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Health Profession Students' Experiences with Emergency Remote Teaching: A Qualitative Content Analysis

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Research Article

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Abstract

Background

Rapid transitions to emergency remote teaching (ERT) can significantly disrupt health professions education, where experiential learning and interactive instruction are central components. Although prior research has documented academic and psychological challenges associated with large-scale instructional shifts, fewer studies have explored students' narrative accounts of their experiences within health professions programs.

Methods

This study employed conventional qualitative content analysis of open-ended survey responses collected during a cross-sectional study of undergraduate health profession students at a multi-campus public university in Saudi Arabia. Of the 94 participants included in the broader survey, 93 provided complete narrative responses and were included in this analysis. Responses addressing perceived difficulties, emotional reactions, and coping strategies during ERT were analyzed inductively to identify categories and themes.

Results

Students described disruption of academic structure, reduced interactivity, technological constraints, and concerns related to virtual assessment. Emotional responses ranged from stress and uncertainty to adaptation and relief. Participants reported diverse coping strategies, including cognitive reframing, goal orientation, social support, structured routines, and self-care practices. Variability in perceived challenges and adaptive responses was evident across participants.

Conclusions

Findings highlight the multifaceted impact of abrupt instructional transitions on student learning experiences and emotional well-being within health professions education. Understanding students' perspectives may inform institutional preparedness strategies, enhance student engagement in remote settings, and guide support mechanisms during future educational disruptions.

Introduction

Abrupt shifts in instructional modality in response to crisis, commonly referred to as emergency remote teaching (ERT), may alter academic structure, student engagement, assessment processes, and perceptions of preparedness (Hodges et al., 2020). Large-scale transitions to ERT during the COVID-19 pandemic significantly disrupted health professions education, where experiential learning, clinical

exposure, and interactive instruction are central components of training (Agu et al., 2021; Frenk et al., 2022).

Subsequent evaluations of medical and health professions education have emphasized the importance of structured digital engagement, pedagogical flexibility, and institutional preparedness to sustain educational continuity during future disruptions and technological transitions (Yang, Duan, & Zhang, 2024). As virtual and hybrid learning models become increasingly integrated into higher education, understanding how students interpret and navigate instructional disruption remains relevant beyond the immediate pandemic context (Parmar et al., 2025).

Although a substantial body of research has documented psychological distress and academic challenges associated with rapid instructional change (Dergham et al., 2023), fewer studies have explored students' narrative accounts of their lived experiences within health professions programs (Saeedi & Marzieh, 2025). Qualitative exploration may provide insight into how learners perceive structural instability, altered interactivity, and evolving assessment practices, as well as how they adapt to increasing virtual learning demands.

Therefore, the aim of this study was to explore health profession students' narrative accounts of their difficulties, emotional responses, and coping strategies during emergency remote teaching through qualitative content analysis of open-ended survey responses.

Design

This study employed conventional qualitative content analysis to examine narrative responses to open-ended survey questions exploring health profession students' experiences with emergency remote teaching (ERT) during the COVID-19 pandemic. The open-ended responses analyzed in this manuscript were collected as part of a broader cross-sectional survey examining academic stress and mental health outcomes among health profession students (Alhamed, 2023). While the quantitative findings have been reported elsewhere, the present study focuses exclusively on students' written descriptions of their difficulties, emotional responses, and coping strategies during ERT. Qualitative content analysis was selected as an appropriate methodological approach for systematically analyzing brief narrative responses obtained through survey-based open-ended questions. This study adhered to the Standards for Reporting Qualitative Research (SRQR).

Setting and Participants

Participants were undergraduate students enrolled in health profession programs at a multi-campus public university in Saudi Arabia during the COVID-19 lockdown period. Eligibility criteria included active enrollment during data collection and proficiency in English, the language of instruction. Of the 94 participants included in the previously published quantitative analysis (Alhamed, 2023), 93 provided complete responses to the open-ended questions and were included in the present qualitative analysis.

Data Collection

Data were collected between June and September 2020 using an online survey distributed via the University Central Messaging System and social media platforms (e.g., X and WhatsApp). The survey included standardized quantitative instruments (Alhamed, 2023), as well as six study-developed open-ended questions designed to capture students' experiences with emergency remote teaching. The questions explored perceived difficulties related to remote learning, virtual sessions, and online assessments, as well as emotional responses and coping strategies. Participants provided free-text responses without word limits. No follow-up interviews were conducted. All available narrative responses were included in the analysis. The present analysis focuses exclusively on responses to the open-ended questions. The use of multiple open-ended questions allowed for more comprehensive exploration of students' experiences across academic, emotional, and adaptive domains. The open-ended questions used in this study are provided as a supplementary file.

Data Analysis

Qualitative data were analyzed using conventional qualitative content analysis. The author and a trained research assistant independently read the responses multiple times to achieve immersion in the data. Initial codes were generated inductively from participants' language without imposing predefined categories. Coding was conducted using a combination of manual coding and NVivo (Version 12; QSR International Pty Ltd., 2018). Codes were compared and discussed until consensus was reached. Discrepancies were resolved through discussion and refinement of category definitions. Codes were grouped into broader categories and themes that reflected recurring patterns across responses. Given the survey-based nature of the data collection, data saturation was not used as a stopping criterion. Instead, all available narrative responses were analyzed to ensure comprehensive representation of participant perspectives. To enhance credibility and dependability, an audit trail documenting coding decisions and theme development was maintained. Representative quotations were selected to illustrate each theme.

Reflexivity

The primary investigator is a faculty member in health professions education with experience in quantitative and qualitative research. To minimize interpretive bias, coding decisions were discussed collaboratively with a research assistant who was not involved in the original quantitative analysis. The research team engaged in reflexive discussions throughout the analytic process to ensure that themes reflected participants' perspectives rather than researcher assumptions.

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Institutional Review Board of King Abdullah International Medical Research Centre (KAIMRC), King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia (Approval No: 9833/AR/D22). All procedures were conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Declaration of Helsinki and its later amendments.

Participation was voluntary, and electronic informed consent was obtained from all participants prior to survey completion. No identifying information (e.g., names or student identification numbers) was collected. Participation was not linked to any academic courses, faculty members, or academic evaluation processes, and students were assured that their decision to participate or not would not affect their academic standing. Data were collected anonymously using an online survey platform, and no direct interaction occurred between the primary investigator and participants during data collection.

Findings

Participant Characteristics

The 93 participants represented undergraduate students enrolled in multiple health profession programs, including nursing, medicine, and applied health sciences. Participants were drawn from campuses located in different cities within Saudi Arabia. The sample included students across junior and senior academic levels, with both male and female students represented. Detailed demographic characteristics of the broader sample have been reported previously (Alhamed, 2023).

The analysis revealed three main themes: Difficulties with Emergency Remote Teaching, Emotional Responses, and Coping Strategies (Table 1).

Table 1. Overview of Main Themes and Subthemes Identified from Narrative Responses (n = 93)

Main Theme	Subthemes	Description of Participant Perspectives
Difficulties with Emergency Remote Teaching	Disruption of academic structure	Sudden schedule changes, inconsistent instructional approaches, increased coursework demands, suspension of clinical training
	Reduced interactivity and engagement	Limited real-time dialogue, reduced feedback, difficulty asking questions, decreased concentration and motivation
	Technical constraints	Internet instability, platform access challenges, technical disruptions during classes and assessments
	Concerns regarding virtual assessment	Anxiety about examination settings, grading fairness, and potential system failures
Emotional Responses	Distress and uncertainty	Stress, anxiety, frustration, feelings of isolation, concern about academic progression
	Mixed or adaptive responses	Fluctuating emotions, gradual adjustment, relief from commuting, development of new habits
Coping Strategies	Personal regulation strategies	Cognitive reframing, goal orientation, acceptance, self-motivation
	Social support	Emotional reassurance from family and peers
	Behavioral structuring	Establishing routines, time management, maintaining daily structure
	Self-care and well-being practices	Physical activity, hobbies, sleep regulation, engagement in leisure activities
	Institutional and educational support	Seeking faculty guidance, use of educational technology platforms

Difficulties with Emergency Remote Teaching

Participants described multiple challenges related to the abrupt transition to emergency remote teaching. Three dominant areas emerged: disruption of academic structure, reduced interactivity, and technical constraints.

Disruption of Academic Structure

Many students described the transition to virtual learning as disorganized, unpredictable, and overwhelming. Participants frequently referred to sudden schedule changes, inconsistent instructional approaches across faculty members, and increased coursework demands. These disruptions appeared to contribute to stress, sleep disturbances, and difficulty maintaining routines. One student reflected:

"*I struggled with the unorganized working schedule and the last-minute changes in schedules*." (#34)

Others described the experience as emotionally exhausting:

"*The weekends were very stressful, and I was very busy*." (#41)

Students also emphasized the impact of suspended clinical training, which they viewed as a significant educational loss:

"*The clinical aspect has been stopped*." (#19)

Reduced Interactivity and Engagement

A recurring theme was the perceived absence of meaningful interaction with instructors and peers. Students described virtual sessions as less engaging and less conducive to active learning. The lack of real-time dialogue and informal classroom dynamics contributed to feelings of detachment and decreased concentration. One participant explained:

"Not being able to ask questions freely like in normal class settings." (#93)

Others noted difficulty sustaining attention:

"*Easily being distracted and communication with the instructors is not as good as face to face*." (#25)

Virtual learning was often described as lacking authenticity, leading some students to feel less motivated or emotionally invested in their coursework.

Technical Constraints

Students also described technological barriers that compounded academic stress. Unstable internet connections, audio disruptions, and platform-related challenges were frequently mentioned. These issues contributed not only to frustration but also to anxiety, particularly during examinations. One student stated:

" The probability of the internet stopping suddenly." #85

Technical uncertainty was especially distressing during assessments, where students feared system failures could compromise their academic performance. One student stated:

" What if the system doesn't grade accurately?" #53.

Students indicated that in many virtual exams, exam settings were not adequately designed to minimize cheating as one student reported:

" People can cheat easily, so you can't differentiate between the good student and the lazy one." #87

Emotional Responses During Lockdown

Students' emotional responses varied widely and ranged from distress to relief. Most participants described experiencing stress, uncertainty, anxiety, or depressive feelings. These emotions were closely linked to academic unpredictability, isolation, and concerns about future clinical preparedness. One student described the experience as:

"Very upsetting and depressing; it would've been easier if we could have a normal class." (#4)

Some participants characterized the period as an "emotional roller coaster," reflecting fluctuations between adjustment and distress. A smaller group of students described positive aspects of the experience, including relief from commuting and opportunities to develop new habits:

"*Happy to get new healthy habits in my life.*" (#18)

These contrasting narratives suggest variability in adaptation and perceived control during ERT.

Coping Strategies

Students described a range of adaptive strategies to manage the challenges of ERT. Personal coping strategies, including cognitive reframing, acceptance, and goal-oriented thinking, were commonly described. Participants emphasized maintaining perspective and focusing on long-term aspirations:

"I kept remembering my dream of joining the College of Medicine." (#45)

Social support from family and peers also emerged as an important source of reassurance:

"Talking about them with my friends and finding out everyone is struggling just the same." (#12)

Other strategies included establishing structured routines, engaging in hobbies, maintaining physical health, and seeking faculty support. A subset of participants reported difficulty identifying effective coping mechanisms, reflecting variability in adaptive capacity.

Discussion

This study explored health profession students' narrative accounts of their experiences during the early implementation of emergency remote teaching. Students described academic disruption, reduced interactivity, technological challenges, emotional variability, and diverse coping strategies. These findings provide insight into how abrupt educational transitions affect learners beyond measurable psychological outcomes.

Participants consistently described ERT as disorganized and unpredictable. Sudden changes in schedules, inconsistent instructional approaches, and suspension of clinical training contributed to stress and uncertainty. These findings align with broader reports that rapid transitions to online education may compromise perceived academic structure and preparedness (Frenk et al., 2022; Iglesias-Pradas et al., 2021). The interruption of clinical experiences appeared particularly distressing for senior

students, suggesting that experiential learning components may play a critical role in students' sense of academic progression and professional identity development (Bawadi et al., 2023). Rather than viewing these disruptions solely as logistical challenges, the narratives suggest that structural instability can influence emotional well-being and perceived academic competence. Similar concerns regarding academic structure and clinical interruption have been reported among medical and nursing students during rapid transitions to remote learning (Dergham et al., 2023; Li et al., 2021). These parallels suggest that structural stability may play a critical role in students' perceived preparedness during instructional shifts (Mastour, Yousefi, & Niroumand, 2025)

Students emphasized the importance of face-to-face interaction in facilitating understanding, motivation, and engagement. The perceived absence of spontaneous dialogue and immediate feedback contributed to feelings of detachment. These findings reinforce the importance of interactive pedagogical strategies in virtual learning environments (Seed Ahmed et al., 2025). Simply transferring content to online platforms may not sufficiently replicate the relational and dialogic aspects of in-person education. Reduced opportunities for real-time interaction have been consistently identified as a challenge in remote medical education settings (Yerex, Schonwetter, & Monnin, 2025). The present findings extend this literature by highlighting how students interpreted these changes in relation to motivation and concentration.

Students' concerns regarding virtual assessment settings warrant particular attention. Participants described anxiety related to online examination settings, system stability, grading fairness, and the potential for academic dishonesty. In health professions education, where assessment is closely tied to academic progression and professional development, perceived instability or inequity in evaluation processes may amplify stress beyond routine academic pressure. These findings suggest that transparent assessment protocols, reliable technological infrastructure, and clear communication regarding grading procedures are essential components of institutional preparedness during instructional transitions (Mate & Weidenhofer, 2021).

Participants reported a wide range of emotional experiences, from anxiety and frustration to relief and adaptation. The coexistence of distress and resilience within the same cohort highlights variability in students' adjustment to crisis-driven educational change. Rather than interpreting emotional responses as uniformly negative, the findings suggest that individual appraisal and context influence adaptation and coping processes. Consistent with prior reports of emotional strain during instructional disruption (Saeedi & Panahi, 2025; Schindler, Polujanski, & Rottoff, 2021), participants described stress and uncertainty.

Students described cognitive reframing, goal orientation, social support, and routine establishment as strategies to manage stress. These narratives illustrate the active role students take in regulating their learning environments and emotional responses. The variability in coping capacity observed across participants suggests that institutional support systems may need to account for differences in adaptive readiness during times of crisis. Similar adaptive strategies, including social support and routine

establishment, have been described in prior studies examining student adjustment during educational disruption (Li et al., 2025; Su et al., 2026). The present findings provide further context for understanding how students actively regulate their academic and emotional environments during periods of uncertainty.

The findings underscore the importance of institutional preparedness for rapid instructional transitions in health professions education. Abrupt shifts in delivery modality can influence academic structure, student engagement, emotional well-being, and perceived preparedness. Educational leaders may benefit from proactively integrating contingency planning into curriculum design, including structured communication protocols, interactive virtual teaching strategies, and clear assessment frameworks.

The prominence of reduced interactivity in students' narratives highlights the need for intentional design of synchronous and asynchronous engagement methods when implementing remote or hybrid models (Li et al., 2025). Faculty development initiatives that emphasize interactive pedagogical techniques may mitigate disengagement during future transitions (Toofaninejad et al., 2025).

Additionally, variability in students' adaptive responses suggests that support mechanisms should extend beyond technological access to include accessible academic advising, peer support structures, and well-being resources (Abou Hashish & Alnajar, 2024; Parmar et al., 2025). Incorporating student feedback into institutional preparedness planning may enhance responsiveness and resilience in the face of future educational disruptions, technological shifts, or systemic challenges (Saeedi & Panahi, 2025).

This study provides insight into students' lived experiences through narrative responses collected during the early phase of the pandemic. However, several limitations should be acknowledged. First, data were collected through survey-based open-ended questions rather than in-depth interviews, which may limit depth of exploration. Second, participants were drawn from a single university context, which may limit transferability. Third, data were collected during the early stage of emergency remote teaching implementation, which may have influenced students' perceptions of remote learning. Fourth, participation was voluntary, which may introduce self-selection bias, as students with stronger experiences or perspectives may have been more likely to respond. Lastly, the cross-sectional design captures experiences at one point in time and does not reflect longitudinal adaptation. Future research using longitudinal qualitative approaches may provide deeper insight into evolving student experiences.

Declarations

Ethics approval and consent to participate

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Availability of data and materials

The qualitative datasets generated and analyzed during the current study are not publicly available due to the inclusion of narrative responses that may contain potentially identifiable information. Data may be made available from the corresponding author on reasonable request and subject to institutional ethical approval.

Competing interests

The author declares no competing interests.

Consent for Publication

Not applicable

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Authors' contributions

The author was responsible for study conception, data analysis, interpretation, and manuscript preparation.

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