friends was the most commonly mentioned. Across countries, adolescents frequently described the importance of staying connected to friends to help cope with all the stresses related to the pandemic. In Indonesia, Shanghai, and Blantyre, adolescents mentioned the importance of friends to help them relieve stress and help with homework. In Blantyre and Kinshasa, the boys primarily described turning to friends to help with stressors.

When I have worries, I go to my friend for help. If I cannot solve my worries, I need to share them with a friend so that the burden may be lifted. (boy, Blantyre)

I turned to the older brothers of the neighborhood, and they gave us strength and encouraged us to respect the barriers gestures [no physical greetings]. (boy, Kinshasa)

In Ghent and Santiago, both boys and girls discussed the importance of their parents and friends helping them through the pandemic, whereas, in São Paulo, this sentiment was more often shared by girls.

You can tell them [friends] that, 'Oh, a relative died,' or something bad that is happening in your family, and they are like the second ones we trust. Because sometimes it is the parents first, or maybe it is the parents. At some moments, it was my parents, and I had confidence that I could talk to them about my problems. (girl, Santiago)

I do not know, [on the days I did not want to get up], I did not get up, I think I just laid down. Then I would get discouraged and I would put it in my head, "No, I will get up." Sometimes my friend would come to my house, and she would try to cheer me up, and if she succeeded, sometimes we would go out, then I would come back. (girl, São Paulo)

Notably, in Blantyre, there seemed to be a gender difference in who adolescents were more likely to confide. Several girls, for instance, mentioned the importance of their mothers, while boys often discussed their problems with their pastors, teachers, or even doctors.

Religious coping

Another coping mechanism mentioned primarily by adolescents in Kinshasa and Blantyre was using prayer to help relieve their stress.

When I have worries, I just kneel and talk to God because he is the greatest physician in the world. (girl, Blantyre)

I thought I was going to catch it [COVID], but I prayed to God that it wouldn't get to me. (boy, Kinshasa)

Only one other adolescent outside of Blantyre and Kinshasa reported religious coping during COVID. This adolescent from New Orleans reported being a "spiritual person" and said that practicing her faith helped ease her stress.

Cognitive reframing

Finally, the last type of coping mechanism, cognitive reframing, to change how a stressor is viewed, was only mentioned by adolescents in Shanghai and Ghent. In Shanghai, both boys and girls mentioned the importance of self-discipline to address their concerns about education. One girl, for example, described that when she faces stress, she just thinks optimistically and relaxes herself. Another girl responded, "Just be happy every day." Similarly, in Ghent, an adolescent described that while at the beginning of the pandemic, she was sad, after a while, she switched her mindset and told herself that this pandemic was going to pass and that she would be allowed to see her friends if she followed the safety measures.

Discussion

The COVID-19 pandemic has exacerbated stress levels and mental health challenges among adolescents across the globe. The current study aimed to explore the types of stressors that adolescents were experiencing from the pandemic and the types of coping mechanisms that were being utilized among adolescents across countries. One of the most significant

differences we saw by site was with the reported types of stressors. Adolescents in Blantyre and Kinshasa reported stressors primarily related to economic constraints and hardships, such as not getting enough food to eat or protecting oneself from disease and death. In contrast, adolescents in other sites primarily reported stressors related to school lockdowns, which were happening either before or during the time of the focus groups. Some evidence suggests that countries, as cultural units, are distinguished from one another by how their residents react and cope. In one of their landmark studies on stress and coping, Lazarus and Folkman (1984) explained that stress is a product of the transaction between a person and their environment [8]. Adolescents' experiences of a stressor, therefore, should vary depending on personal and contextual factors, including capacities, resources, and social norms [14]. In our study, we found that the primary differences in perceived stressors occurred between adolescents who lived in the low-income country sites (Kinshasa and Blantyre) versus adolescents living in upper-middle income (Shanghai, Sao Paulo, Denpasar, Semarang) and high-income sites (New Orleans, Ghent, and Santiago). Adolescents in the 2 low-income country sites experienced stressors related more to basic survival, whereas in both upper-middle and high-income country sites, adolescents' stressors were related to well-being and stability (such as educational disruptions). While culture certainly influences the meaning and interpretation of these stressors, our findings also suggest that perceived access to needed resources during a crisis can be one of the most defining factors. Although adolescents in Kinshasa and Blantyre were already living in a challenging environment prior to the pandemic, COVID-19 created huge job losses, which subsequently caused disruptions in the agricultural supply chain, leading to increased food costs [20]. As a result, and because of the existing fragile social safety nets, food insecurity and unemployment increased among households in these sites, leaving many adolescents worried about meeting basic needs.

Patterns of coping mechanisms also largely aligned with patterns of perceived stressors. Blantyre and Kinshasa were the only 2 sites where religious coping mechanisms were frequently mentioned among adolescents. In the United States, research from economically disadvantaged neighborhoods showed that religious coping could instill world views or cognitive schemes that make it easier to bear the brunt of living in poor conditions [21]. In contrast, in Shanghai, adolescents primarily mentioned the personal fear of academic decline as a key stressor, and their common coping strategies—problem-solving and cognitive reframing—were individually applied to address that stressor. To help explain this, one study found that Chinese thinking often embraced the coexistence and mutual reinforcement of opposing elements, such as good and bad or success and failure [22]. This perspective may lead individuals in China to accept contradictions and anticipate their resolution, influencing how they interpret stressful experiences. Consequently, suffering and stress are often imbued with value, meaning, and purpose, which may explain why Chinese students are encouraged to endure hardships in school to achieve success later in life [14,23]. In our study, adolescents in Shanghai frequently reported feeling that they did not have enough homework or that online schooling was too easy. To cope with these feelings, they mainly employed problem-solving strategies to make their tasks more challenging, such as by "applying more pressure," or used cognitive reframing techniques to adopt a more positive mindset.

Regardless of income or cultural background, adolescents across various locations commonly cited seeking social support as their primary coping mechanism, with support from friends and family being the most prevalent. Interestingly, girls were more likely to turn to their parents for assistance, while boys more often reached out to friends or others outside the family. This was somewhat surprising, since some research indicates that the use of social support as a coping strategy varies significantly between Western and Asian cultures. Western cultures tend to view individuals as independent and separate, whereas Asian cultures emphasize the interconnectedness of individuals [14,24]. In Asian cultures, where harmony within the group is highly valued, bringing personal problems to others' attention is often seen as undermining group harmony [24]. However, our findings did not align with this notion, as adolescents across all our study sites frequently used social support as one of their main coping strategies.

To provide additional context to our study findings, Bronfenbrenner's (1979) ecological framework illustrates the complex and varied influences of stress in adolescents' lives, which can be both harmful and protective [25]. Family, peers, and schools serve as microsystem-level factors that exert direct influences, whereas macrosystem-level factors, such as societal values and economic conditions, serve as more distal influences. In our current study, the type of perceived stressor—whether micro or macro—and the coping strategy employed to manage it, were first largely determined by whether adolescents had access to necessary resources. Research among adults generally shows that individuals tend to use problem-focused coping if they have the resources to address perceived stresses. Conversely, if the stressor seems beyond their control, they turn to other forms of coping [26]. In Blantyre and Kinshasa, stressors were more related to structural or macro factors such as poverty and resource access, and these locations were the only settings where adolescents mentioned religious coping. While problem-solving coping was mentioned, when it was mentioned, it related to how adolescents or their families would access food and resources. On the other hand, in Ghent and Shanghai, adolescents reported using cognitive reframing as a coping strategy. Like problem-solving, cognitive reframing is an individual-level coping strategy that may be more common in higher-income settings. It involves changing one's mindset to mitigate the stressor, which is likely easier when more resources are available.

Limitations

One limitation that needs to be considered when reviewing these findings is the difference in the timing of when the focus groups were conducted. In some sites, the focus groups were conducted in the first year, whereas in others, they were conducted in the second year. These differences could have influenced the types of resources and supports adolescents were exposed to, which subsequently could have also influenced the types of perceived stressors and related coping strategies. Additionally, the focus group samples were limited to those from urban poor communities and part of an existing cohort of the Global Early Adolescent Study, which could have introduced selection bias. Findings, therefore, should not be generalized to all adolescents in each country site.

Despite its limitations, this study highlights intriguing patterns in perceived stressors and coping strategies among adolescents from diverse cultural backgrounds. To mitigate negative

outcomes, it is crucial to acknowledge that the effectiveness of coping strategies is significantly influenced by socioeconomic factors, especially during global crises, where the most vulnerable individuals are most in need. Although adolescents were recruited from urban poor communities, the types of available resources varied substantially across our sites. Efforts such as online mental health services, community or peer support groups, and educational campaigns on healthy coping mechanisms can play a vital role in helping adolescents manage current and future stressors. However, these initiatives need to be contextually tailored and can only succeed if adolescents' basic needs, such as adequate food, shelter, and clothing, are met.

Additionally, substantial evidence has now been gathered to inform decisions regarding school closures and the development of innovative strategies to keep schools open [27]. Addressing these issues will not only enhance the immediate well-being of adolescents but also contribute to their long-term health and resilience in the face of global health crises.

Conclusions

To understand how best to respond to the needs of adolescents during, and beyond, the COVID-19 pandemic, a comprehensive understanding of their stressors and coping mechanisms is needed that can promote internal resources and positive outcomes for adolescents. In this study, adolescents clearly expressed a range of deeply impactful stressors that have influenced their mental health and well-being across countries. At the same time, they also shared how coping strategies, commonly through social support from friends and family, helped them. Stressors and coping did vary, but primarily by cultural and socioeconomic factors, and future work is warranted to understand what types of resources and positive coping strategies can be bolstered for young people in various economic and cultural contexts.

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