



Assessing the Impact of Health Policy Reforms on Vulnerable Populations: A Social Science Perspective

Dr. Uddhav T. Kumbhar¹, Dr. G Shaber Ali², Dr. Ajinkya Bahulekar³, D.B. Bhojar⁴, Dr. Dhairyashil Patil⁵, Dipika R. Birari⁶

¹Associate Professor, Department of Community Medicine, Krishna Institute of Medical Sciences, Krishna Vishwa Vidyapeeth, Karad, Maharashtra, India. Email: utkumbhar@gmail.com

²Principal (Offg), Associate Professor, V. M. Salgaocar College of Law, Goa, India. Email: shaberalig@vmslaw.edu.in

³Assistant Professor Department of General Medicine Krishna Institute of Medical Sciences, Krishna Vishwa Vidyapeeth Deemed To Be University, Karad, Maharashtra, India. Email: ajinkyabahulekar91@gmail.com

⁴Assistant Professor, Department of Electronics & Telecommunication Engineering, Yeshwantrao Chavan College of Engineering, Nagpur, India. Email: dinesh.bhojar23@gmail.com

⁵Assistant Professor Department of General Medicine Krishna Institute of Medical Sciences, Krishna Vishwa Vidyapeeth Deemed To Be University, Karad, Maharashtra, India. Email: dhairyasheel94@gmail.com

⁶Army Institute of Technology Dighi, Pune, Savitribai Phule Pune University, Pune, India. Email: dipikabirari001@gmail.com

KEYWORDS

Health Policy Reforms, Vulnerable Populations, Social Science Perspective, Healthcare Disparities

ABSTRACT:

Through the view of social science, this study takes a critical look at how changes to health policy affect people who are already at risk. As countries around the world make big changes to their health care systems, it's important to figure out how these changes affect weak and marginalised groups. Our study uses a social science approach to look into how changing health policies affect the lives of disadvantaged groups by exploring the complex web of social, economic, and cultural factors that affect them. The method uses a mix of quantitative and qualitative data analysis, with conversations and focus group talks with people from a range of disadvantaged groups to get more in-depth ideas. Through a broad lens, we want to find out the complex ways that changes in health policy interact with social factors that affect health, affecting the availability, cost, and quality of healthcare for weak groups. Early results show that vulnerable groups bear an unfair amount of the load, showing differences in healthcare outcomes, hurdles to entry, and differences in healthcare service. The study also explores the role of social support networks, community engagement, and cultural competence in mitigating or exacerbating the effects of health policy reforms on vulnerable populations. The implications of this research extend beyond academia, offering practical insights for policymakers, healthcare professionals, and advocacy groups to formulate inclusive policies that address the unique needs of vulnerable populations. By fostering a deeper understanding of the social dynamics at play, this study contributes to the ongoing discourse on health equity and informs evidence-based interventions aimed at safeguarding the health and well-being of society's most marginalized members.

I. INTRODUCTION

The healthcare system is always changing because of new policies that aim to make services more accessible, efficient, and of higher quality. These kinds of changes are necessary to make healthcare systems better generally, but they often have big effects on people who are already struggling. From a social science point of view, this study starts an in-depth look at all the different ways that changes to [1] health policy have affected weak communities. In a world with unprecedented global health problems and growing awareness of health inequalities, it is important to know how policy changes affect social factors. Health policy improvements, such as changes to how services are delivered and how they are paid for, have become commonplace across all countries. This is because of the need for sustainability, response, and fairness. But these changes don't have the same effects on everyone. Vulnerable groups [2], like those who are poor, a minority, or otherwise on the outside, often have to deal with more of the effects than others. Inequality in wealth, lack of schooling, poor access to healthcare, and widespread abuse are all sociostructural factors that make people vulnerable. These factors all have an effect on health results and experiences. A big part of our research comes from the idea that health is affected by more than just medical care. It's also affected by things like society, money, and culture. We want to find out how changes in health policy affect the lives of vulnerable groups by looking at them through the lens of social science. Social science looks at health results from a bigger picture point of view than just clinical data. It takes into account the bigger picture factors that affect health outcomes [3]. This method from different fields recognizes that risk is not just a

physical disease, but a complicated web of social factors, past events, and policy settings.

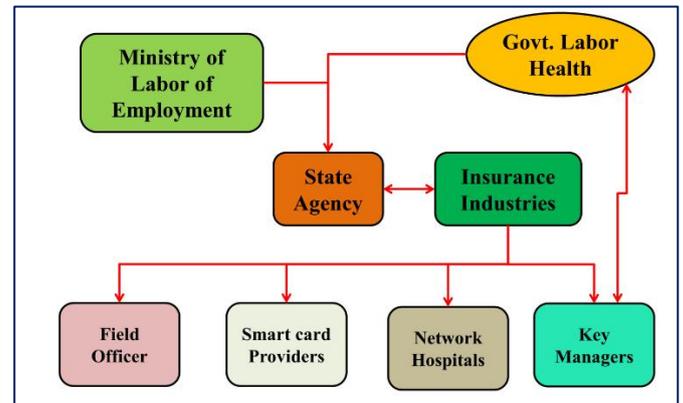


Figure 1: Overview of Health Coverage and vulnerable population

This study uses both quantitative and qualitative methods together because it is important to have a full picture of the problem from different angles. We can look at big trends and patterns in quantitative data analysis, which helps us find structural differences in healthcare access, use, and results. Along with quantitative insights gained from interviews and focus group talks with vulnerable community members, the [4] data results are given more depth and context. Using a variety of research methods together guarantees a full analysis that shows the full range and depth of how changes in health policy have affected people who are more likely to be hurt. As we get deeper into the factual parts of our study, it is important to keep in mind that vulnerable groups are not all the same. Some broad trends may show up, but how people feel vulnerable is affected by their multiple identities and the specifics of their situation. Some of these identities are sexual preference, race, culture, gender, age, disability, and so on. It is important to be aware of this variety in order to make policies that are fair and take into account the specific

problems that different subgroups of vulnerable populations face.

Early results from our ongoing study [5] show how vulnerable groups are being treated very differently since health policy has changed. Access to healthcare services becomes a major issue, as financial problems, location issues, and systematic unfairness make it impossible for everyone to use health resources equally. These [6] differences are made even worse by the fact that poor groups often have trouble paying for health care because they are struggling financially. Quality of care also varies a lot, and vulnerable groups often don't get the best care because healthcare systems don't do enough to support their culture or aren't culturally competent. What makes or breaks the problems that vulnerable groups face is how easy it is for them to connect with others and how [7] well those connections work. Community involvement turns out to be a strong force for good, with active participation building resilience and making it easier to find your way around complicated healthcare systems. Cultural literacy in healthcare service is seen as an important factor that affects not only how well treatments work but also how vulnerable people experience healthcare generally. In the next parts of this paper, we'll go into more detail about these early results and give a more complete picture of how changes in health policy affect the social structure and ultimately affect the health of vulnerable groups [8]. Our goal is to provide evidence-based insights that shape policy discussions and give partners the tools they need to create and carry out changes that value health fairness and inclusion. As we continue our study, we are aware of the moral obligation to give a voice to underrepresented groups and make sure that our work leads to

good changes in healthcare policies and practices that can be put into action.

II. REVIEW OF LITERATURE

The impact of health policy reforms on vulnerable populations has been a subject of growing scholarly interest, reflecting the increasing awareness of the need for equitable healthcare systems [9]. Researchers have approached this complex issue from various angles, employing diverse methodologies and theoretical frameworks to shed light on the multifaceted interactions between policy changes and the well-being of vulnerable communities [10]. A significant body of literature has focused on the assessment of healthcare disparities arising from policy reforms. Studies often utilize quantitative methods [11] to analyze large datasets, investigating how policy changes affect health outcomes across different demographic groups. For instance, analyses of insurance coverage expansions or changes in reimbursement models have been conducted to discern [12] their impact on vulnerable populations. These [13] studies contribute valuable insights into the systemic inequalities that persist within healthcare systems, highlighting the pressing need for policies that address the root causes of disparities. Complementary to these quantitative endeavors, qualitative research has played a crucial role in capturing the nuanced experiences of vulnerable populations navigating healthcare systems undergoing reforms. By engaging directly with individuals from marginalized communities, researchers have been able to unearth the intricacies of how policy changes are felt on the ground. Qualitative [14] studies often illuminate the lived realities of individuals facing barriers to healthcare access, providing a more holistic

understanding of the social and cultural factors that mediate the impact of reforms. These narratives not only complement quantitative findings but also serve as a powerful advocacy tool by amplifying the voices of those directly affected. Moreover, a growing body of literature has explored the role of social determinants of health in shaping vulnerability and mediating the effects of policy reforms. Researchers have delved into the intersections of race, socioeconomic status, gender, and other identity markers to unravel the complexities of vulnerability. Such [15] intersectional analyses are crucial for acknowledging the diverse and intersecting factors that contribute to health disparities, ensuring that policies are tailored to the specific needs of different subgroups within vulnerable populations. Several studies have also investigated the effectiveness of interventions aimed at mitigating the negative consequences of policy reforms on vulnerable populations. Community-based initiatives [16], support networks, and targeted interventions have been examined for their potential to enhance healthcare access and outcomes for marginalized communities. Evaluating the success of these interventions provides valuable lessons for policymakers and practitioners seeking evidence-based strategies to address health disparities in the context of evolving policy landscapes [17].

The global nature [18] of health policy reforms has led to a rich tapestry of international research, comparing and contrasting the impact of reforms across diverse healthcare systems. Comparative analyses offer insights into the contextual factors that influence vulnerability and shape the effectiveness of policy responses. Understanding how different countries navigate similar challenges provides a broader

perspective on the range of strategies available to promote health equity, offering valuable lessons for policymakers on a global scale. Ethical considerations [19] in researching vulnerable populations have also become a focal point within the literature. Scholars have grappled with questions of informed consent, privacy, and the potential for research to either empower or further marginalize vulnerable communities. This growing body of work underscores the importance of an ethical and participatory approach to research, emphasizing collaboration with communities to ensure that the research process itself aligns with principles of justice and inclusivity [20]. Despite the wealth of existing research, there remains a need for ongoing inquiry, especially as healthcare systems continue to evolve in response to emerging challenges. As policy landscapes shift in response to global health crises, economic fluctuations, and changing demographics, researchers must adapt their approaches to capture the dynamic interactions between policy reforms and vulnerability. Longitudinal studies tracking the impact of reforms over time, mixed-methods approaches that combine quantitative and qualitative insights, and collaborative research involving interdisciplinary teams are avenues for future exploration.

III. METHODOLOGY

A. Study Design

1. Quantitative, Qualitative, or Mixed-Methods Approach:

The research design for this study adopts a mixed-methods approach to ensure a comprehensive understanding of the impact of health policy reforms on vulnerable populations. Recognizing the need for both

quantitative data to identify broader trends and qualitative insights to capture the depth and nuances of individual experiences, this approach allows for a more robust exploration of the research questions [21]. The combination of quantitative and qualitative methods enables a triangulation of findings, enhancing the validity and completeness of the study. Quantitative methods will be employed to analyze large datasets related to healthcare utilization, outcomes, and disparities among vulnerable populations. This will involve statistical analyses to identify patterns, trends, and correlations, providing a quantitative foundation for understanding the overall impact of health policy reforms. Key quantitative indicators may include changes in healthcare access, affordability, and quality for vulnerable populations [22]. Qualitative methods, including interviews and focus group discussions, will complement the quantitative analyses by capturing the lived experiences and perspectives of individuals within vulnerable communities. Qualitative data will be instrumental in uncovering the contextual factors that mediate the impact of health policy reforms, such as cultural dynamics, social support networks, and individual coping strategies. These qualitative insights will add depth to the quantitative findings and contribute to a more nuanced understanding of the interplay between policy changes and vulnerability.

2. Sampling Strategy:

The sampling strategy for this study will be purposive, aiming to select participants who represent the diversity within vulnerable populations.

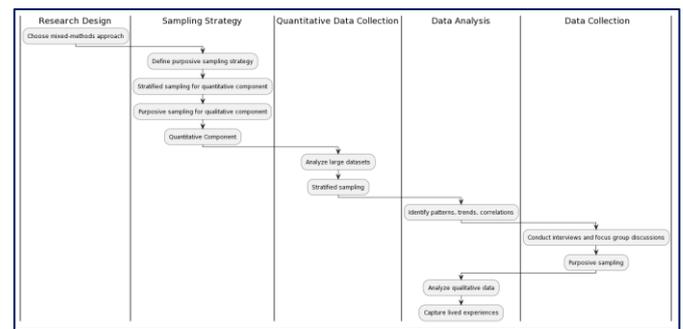


Figure 2: Representation of strategy for proposed design

Given the heterogeneity of vulnerability factors, including socio-economic status, race, ethnicity, gender, and other identity markers, the sample will be intentionally designed to capture this diversity. The goal is to ensure that the study's findings are reflective of the various experiences within vulnerable populations and can inform policies that address the specific needs of different subgroups. The quantitative component of the study will involve a large-scale survey or analysis of existing healthcare databases, employing a stratified sampling technique to ensure representation from different demographic categories. Stratification may be based on factors such as income levels, geographic locations, and cultural backgrounds to capture a comprehensive view of the impact of health policy reforms. For the qualitative component, a purposive sampling strategy will be employed to select participants with a range of experiences and perspectives. This may involve recruiting individuals from different vulnerable communities, ensuring variation in socio-demographic characteristics. Additionally, efforts will be made to include participants with diverse healthcare utilization patterns, allowing for a more nuanced exploration of the impact of policy changes on individuals with varying degrees of vulnerability.

B. Data Collection

1. Sources of Data:

The data collection process involves sourcing information from a variety of channels to ensure a comprehensive understanding of the impact of health policy reforms on vulnerable populations. Primary sources include government reports, which may provide quantitative data on healthcare utilization, outcomes, and policy changes. Surveys will be conducted to gather direct feedback from individuals within vulnerable communities, capturing their perspectives and experiences. Additionally, interviews and focus group discussions with representatives from diverse vulnerable groups will offer qualitative insights into the nuanced aspects of the impact [23].

2. Ethical Considerations:

Ethical considerations are paramount in conducting research involving vulnerable populations. Informed consent will be obtained from all participants, clearly explaining the purpose, procedures, and potential implications of the study. Anonymity and confidentiality will be ensured to protect participants' privacy. Additionally, efforts will be made to minimize any potential harm or discomfort arising from the research process. The research will adhere to established ethical guidelines and obtain necessary approvals from relevant ethical review boards.

C. Data Analysis

1. Statistical Methods:

The quantitative data collected, such as healthcare utilization rates and disparities, will undergo rigorous statistical analysis. Descriptive statistics, such as means, medians, and standard deviations, will be employed to

summarize key metrics. Comparative analyses, including t-tests or chi-square tests, may be used to identify significant differences across demographic groups. Regression analysis can help explore relationships between policy variables and health outcomes. Stratified analyses will allow for a detailed examination of subgroups within vulnerable populations.

Statistical Methods:

a. Descriptive Statistics:

Utilize means, medians, and standard deviations for summarizing key quantitative metrics related to healthcare utilization rates and disparities.

b. Comparative Analyses:

Apply t-tests or chi-square tests to identify significant differences across demographic groups, providing insights into variations induced by health policy reforms.

c. Regression Analysis:

Employ regression analysis to explore relationships between policy variables and health outcomes, unraveling the potential causal links and impacts.

d. Stratified Analyses:

Conduct detailed stratified analyses to examine subgroups within vulnerable populations, facilitating a nuanced understanding of how policy changes affect different segments of the population.

2. Qualitative Analysis Techniques:

Qualitative data collected from interviews and focus group discussions will undergo systematic analysis using established techniques. Thematic analysis will be employed to identify recurring patterns and themes within the qualitative data. Coding, categorization, and constant comparison

methods will aid in organizing and interpreting the textual data. The use of qualitative data analysis software may facilitate the management and coding of large qualitative datasets. Member checking, where participants review and confirm interpretations, will enhance the validity of qualitative findings.

IV. HEALTH POLICY REFORMS AND VULNERABLE POPULATIONS

A. Health Policy Reforms:

Health policy reforms represent strategic efforts to enhance the efficiency, accessibility, and quality of healthcare systems. These reforms encompass a spectrum of changes, often driven by evolving societal needs, technological advancements, and economic considerations. Key components of health policy reforms may include alterations in funding models, modifications to healthcare delivery mechanisms, and the introduction of new regulations or policies.

1. Key Components of the Reforms:

Health policy reforms typically involve changes in healthcare financing, aiming to ensure sustainable funding models. This may include shifts from fee-for-service to value-based payment systems, increased public investment, or the introduction of innovative funding mechanisms. Changes in healthcare delivery models, such as the integration of telehealth services, the establishment of accountable care organizations, and the emphasis on preventive care, are also common components. Additionally, reforms often address regulatory frameworks to improve quality, safety, and equitable access to healthcare services.

2. Targeted Outcomes:

The overarching goals of health policy reforms are multifaceted, often encompassing improved health outcomes, enhanced access to care, and increased cost-effectiveness. Reforms seek to achieve population health objectives, reduce healthcare disparities, and ensure financial sustainability. Targeted outcomes may include increased vaccination rates, decreased hospital readmissions, and improved overall community health indicators.

B. Identification of Vulnerable Populations:

1. Definition and Characteristics of Vulnerable Populations:

Vulnerable populations are characterized by heightened susceptibility to adverse health outcomes due to various socio-economic, demographic, or systemic factors. These may include individuals with low socio-economic status, racial or ethnic minorities, the elderly, children, individuals with disabilities, and those facing systemic discrimination. Vulnerability often results from a complex interplay of socio-economic determinants, including income inequality, limited educational opportunities, inadequate access to healthcare, and cultural or language barriers.

2. Justification for Selection:

The selection of vulnerable populations for study within the context of health policy reforms is grounded in the ethical imperative to address health disparities and ensure equitable access to healthcare. These populations face unique challenges that amplify the impact of policy changes. For instance, individuals with low socio-economic status may encounter barriers related to affordability, transportation, and health literacy. Racial and ethnic minorities may experience disparities in healthcare quality and

cultural competency. By focusing on vulnerable populations, the research aims to uncover the differential effects of health policy reforms and contribute to the development of interventions that promote health equity. Furthermore, vulnerable populations often experience a disproportionate burden of preventable diseases and health conditions. Understanding how health policy reforms influence these populations is crucial for crafting policies that not only improve overall healthcare systems but also address the specific needs of marginalized communities. The justification for the selection of vulnerable populations lies in the recognition that effective health policy must be inclusive and responsive to the diverse challenges faced by different segments of the population. The overview of health policy reforms highlights their dynamic nature, encompassing various components aimed at improving healthcare systems. The identification of vulnerable populations underscores the importance of addressing health disparities and ensuring that policy changes benefit all members of society. By examining the interplay between health policy reforms and vulnerable populations, this research contributes to the ongoing dialogue on health equity and informed policymaking.

V. SOCIAL SCIENCE PERSPECTIVE

A. Social Determinants of Health:

- Analyzing how social factors influence health outcomes:

Understanding health outcomes requires a nuanced examination of social determinants, recognizing that health is not solely shaped by medical interventions. Socio-economic status, education, employment, and community environments significantly influence

individuals' health. Health policy reforms must scrutinize how these social factors interplay, influencing access to healthcare, health behaviors, and overall well-being. For example, individuals with lower socio-economic status may face barriers to healthcare access, leading to delayed diagnoses and poorer health outcomes. Analyzing these dynamics helps tailor reforms to address the root causes of health disparities.

- Identifying social inequalities perpetuated or mitigated by reforms:

Health policy reforms have the potential to perpetuate or mitigate existing social inequalities. Reforms that enhance healthcare access, affordability, and quality can mitigate disparities. However, unintended consequences may exacerbate inequalities if reforms are not designed with a thorough understanding of social determinants. Identifying these inequalities requires a comprehensive assessment of the distribution of resources, opportunities, and the accessibility of healthcare services. By recognizing and addressing the social determinants of health, policy reforms can contribute to fostering a more equitable and just healthcare system.

B. Power Dynamics:

- Examining power structures in the context of health policy:

Power dynamics play a pivotal role in shaping health policy outcomes. Decision-making processes, resource allocation, and policy formulation often reflect existing power structures within society. Examining power dynamics involves analyzing who holds influence, which voices are prioritized, and how policies may impact different social groups. For instance, policies driven by

powerful interest groups may inadvertently neglect the needs of vulnerable populations. An understanding of these power dynamics is crucial for developing policies that are transparent, inclusive, and considerate of diverse perspectives.

- Assessing the distribution of resources and opportunities:

The distribution of resources and opportunities within the healthcare system is a key aspect of power dynamics. Health policy reforms can either perpetuate existing disparities or rectify historical injustices. Assessing how resources are allocated, healthcare facilities are distributed, and opportunities for preventive care are accessible is essential. Reforms should aim to dismantle structural barriers that limit access for marginalized communities. By addressing resource distribution and opportunities for health promotion, policies can contribute to a more equitable distribution of power and resources within the healthcare system.

VI. CHALLENGES AND LIMITATIONS

A. Methodological Challenges:

- Data Limitations:

Methodological challenges in assessing the impact of health policy reforms on vulnerable populations are often exacerbated by data limitations. Comprehensive and accurate data are critical for robust analyses, yet limitations may arise due to incomplete datasets, data inconsistencies, or lack of granularity. Vulnerable populations, often underrepresented in traditional datasets, may further compound these challenges. Addressing data limitations requires innovative approaches, such as combining multiple data sources, utilizing advanced

statistical techniques, and recognizing the potential gaps in understanding introduced by data constraints.

- Bias and Confounding Factors:

Methodological challenges also encompass the presence of bias and confounding factors that can influence research outcomes. Bias may arise from sampling methods, measurement errors, or systemic inaccuracies in data collection. Confounding factors, such as socio-economic disparities or pre-existing health conditions, can complicate the attribution of observed effects to health policy reforms. Mitigating these challenges involves employing rigorous study designs, utilizing statistical techniques to control for confounding, and transparently acknowledging potential biases in the interpretation of findings.

B. Ethical Considerations:

- Ensuring the Protection of Vulnerable Populations:

Ethical considerations are paramount in research involving vulnerable populations. Ensuring the protection of individuals within these communities requires robust informed consent processes, clear communication of study objectives and potential risks, and mechanisms to safeguard participant privacy. Researchers must be attuned to the power dynamics inherent in the research process and take steps to minimize any potential harm to vulnerable participants. Additionally, ethical considerations extend to the dissemination of findings, emphasizing the need to present results in a manner that respects the dignity and rights of vulnerable populations.

- Balancing Research Objectives with Ethical Principles:

Balancing research objectives with ethical principles involves navigating the tension between obtaining valuable insights and safeguarding the well-being of participants. Researchers must strike a delicate balance, ensuring that the research design optimally addresses the study's objectives while minimizing any potential harm or discomfort to participants. This necessitates ongoing ethical review, stakeholder engagement, and a commitment to upholding principles of justice, autonomy, and beneficence. Striving for transparency in research processes, openly acknowledging ethical dilemmas, and incorporating feedback from the communities under study contribute to ethical research practices.

In navigating these methodological challenges and ethical considerations, researchers play a crucial role in advancing knowledge while upholding the rights and well-being of study participants. Transparent communication, adherence to ethical guidelines, and continuous reflection on the implications of research actions are essential. Collaborative efforts between researchers, ethics review boards, and community stakeholders are pivotal in establishing a research environment that is both scientifically rigorous and ethically sound. By addressing these challenges thoughtfully, researchers contribute not only to the academic discourse on health policy reforms but also to the broader goal of promoting justice, equity, and the well-being of vulnerable populations.

VII. CONCLUSION

the assessment of the impact of health policy reforms on vulnerable populations from a social science perspective underscores the complex interplay between policy changes and the unique challenges faced by marginalized

communities. The mixed-methods approach, combining quantitative analyses and qualitative insights, provides a nuanced understanding of the multifaceted dynamics at play. By delving into social determinants of health, this research illuminates how factors such as socio-economic status, education, and community environments significantly influence health outcomes, thereby emphasizing the importance of tailored interventions. Methodological challenges, including data limitations and the presence of bias, highlight the need for innovative approaches in research design and analysis. Overcoming these challenges is crucial to ensure the reliability and validity of findings, especially when assessing the impact on vulnerable populations. Ethical considerations, paramount in research involving vulnerable communities, necessitate a commitment to participant protection, transparent communication, and a continual balancing act between research objectives and ethical principles. As health policy reforms continue to reshape healthcare systems globally, it becomes evident that their impact is not uniform across society. Vulnerable populations, characterized by socio-economic disadvantage and systemic discrimination, bear a disproportionate burden. The research contributes actionable insights for policymakers, healthcare professionals, and advocacy groups to craft inclusive policies that address the unique needs of vulnerable populations. By fostering a deeper understanding of the social dynamics and ethical imperatives at play, this study advocates for a future where health policy reforms prioritize equity, justice, and improved health outcomes for all.

REFERENCES

- [1] X. Xiao and Z. Hu, "Analysis on the Influencing Factors of Medical Seeking Behavior of the Elderly Migrantfollowing Child in China," 2021 International Conference on Public Health and Data Science (ICPHDS), Chengdu, China, 2021, pp. 218-221, doi: 10.1109/ICPHDS53608.2021.00051.
- [2] EliudiSariaEliakimu, & Linda Mans. (2022). Taking Up From COP26 Going Forward: Contribution Of The Book "Survival: One Health, One Planet, One Future By George R. Lueddeke". South Eastern European Journal Of Public Health, 41–51. <https://doi.org/10.56801/Seejph.Vi.338>
- [3] Jeffrey Levett. (2023). Steer clear of red herrings: Grant v Mahler Hygiene's philosophical advice to the World Health Assembly. South Eastern European Journal of Public Health, 1–5. <https://doi.org/10.56801/seejph.vi.393>
- [4] Ajani, S. N. ., Khobragade, P., Dhone, M. ., Ganguly, B. ., Shelke, N. ., &Parati, N. . (2023). Advancements in Computing: Emerging Trends in Computational Science with Next-Generation Computing. International Journal of Intelligent Systems and Applications in Engineering, 12(7s), 546–559
- [5] GencBurazeri, SampathEmani, & Ulrich Laaser. (2022). Transfer of the South Eastern European Journal of Public Health to the Netherlands Press. South Eastern European Journal of Public Health, 1–3. <https://doi.org/10.56801/seejph.vi.363>
- [6] Ulrich Laaser, Cheryl Stroud, VesnaBjegovic-Mikanovic, Helmut Wenzel, Richard Seifman, Carter Craig, Bruce Kaplan, Laura Kahn, &RohiniRoopnarine. (2022). EXCHANGE AND COORDINATION: CHALLENGES OF THE GLOBAL ONE HEALTH MOVEMENT. South Eastern European Journal OfPublic Health, 11–40. <https://doi.org/10.56801/Seejph.Vi.337>
- [7] Meena SL, Tunwal R, Khan SP. Study of red blood cell distribution width and carotid intima-media thickness in acute ischemic stroke patients and its correlation with neurological scoring systems. J Krishna Inst Med SciUniv 2023; 12(3):32-40
- [8] Barreto O, Goel L, De Sa C, Pillai VG, Pillai AG, Devi MGG. Assessment of sensorineural hearing loss in well controlled and poorly controlled patients with diabetes mellitus. J Krishna Inst Med SciUniv 2023; 12(3):63- 72
- [9] Vineela KN, Kodudula S, Sindhu P, Srisangeetha G. A comparative study on the pleiotropic effects of Olmesartan and Telmisartan in hypertensive patients with type 2 diabetes mellitus: Arandomized, prospective, open labelled, hospital based study. J Krishna Inst Med SciUniv 2023; 12(3):113-121
- [10] Marnal BAA, Ajjammanavar V, Sumuk MS, Mamatha S, Jayashree S, Poornima M. Efficacy of metformin and insulin in the management of gestational diabetes mellitus: A comparative study. J Krishna Inst Med SciUniv 2023; 12(3):104-112
- [11] X. Chen, X. Ai and L. Zhong, "The Impact of Medical Services and Medicine Separation Policy on Competitive Pharmaceutical Supply Chain Performance," 2018 15th International Conference on Service Systems and Service Management (ICSSSM), Hangzhou, China, 2018, pp. 1-5, doi: 10.1109/ICSSSM.2018.8464964.
- [12] C. Ya-wen, "Research Progress of Chinese Public Health System Reform under COVID-19," 2020 International Conference on Public Health and Data Science (ICPHDS), Guangzhou, China, 2020, pp. 377-381, doi: 10.1109/ICPHDS51617.2020.00081.
- [13] S. Gondi and K. Patel, "Improving Rural Health: How system-level innovation and policy reform can enhance health outcomes across the United States," in IEEE Pulse,

- vol. 7, no. 6, pp. 8-12, Nov.-Dec. 2016, doi: 10.1109/MPUL.2016.2608447.
- [14] Ajani, S.N., Mulla, R.A., Limkar, S. et al. DLMBHCO: design of an augmented bioinspired deep learning-based multidomain body parameter analysis via heterogeneous correlative body organ analysis. *Soft Comput* (2023).
- [15] Khetani, V. ., Gandhi, Y. ., Bhattacharya, S. ., Ajani, S. N. ., & Limkar, S. . (2023). Cross-Domain Analysis of ML and DL: Evaluating their Impact in Diverse Domains. *International Journal of Intelligent Systems and Applications in Engineering*, 11(7s), 253–262.
- [16] C Wen, J Tian, M Xie et al., "[Roles of the public-facility-turned temporary hospital in prevention and control of coronavirus disease 2019 in Wuhan China and clinical experience in the hospital].[J]", *Zhongguo dang dai erke zazhi = Chinese journal of contemporary pediatrics*, vol. 22, no. 5, pp. 409-413, 2020.
- [17] Q Chen, Z Y Zu, M D Jiang et al., "Infection Control and Management Strategy for COVID-19 in the Radiology Department: Focusing on Experiences from China[J]", *Korean J Radiol*, vol. 21, no. 7, pp. 851-858, 2020.
- [18] L Lu, J Zhang, M Xie et al., "A consensus among experts on intelligent medicine during the prevention and control of Corona Virus Disease 2019[J]", *Chinese Journal of Experimental Surgery*, vol. 37, no. 1001-9030(2020)37:2 <393:XXGZBD>2.0.TX;2-F2, pp. 393-398, 2020.
- [19] L L Huang, S P Shen, P Yu et al., "[Dynamic basic reproduction number based evaluation for current prevention and control of COVID-19 outbreak in China][J]", *Zhonghua Liu Xing Bing Xue Za Zhi*, vol. 41, no. 4, pp. 466-469, 2020.
- [20] Z Niu, T Wang, P Hu et al., "Chinese public's engagement in preventive and intervening health behaviors during early breakout of COVID-19: a cross-sectional study.[J]", *Journal of medical Internet research*, 2020.
- [21] S Deng and H. Peng, "Characteristics of and Public Health Responses to the Coronavirus Disease 2019 Outbreak in China[J]", *JOURNAL OF CLINICAL MEDICINE*, vol. 9, no. 5752, 2020.
- [22] M Jakovljevic, S Bjedov, N Jaksic et al., "COVID-19 Pandemia and Public and Global Mental Health from the Perspective of Global Health Securit.[J]", *Psychiatria Danubina*, vol. 32, no. 1, pp. 6-14, 2020.
- [23] L Dong and J. Bouey, "Public Mental Health Crisis during COVID-19 Pandemic China[J]", *EMERGING INFECTIOUS DISEASES*, vol. 26, no. 7, pp. 1616-1618, 2020.
- [24] Q Huang and Y S. Kang, "Mathematical Modeling of COVID-19 Control and Prevention Based on Immigration Population Data in China: Model Development and Validation[J]", *JMIR Public Health Surveill*, vol. 6, no. 2, pp. e18638, 2020.
- [25] Z Yang, Z Zeng, K Wang et al., "Modified SEIR and AI prediction of the epidemics trend of COVID-19 in China under public health interventions[J]", *J Thorac Dis*, vol. 12, no. 3, pp. 165-174, 2020.