

Barriers to polio eradication in south asia: a systematic review

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Background: The Eastern Mediterranean Region (EMRO) of the World Health Organization (WHO) is the last region in which polio transmission continues. Afghanistan and Pakistan, also being parts of South Asia, pose a major burden for the transmission of the virus both in the EMRO and South Asia, and remain the top-priority countries for polio eradication programs. We conducted a systematic review of obstacles towards polio eradication efforts in South Asia.

Methods: Relevant literature from the past five years was systematically examined using the PubMed database, detailing the challenges faced in eliminating polio from the region. The search terms included 'barriers' and 'polio' and 'South Asia'. The included articles were exported to the Rayyan software for screening. Articles were then screened rigorously for abstracts and full texts based on the inclusion criteria mentioned by two independent reviewers. Data extraction was conducted to retrieve relevant information on the demographic profile of affected populations, clinical presentation of barriers, prevailing challenges in laboratory investigations, strategies employed for vaccination, and outcomes of eradication efforts. This study was exempted from IRB approval.

Results: Of the 42 articles initially found, 21 were reviewed using Rayyan, and 17 articles were included in the final systematic review. Of these, 10 studies were conducted in Pakistan, 4 in India, and 3 in Afghanistan. Social, religious, political, professional, political, and vaccine-related barriers were also identified. The most common barrier was social misconceptions about the vaccine (47%, N=8), which included fear of female infertility, adverse effects, perceived conspiracies from other religions, and illiteracy. The second barrier was religious beliefs (41%, N=7) regarding the vaccine and its influence on vaccination campaigns. There were safety issues (23%, N=4) for polio workers, leading to fear among them, which was the reason for the failure of multiple campaigns. The unavailability of cold chains and resistance to polio strains (23%, N=4) have also been identified as barriers in this part of the world. Additionally, regional conflicts, natural disasters, and large-scale migration remain significant factors that contribute to the failure of polio eradication in South Asia.

Conclusion: This systematic review identified major barriers to the failure of polio eradication in South Asia. Multiple obstacles, including cultural barriers, vaccine hesitancy, political instability, and healthcare infrastructure deficits, have played a role in the continued threat of polio in these countries.

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Biography

Awraanoos Ahadi is a dedicated medical graduate from Pakistan, his deeply committed to pursuing clinical research and pediatric residency. During his internship and clinical observer-ships I gained extensive clinical experience, contributed to impactful research, and presented my work at prestigious national and international conferences. His background in leadership, research and advocacy for child health has given me the skills for good patient care. He was eager to bring my skills and drive for continuous learning to a dynamic program that values innovation, collaboration, and professional growth.

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