

## OPINION

# Monkeypox outbreak: Preventing another episode of stigmatisation

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## INTRODUCTION

Monkeypox has been circulating for decades, but recent outbreaks in European countries have highlighted how little we know about the infection, particularly its route of transmission [1]. Velavan and Meyer pointed out that the recently reported monkeypox cases have not been associated with travel to endemic regions, and no source of infection has been identified [1]. The majority of monkeypox cases were found in men who have sex with men and in bisexual men [2]. Concern is growing that public and social media coverage of monkeypox may be reinforcing homophobic and racial stereotypes [2]. The portrayal of monkeypox as a sexually transmitted illness by the media is misleading, as the route of transmission is still unclear to experts [2]. Public belief that the disease might be sexually transmitted may impede the recognition of its zoonotic transmission and result in undetected spread and improper treatment for other at-risk groups.

We conducted a study among individuals and family members affected by COVID-19, and discovered that affected individuals felt isolated, stereotyped and blamed by their communities [3]. Furthermore, stigmatisation delayed disease disclosure, which raises the possibility of disease spread [3]. Hence, we concur with Velavan and Meyer that there is an urgent need for strategies to mitigate monkeypox transmission [1]. The stigma component should be acknowledged and be given more attention, as the ripple effects of stigma become increasingly difficult to erase over time and may disrupt the response to the monkeypox outbreak.

We propose a modified five-level stigma mitigation framework (Figure 1) based on the socio-ecological model

proposed by Salihu and colleagues [4]. This model was used for overcoming recruitment and retention challenges in randomised controlled trials among socio-economically disadvantaged pregnant women who smoke [4]. It employs a five-level approach, including individual, interpersonal, organisational, community, and public policy [4]. Our proposed modified socio-ecological model is designed to characterise and visualise the various anti-stigma interventions that can be implemented for monkeypox. In this modified model, we combine the first and second level (individual and interpersonal) of the original model into one level (individual and family) as they are closely intertwined, while we retain the organisational, community, and public policy levels. As a novel approach of dealing with the dynamics of infectious disease outbreaks, we added evidence-based research as the fifth level, which appears as the outermost circle in Figure 1, to emphasise the use of current evidence and to guide the design of new policies and studies. This is crucial to reduce redundancy and to merge new findings into existing evidence, and it is critical to shape policymaking and mitigation strategies across other levels of the model.

## INDIVIDUAL AND FAMILY LEVEL

Affected individuals and families are vulnerable to internalised and experienced stigma. Internalised stigma may result in negative mental health outcomes such as anxiety, decreased self-efficacy, depression, and even suicide ideation [5, 6]. Family members might even restrict the affected individual's access to health and social services in order to avoid experienced stigma [7]. As a result, the consequences of the stigma outweigh the disease's burden. In their model, Salihu and colleagues emphasised the need to improve communication at intrapersonal and interpersonal level, as clinical

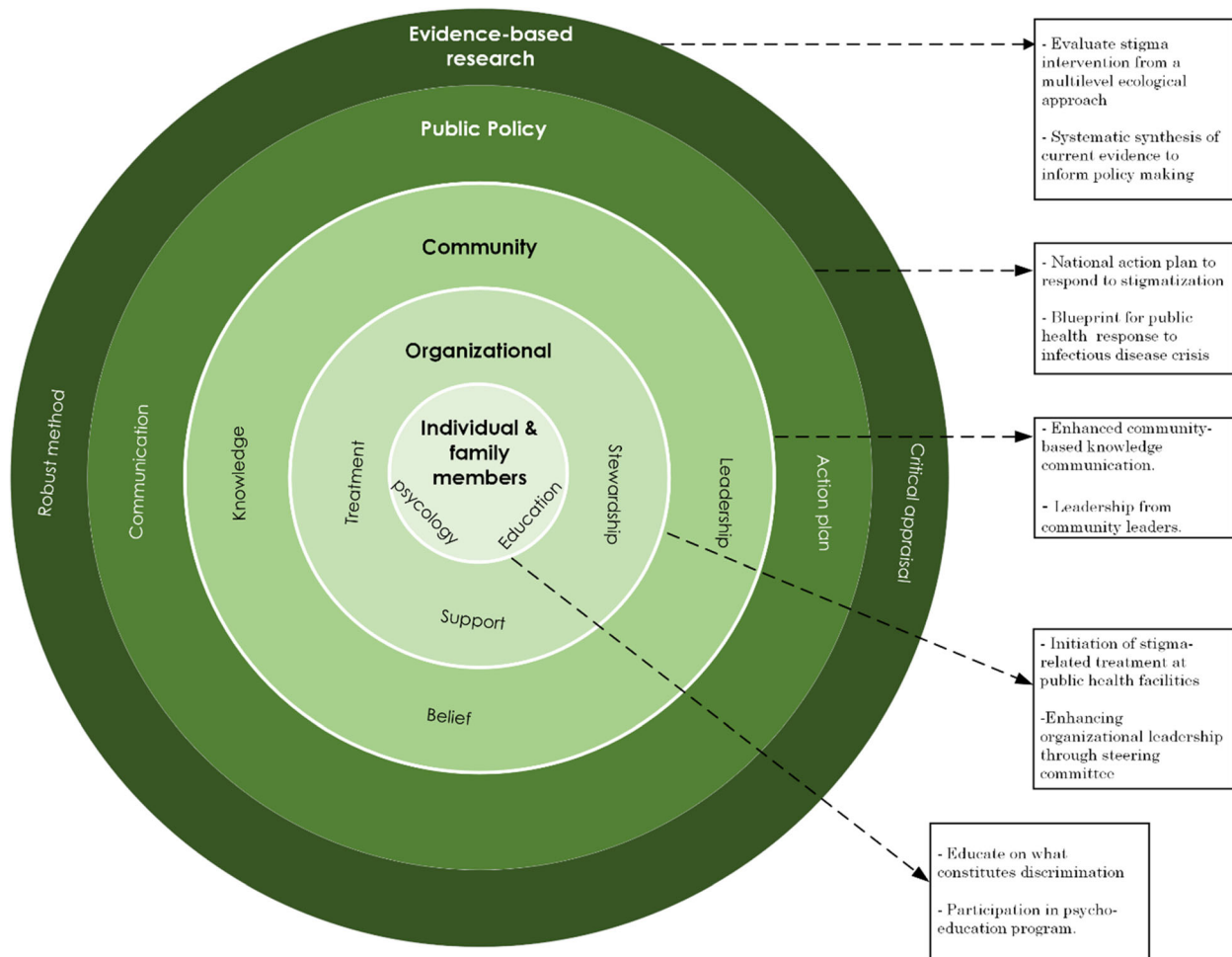


FIGURE 1 Multilevel stigma mitigation framework: a modified socio-ecology model

trials involve medical jargon [4]. In our modified model, we highlight the importance of psychological support and raising awareness of affected individuals. Psychological support and engagement of affected individuals and families in the development of public health initiatives may promote empowerment, self-efficacy, and coping abilities [8]. Affected groups should also be educated on what constitutes discrimination so that they can exercise their rights and seek justice when necessary.

## ORGANISATIONAL LEVEL

Salihu and colleagues pointed out logistic issues during recruitment of clinical trials subjects as one of the major organisational barriers [4]. Likewise, structural bias in health organisation may coerce stereotyping among healthcare workers. In our model, treatment, support, and hospital stewardship are prioritised at the organisational level. Quality hospital stewardship is crucial to communicate about the disease in neutral language, avoiding exaggerated assertions that may promote stigma and scapegoating. In-service

training sessions on the latest scientific evidence on monkeypox, stigma reduction, nondiscrimination and medical ethics should be provided for all health facility staff [9].

## COMMUNITY LEVEL

In the setting of a clinical trial, economic and nutritional factors must be addressed to improve retention among the underprivileged population [4]. People living in the same community are likely to share values, beliefs, attitudes, and behaviours, including disease-related stigma and discrimination. Principally, the lack of knowledge about the aetiology of an infection and available treatment are major contributors to fear and stigma. Hence, in our model, we emphasise knowledge transfer and community leadership. A community-based awareness campaign could improve knowledge through mass communication of educational materials [10]. However, community-level interventions should not only address the broad public but also specific faith-based and spiritual groups that are influential in reinforcing or shifting norms and practices. Stigma reduction programmes that make use of large

cultural and religious events, combined with advocacy and engagement by key figures, could raise the effectiveness of such initiatives [11].

## PUBLIC POLICY LEVEL

Within the clinical trial context, state and federal regulations governing research influence public policies [4]. Policies may explicitly or covertly facilitate discrimination, resulting in reduced access to health services and violation of human rights. Due to the likelihood of stereotyping among vulnerable societal groups, stakeholders should assess the perspectives of laws, social services, and resource distribution to address inequalities among the marginalised populations. From a policy standpoint, stigma reduction should be considered as one of the priorities in terms of planning, funding, and programming. Key government agencies have the authority to convince other divisions, corporate partners, and social fraternities to implement policies and programmes that minimise and eliminate stigma and discriminatory practises, to coordinate efforts for maximum efficacy [12]. Hence, in our model, we call for a national action plan and a public health blueprint to facilitate response to stigmatisation during infectious disease outbreaks.

## EVIDENCE-BASED RESEARCH LEVEL

We incorporate a new component, that is, evidence-based research, into the outermost layer of our modified socio-ecological model to guide policymaking and intervention in other levels. Conventionally, the isolation of researchers from the policymaking process is one of the barriers in implementing evidence-based policies. Researchers who specialise in a certain field may not be able to comprehend the entire policymaking process. Communication between researchers and policymakers must be streamlined to increase the likelihood of policy adoption. Published findings should be critically and systematically reviewed and built upon by researchers to minimise waste of public funding and to derive more precise research questions and rigorous study designs [13]. Systematic reviews of clinical trials or observational studies help determine which interventions are most likely to be effective. Furthermore, researchers should take the point of view of policymakers when designing studies, and convey research findings in simpler language. The negative impact of stigma should be quantified in terms of direct health care costs due to treatment delay and indirect social costs of disease spread, productivity loss, or premature death. Once adopted, the efficacy of and cost-effectiveness of stigma reduction policies could be monitored to determine whether they should be maintained, modified or abandoned. The lack of research in monkeypox-related stigma and discrimination underlines the relevance of evidence-based research as the universal strategy to guide

policymaking and intervention at other levels in the modified socio-ecological model.

The historical pattern of stigma and structural inequity in responses to infectious disease outbreaks seems to be repeating itself. Our experience with COVID-19, HIV, and Ebola has taught us that stigmatising language can hinder disease response and discourage help-seeking behaviour. The media should tailor their language to avoid misinterpretation of monkeypox research findings in non-endemic regions and misleading conclusions. We should use the harsh lessons learnt from previous and current outbreaks to break the cycle of stigmatisation. To achieve this and to contain the outbreaks, it is critical to consolidate mitigation strategies across different levels.

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## REFERENCES

1. Velavan T, Meyer CG. Monkeypox 2022 outbreak: an update. *Tropic Med Int Health*. 2022;27:604–605. <https://doi.org/10.1111/tmi.13785>
2. Zumla A, Valdeiros SR, Haider N, Asogun D, Ntoumi F, Petersen E, et al. Monkeypox outbreaks outside endemic regions: scientific and social priorities. *Lancet Infect Dis*. 2022;22(7):929–31.
3. Chew CC, Lim XJ, Chang CT, Rajan P, Nasir N, Low WY. Experiences of social stigma among patients tested positive for COVID-19 and their family members: a qualitative study. *BMC Public Health*. 2021 Dec;21(1):1623.
4. Salihi HM, Wilson RE, King LM, Marty PJ, Whiteman VE. Socio-ecological model as a framework for overcoming barriers and challenges in randomized control trials in minority and underserved communities. *Int J MCH AIDS*. 2015;3(1):85–95.
5. Rueda S, Mitra S, Chen S, Gogolishvili D, Globerman J, Chambers L, et al. Examining the associations between HIV-related stigma and health outcomes in people living with HIV/AIDS: a series of meta-analyses. *BMJ Open*. 2016;6(7):e011453.
6. Wei L, Yan H, Guo M, Tian J, Jiang Q, Zhai M, et al. Perceived HIV stigma, depressive symptoms, self-esteem, and suicidal ideation among people living with HIV/AIDS in China: a moderated mediation modeling analysis. *J Racial Ethnic Health Disparit*. 2022. <https://doi.org/10.1007/s40615-022-01255-0>
7. Demmer C. Experiences of families caring for an HIV-infected child in KwaZulu-Natal, South Africa: an exploratory study. *AIDS Care*. 2011;23(7):873–9.
8. Thurman TR, Kidman R, Carton TW, Chiroro P. Psychological and behavioral interventions to reduce HIV risk: evidence from a randomized control trial among orphaned and vulnerable adolescents in South Africa. *AIDS Care*. 2016;28(sup1):8–15.
9. Nyblade L, Stockton MA, Giger K, Bond V, Ekstrand ML, Lean RM, et al. Stigma in health facilities: why it matters and how we can change it. *BMC Med*. 2019;17(1):25.
10. Mat Ruzlin AN, Chen XW, Yunus RM, Samsudin EZ, Selamat MI, Ismail Z. Promoting mental health during the COVID-19 pandemic: a

- hybrid, innovative approach in Malaysia. *Front Public Health*. 2021; 6(9):747953.
11. Mascayano F, Toso-Salman J, Ho YCS, Dev S, Tapia T, Thornicroft G, et al. Including culture in programs to reduce stigma toward people with mental disorders in low- and middle-income countries. *Transcult Psychiatry*. 2020;57(1):140–60.
  12. Evans-Lacko S, Corker E, Williams P, Henderson C, Thornicroft G. Effect of the time to change anti-stigma campaign on trends in mental-illness-related public stigma among the English population in 2003–13: an analysis of survey data. *Lancet Psychiatry*. 2014;1(2): 121–8.
  13. Robinson KA, Brunnhuber K, Ciliska D, Juhl CB, Christensen R, Lund H. Evidence-based research series- paper 1: what evidence-based research is and why is it important? *J Clin Epidemiol*. 2021;129:151–7. <https://linkinghub.elsevier.com/retrieve/pii/S08954356203109>

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