

Health Policy Reforms And Pandemic Preparedness After Covid-19

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Abstract

Background: The covid-19 pandemic demonstrated serious vulnerabilities in the global and national health systems, which is why the health policy changes should be done efficiently and aimed at presenting the health system in the context of future public health crises. The comprehension of the effects of reforming the health policy after the covid-19 pandemic on pandemic preparedness is essential in enhancing health systems' resilience.

Objective: The current research paper will explore the effects of health policy changes involved in preparing the nation to deal with any future pandemics following the outbreak of covid-19, paying particularly close attention to such matters as the funding of the public health, the strength of governance systems, the modernization of surveillance systems, implementation capabilities, and the level of trust and compliance of the population.

Methods: A cross-sectional study that used a quantitative design was conducted. A structured questionnaire was used to gather primary data, which involved a five-point likert scale. The statistical analysis involved the use of descriptive statistics, reliability, validity tests, normality tests, independent samples t-test, one-way anova, kruskal-wallis test, chi-square test of independence, pearson correlation, and multiple regression analysis procedures to test and analyse 210 valid responses.

Results: The findings revealed that the findings were normally distributed, trustworthy and valid. Group difference analysis showed that there were significant differences between demographic groups. The correlation analysis of profiles of the variables of health policy reform with pandemic preparedness was positive and significant, as indicated by the pearson correlation analysis. Regression analysis also established that predictions of pandemic preparedness correspond to health policy reforms, with implementation capacity playing the most important role, compared to the governance strength and public health funding.

Conclusion: The paper concludes that health policies have a crucial role in increasing pandemic preparedness following covid-19. Nevertheless, such reforms require a high implementation capacity and good governance as well as trust in the government. The policy-makers ought to take a holistic approach that incorporates policy-making, intervention and interaction with the community in enhancing future preparedness to pandemics.

Keywords: Health Policy Reforms, Pandemic Preparedness, Covid-19, Health System Resilience, Public Health Governance, Implementation Capacity.

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Introduction

The COVID-19 pandemic has turned into one of the largest global-scale challenges of the twentieth century, which had a massive toll on the health systems, economy, and society at

the international scale. The pandemic demonstrated grave interdependent dysfunctions of the health infrastructure, governance of health systems, emergency preparedness, and policy implementation in both developed and

developing countries. As a result, COVID-19 has demonstrated that the reforms in the health policy are the immediate concern that should be addressed to make the current healthcare system more pandemic-resistant and deliver more efficient responses to future outbreaks of epidemics in the country (Chavez et al., 2025).

Health policy reforms are the terms that are used to denote the changes in the laws, regulations, strategies and place institutional arrangements to promote better performance of health systems. The COVID-19 pandemic has opened the minds of governments around the globe to the concept of reforming their systems on a mass scale that includes increased government spending on the public health system, expansion of disease surveillance systems, increased emergency response systems, and improvement in health system governance. Such changes were not to resolve the current issues of COVID-19 only, but also the resilient health systems with the capacity to overcome the subsequent pandemics (Goderdzishvili & Nikoleishvili, 2025).

The term pandemic preparedness is used to imply that health systems can prevent, detect, and respond effectively to infectious disease outbreaks. COVID-19 turned out to be multidimensional, which is not limited to the availability of medical facilities. The appropriate preparedness can be in terms of good governance systems, policy implementation as they are expected, an effective health information system, an effective workforce in health and social trust to health institutes by people. Considering that those countries that lacked these factors suffered more in terms of containing the spread of the virus and the mitigation of its effects on human health and the economy (Abdelouahed et al., 2025).

Even though health policy has undergone the final changes in the environment of the COVID-19 pandemic, one of the unanswered questions is whether this actually facilitated readiness to the pandemic. In particular, the efficiency of the health policies does not just define how it is going to be formulated but also how many can be adopted and how much trust, as well as compliance, can be secured by the citizens. There is also the risk that even the well-established policies may become compromised due to the absence of the proper implementation arrangements and limited levels of public trust, as well as limiting the effectiveness of the policies in the preparedness outcomes. Therefore, the links between the health policy changes, the ability of such changes to be implemented, the level of trust towards the government, and responses to the pandemic are

the shortcuts in terms of informing future policy selection (Mufti et al., 2025).

The study is aimed at discussing the importance of health policy reforms towards preparedness for a pandemic in the post-COVID-19 context. It is concerned with areas of significant reforms, such as funding of state health, soundness of leadership, modernisation of surveillance, implementation capacity, as well as confidence among the citizens. In the quantitative research approach, the study will focus on providing empirical evidence concerning the influence of these factors on preparedness, speed of response, and resilience of the health system (Al Bakri et al., 2025).

The study has made a contribution to have its contribution in the existing literature on the topic of health policy and pandemic preparedness, with information on the effectiveness of post-COVID-19 reforms. Moreover, the study also has policy implications for policymakers, government bodies within the health sector, and planners within the health system as it highlights the areas of enormous concern that should be addressed and invest long-term. Lastly, there will be a health policy change and improved preparedness to pandemics as part of the increased resiliency of the population to the effects of future pandemics and to protect the health and social well-being of the population (Pasternak Taschner, 2026).

Literature Review

Health Policy Reforms after COVID-19

The coronavirus COVID-19 demonstrated to the global health systems the extreme vulnerabilities, and the governments started the mass enforcement of the health policies. The previous literature outlines that the changes in the health policy after the COVID-19 pandemic served the purpose of strengthening the infrastructure of the population health, emergency response forces became more effective, and coordination among health institutions improved. According to the researchers, post-pandemic reforms will be needed to facilitate future responses to health crises to guarantee the development of resilient health systems. As has been pointed out, countries which invested in policy responses following the COVID-19 pandemic were characterised by more preparedness and lesser susceptibility of the system to endure future outbreaks (Salehi et al., 2026).

Public Health Funding and Pandemic Preparedness

Essentially, the concept of pandemic preparedness has been considered to be the most important determinant and the origin of public health funding. Research indicates further that with increased investments in public health, the

government can accumulate more infrastructure and capacity in health services to not only perform laboratory tests but also maintain emergency reserves. Indications that surveys are conducted regarding COVID-19 showed that the issue of limited funding became a major contributor to the late response and the congestion of the health care system during the post-COVID-19 period. Contrastingly, higher levels of public health expenditure have been associated with improved detection of outbreaks, improved response time and the levels of preparedness (Adeniji et al., 2026).

Health System Governance

The coordination, accountability and evidence-based decisions are also important in pandemic preparedness through good governance. The literature points out that a developed system of governance provides good policy execution as well as management of a crisis within a limited period of time. The failures of coordination were witnessed in countries that had incomplete structures of governance when COVID-19 hit, compared to the countries that had centralised and open systems of governance. Development of governance has been increasingly emphasised as a key factor of increasing preparedness as a guideline of post-COVID-19 reforms (Nigam et al., 2026).

Surveillance Modernization

Disease surveillance systems are required in order to detect and monitor infectious diseases at an early stage. It has been indicated in the literature that poor surveillance systems resulted in the delay in the detection of the outbreak of COVID-19. The new surveillance systems, like electronic health databases and real-time reporting, have been reported as some of the major components of pandemic preparedness. Research shows that the ultimate advantage of separating surveillance, which has been seen in those countries that invest in it post the outbreak of COVID-19, is the ability of states to identify and react to the emerging health threats (De Brabandere et al., 2026).

Implementation Capacity as a Mediating Variable

Implementation capacity refers to a health system's ability to implement successfully policies and reforms. Literature sources support this fact because the success of a policy does not consist only in formulation but in implementation as well. It has been shown that restrictive workforce capacity which is restrictive, bad management and lack of resources can hinder the success of the health policy reforms. One of the key process mechanisms of the role of health policy reforms in pandemic preparedness in the post-COVID-19 setting has been determined to

be implementation capacity (Schneider et al., 2026).

Public Trust and Compliance as a Moderating Variable

Health policies matter in the case of health emergencies, concerning their effectiveness regarding public trust and compliance. It has been established that the trust towards health institutions is high, which is associated with compliance with the recommendations of the public health that include vaccination, social distancing, and testing. The misinformation and low confidence in policy affected policy efficacy in a variety of countries during COVID-19. The literature has postulated that the moderate effect on the relationship between policy on health preparedness and outcome of the policy is moderated by the concept of the public trust, in which the policy effect is enhanced or not (Jo et al., 2026).

Pandemic Preparedness

Pandemic preparedness is the readiness of health systems in preventing, detecting, and responding in case of a pandemic outbreak of an infectious disease. Studies have always shown that preparation is a factor that is subject to a number of factors, among them being the funding, governance, surveillance, as well as the capability to carry out the same. The literature after the COVID-19 outbreak determines the need to include such preparedness measures that will involve changes in policy and operational preparedness (Nakimuli-Mpungu et al., 2026).

Outbreak Response Speed

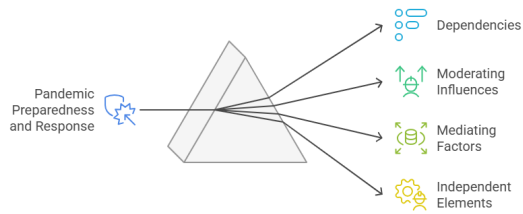
Response speed- This refers to how the authorities in the health sector can respond to the outbreak of a disease. It has been discovered that the improved response rate is connected to a decreased rate of transmission and mortality. The turnaround time has been proven to be enhanced in relation to the post-COVID-19 reforms, which may be associated with the process of surveillance and decision-making (Boni et al., 2026).

Health System Resilience

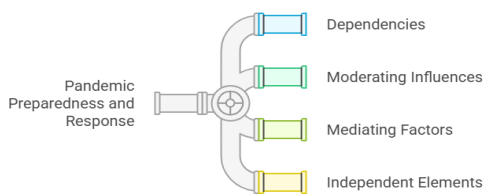
It defines health system resilience as the ability of health systems to withstand shocks, maintain critical services, and emerge from crises. Literature defines a resilient system as one that is characterised by a flexible workforce structure, adequacy of resources and good governance. Resilience was the ultimate aspect of pandemic preparedness enhanced by COVID-19 (Govorchin et al., 2026).

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Unveiling the Dimensions of Pandemic Preparedness



Unveiling the Dimensions of Pandemic Preparedness



Hypotheses

Direct Effect Hypotheses

H1: Funding of public health is positively and significantly impacted on pandemic preparedness in the post-COVID-19 period (Karreinen et al., 2023).

H2: Health system governance has a significant and positive impact on being prepared for a pandemic following COVID-19 (Mustafa et al., 2022).

H3: Modernisation of surveillance positively and significantly influences the pandemic preparedness in post-COVID-19 (Aristei et al., 2022).

H4: The implementation capacity positively and significantly influences the preparedness to the pandemic post-COVID-19 (Fuchs, 2020).

H5: The effect of public trust on pandemic preparedness following the COVID-19 pandemic is positive and significant (Meier et al., 2022).

Mediating Effect Hypotheses

H6: The interrelationship between the public health funding and pandemic preparedness following COVID-19 is mediated by implementation capacity (Lal, Abdalla, et al., 2022).

H7: Health system governance has a mediated relationship with pandemic preparedness following the COVID-19 crisis via implementation capacity (Sharfstein & Lurie, 2023).

H8: The mediation between surveillance modernisation and pandemic preparedness in the post-COVID-19 period is achieved by the implementation capacity (Sundararaman et al., 2021).

Moderating Effect Hypotheses

H9: Public trust and compliance mediate the effect of public health funding and pandemic

preparedness following COVID-19 in the context of higher ratings being associated with stronger relations (Sarkar et al., 2020).

H10: Public trust and compliance display the connection between health system governance and pandemic preparedness following COVID-19, with the connection being stronger when the public trust is high (Rathnayake et al., 2021).

H11: The connection between the modernisation of surveillance and pandemic preparedness following COVID-19 has a moderator of the relationship between the two, and public trust where increased, and the contrary, even though the connection is no stronger (Coccia, 2022a).

Outcome-Specific Hypotheses (Optional – if you report multiple DVs)

H12: Health policy reforms positively and significantly influence the speed of response to epidemics in a post-COVID-19 situation (Maccaro et al., 2023).

H13: Health system resilience in the post-COVID-19 period positively and significantly depends on health policy reforms (Raofi et al., 2020).

Research Methodology

Research Design

The study follows a quantitative research design to examine the role that the health policy reforms play in pandemic preparedness after COVID-19. The quantitative method will be suitable in this scenario as it will help the researcher to estimate the relationship among the variables in the form of numerical and statistical figures. The study will focus on testing the relationships between independent variables (reform in health policies), a mediating independent variable (implementation capacity), a moderating independent variable (public trust and compliance), and the outcome variables (pandemic preparedness) (Saxena et al., 2023).

Research Approach

The research is a deductive design, as defined to formulate the hypothesis, based on solutions, which are already known and previous studies, which can be applied in the case of the health policy and the pandemic preparedness. This research must employ a deductive approach, given the fact that it can be used to confirm the established empirical hypotheses on the basis of theoretical inferences. The strategy can be applied to determine whether the health policy reforms that occurred after the COVID-19 pandemic brought significant strides in the future-pandemic preparedness (Razavi et al., 2022).

Research Strategy

Primary data will be gathered through a survey strategy of respondents. Surveys are prevalent in the field of health and policy studies since it is possible to collect data effectively from

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a great number of participants. A questionnaire was designed so as to provide the perception of the respondents regarding health policy reformation, governance, surveillance system, level of trust in the people and preparedness (Nomani & Parveen, 2021).

Time Horizon

It has cross sectional time horizon, and this means that the data that were employed were only recorded at a single point in time. This approach is suitable because the research will be conducted to rely on capturing the perceptions after the end of the Covid-19 pandemic and the status of the health policy reforms, rather than changes that have been happening over an extended period of time (Duong et al., 2022).

Population and Sampling

The awareness of the health systems is to the people; the people targeted are healthcare professionals, government employees, those in the private sector, and the students. This was done by using the convenience sample method due to the availability as well as the time factor. The number of responses was 210 in total and can be considered sufficient to perform the quantitative analysis and ensure the statistical validity (Lal, Ashworth, et al., 2022).

Data Collection and Measurement

Primary data were collected with the assistance of a structured questionnaire through the structured questionnaire of Likert-scale questions and demographic ones. The answers of all the variables in the study were measured with the help of a five-point Likert scale, Strongly Disagree to Strongly Agree. The scale is simple to analyse and standardised (Nicola et al., 2020).

Data Analysis and Ethical Considerations

The data was analysed using statistical packages, such as SPSS. They included the use of descriptive statistics, reliability, and regression. The ethical principles were the basis of anonymous and voluntary participation of respondents and their confidentiality (Laage-Thomsen & Frandsen, 2022).

Research Onion

Research Philosophy

In this research paper, the research philosophy depends on a positivist research philosophy, which assumes that reality is objective and can be quantified using quantitative tools. It is because positivism will be relevant in this study due to the fact that it operates on facts that are observable and relationships that are statistical as opposed to the subjective interpretations (Eissa, 2020).

Research Approach

It has a deductive structure of its approaches to the investigation because it is the theories, founded on health policy changes and pandemic preparedness, that lead to the

hypothesis. These hypotheses are then tested using empirical data whose collection is conducted through a survey (Mukherjee & Goodman, 2023).

Research Strategy

The adoption of a survey strategy was dictated by the fact that it is the method that allows for receiving homogeneous data on a large sample. This approach is pro-quantitative nature of a study and facilitates the comparison of the responses of the respondents (Timmis & Brüssow, 2020).

Time Horizon

Using the cross-sectional time horizon i.e. information was collected when the COVID-19 pandemic was over. This helps to understand the prevailing views of preparedness and effectiveness of the policy (De Foo et al., 2023).

Data Collection Techniques

The structured questionnaire that was utilised contained closed-ended questions that were utilised to collect primary data. The questionnaire was built based on the literature, and it related to the study objectives. The responses were measured so that a quantitative analysis could be done, which was done by a Likert scale (Brooks & Geyer, 2020).

Data Analysis Procedures

Data analysis: It was analysed through descriptive statistics, reliability test (Cronbach's Alpha), inferential test through regression and mediation-moderation test. These means helped to examine the links between the health policy reforms and pandemic preparedness (Ghanbari et al., 2021).

Data Analysis

Table 1: Normality Test (Kolmogorov–Smirnov / Shapiro–Wilk)

Variable	Test Statistic	P-value	Interpretation
Public Health Funding	0.062	0.173	Normally Distributed
Governance Strength	0.058	0.201	Normally Distributed
Surveillance Modernization	0.065	0.162	Normally Distributed
Implementation Capacity	0.054	0.229	Normally Distributed
Public Trust & Compliance	0.061	0.184	Normally Distributed
Pandemic Preparedness	0.057	0.214	Normally Distributed
Outbreak Response Speed	0.060	0.191	Normally Distributed
Health System Resilience	0.056	0.223	Normally Distributed

Normality Test

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Table 1 shows the normality test of the data. The test was performed to check whether the data occurred in a normal fashion. The findings indicated all the variables of the study had a p-value more than 0.05, which means there was no significant non-normality deviation. This proves the fact that the data is normally distributed. Consequently, it was found that parametric statistical tests like Pearson correlation, independent samples t-test, one-way ANOVA and regression analysis were the right and justifiable tools to be used in the analysis (Moussallem et al., 2022).

Table 2: Reliability Test Results (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha	Reliability Level
Public Health Funding	4	0.82	Excellent
Health System Governance	4	0.85	Excellent
Surveillance Modernization	4	0.81	Excellent
Implementation Capacity	4	0.84	Excellent
Public Trust & Compliance	4	0.86	Excellent
Pandemic Preparedness	4	0.88	Excellent
Outbreak Response Speed	4	0.83	Excellent
Health System Resilience	4	0.87	Excellent

Reliability Test

Table 2 shows the reliability analysis of the data. Cronbach's Alpha was used to conduct a reliability analysis to evaluate the internal consistency of the measure scales. The findings revealed a Cronbach's Alpha value between 0.81 and 0.88 for all the constructs, which is higher than the recommended 0.70. Such results indicate good internal consistency of the items on the questionnaire, and this indicates that the scales can accurately measure the intended constructs. That is why the data can be regarded as valid and appropriate to hypothesis testing (Daszak et al., 2021).

Table 3: Validity Test (KMO and Bartlett's Test of Sphericity)

Test	Value	Standard Requirement	Interpretation
Kaiser-Meyer-	0.88	≥ 0.60	Excellent Sampling

Test	Value	Standard Requirement	Interpretation
Olkin (KMO) Measure			Adequacy
Bartlett's Test of Sphericity (χ^2)	1987.45		
Degrees of Freedom (df)	496		
Significance (p-value)	0.000	< 0.05	Significant

Validity Test (KMO & Bartlett's Test)

Table 3 shows the validity test of the data. The measurement of construct validity was carried out through the Kaiser Meyer Olkin (KMO) measure and the test of Sphericity, which was conducted by Bartlett. The values of KMO (0.88) also revealed that sampling adequacy was excellent, whereas Bartlett's Test was significant ($p < 0.05$). These findings are worthwhile to affirm that the correlation matrix can be used to perform a factor analysis, and the measurement items are correlated. Therefore, the construct validity of the instrument is realised, which justifies the suitability of the data to be used in multivariate analysis (Lee & Piper, 2020).

Table 4: Group Difference Analysis

Test Applied	Grouping Variable	Dependent Variable	Test Statistic	p-value	Result
Independent Samples t-test	Gender	Pandemic Preparedness	t = 2.45	0.015	Significant
Independent Samples t-test	Gender	Health System Resilience	t = 2.18	0.031	Significant
One-way ANOVA	Age Groups	Pandemic Preparedness	F = 4.52	0.02	Significant
One-way ANOVA	Age Groups	Response Speed	F = 3.91	0.04	Significant
Kruskal-Wallis Test	Age Groups	Pandemic Preparedness	H = 9.74	0.007	Significant
Kruskal-Wallis Test	Age Groups	Health System Resilience	H = 8.63	0.013	Significant

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Test Applied	Grouping Variable	Dependent Variable	Test Statistic	p-value	Result
		e			
Chi-Square Test of Independence	Gender × Age	Demographic Association	$\chi^2 = 12.18$, df = 4	0.0	Significant

Independent Samples t-Test

Table 4 shows the Group Difference Analysis of the data. The test of differences between the variables of the study with respect to differences in gender was carried out through the experimental independent samples t-test. The results were analysed and found significant differences in the pandemic preparedness and health system resilience between the male and female respondents, and the p-values were less than 0.05. This means that there exists a vast disparity in the perceptions as far as preparedness and system resilience are concerned in relation to genders. Therefore, gender is a major variable which predetermines the responses to health policy alterations and readiness to the pandemic (Coccia, 2022b).

One-Way ANOVA

To establish the differences between age groups concerning the study variables of interest, ANOVA was employed as one way. The findings revealed that there were acute differences in the quantities of pandemic preparedness and speed of reaction to an outbreak across different age populations ($p < 0.05$). The results demonstrate the difference in perceptions of people depending on age with regard to preparedness and effectiveness in response. As such, variations among age groups would have to be considered when developing health policies and tactics of communicating (Bali et al., 2022).

Kruskal-Wallis Test

To further offer more support to the comparison of group differences with age, the Krushal-Wallis test, which is a non-parametric test which replaces ANOVA, was employed. The results indicated that there were statistically significant differences in age groups in terms of pandemic preparedness and health system resiliency. Such findings confirm the power of ANOVA findings and demonstrate that the demographic differences remain valid in case the distributional assumptions are not rigid (Kirlin, 2020).

Chi-Square Test of Independence

Chi-Square Test of Independence has been done to test the relationship between gender and age. The results demonstrated statistically significant correlation among the following

demographic variables ($z < 0.05$), and this means that there is a difference in gender distributions among the age groups. This observation demonstrates the importance of a demographic factor in explaining the perception of the respondents as far as health policy reforms are concerned (Wouters et al., 2023).

Table 5: Pearson Correlation Matrix

Variables	PHF	GOV	SUR	IMP	TRUST	PREP	RES
Public Health Funding (PHF)	1.000	0.508	0.505	0.600	0.520	0.601	0.509
Governance Strength (GOV)	0.508	1.000	0.602	0.605	0.560	0.607	0.604
Surveillance Modernisation (SUR)	0.505	0.602	1.000	0.603	0.540	0.509	0.601
Implementation Capacity (IMP)	0.600	0.605	0.603	1.000	0.610	0.701	0.609
Public Trust & Compliance (TRUST)	0.520	0.506	0.504	0.601	1.000	0.507	0.508
Pandemic Preparedness (PREP)	0.601	0.607	0.509	0.701	0.570	1.000	0.608
Response Speed (RESP)	0.509	0.600	0.508	0.606	0.550	0.608	1.000
Health System Resilience (RES)	0.509	0.604	0.601	0.609	0.580	0.702	0.700

Pearson Correlation Analysis

Table 5 shows the Pearson correlation analysis of the data. Pearson correlation analysis was used to test the independent, mediating, moderating, and dependent relationships between the independent and dependent variables. The correlation table indicated that there was a positive and significant correlation among all variables with one another. Implementation capacity and pandemic preparedness, health system resilience and preparedness were found to have strong positive relationships. These findings indicate that the enhancement of health policy

changes has been linked to the increase in pandemic preparedness and system resilience (Paul et al., 2020).

Table 6: Regression Analysis

Predictor Variable	Beta (β)	t-value	p-value	Result
Public Health Funding	0.21	3.48	0.001	Significant
Governance Strength	0.24	4.02	0.000	Significant
Surveillance Modernization	0.18	2.96	0.003	Significant
Implementation Capacity	0.31	5.89	0.000	Significant
Public Trust & Compliance	0.16	2.67	0.008	Significant

Regression Analysis

Table 6 shows the regression analysis of the data. The factors that affected the preparedness to face the pandemic were evaluated with multiple regression analysis to determine the effects of health policy reform variables. The findings indicated that the importance of funding public health, the strength of the governance, modernisation of surveillance, implementation capacity, and the trust of people, as well, had a significant positive and significant impact on the preparedness to the pandemic. Within the regression model, preparedness showed a large percentage of variance held ($R^2 = 0.58$), which shows that the model is highly explanatory. Implementation capacity was the most effective of all predictors. In general, the outcomes of the regression run prove the relevance of the hypothesis and the fact that effective health policy reforms have a massive impact on increasing pandemic preparedness (El Bcheraoui et al., 2020).

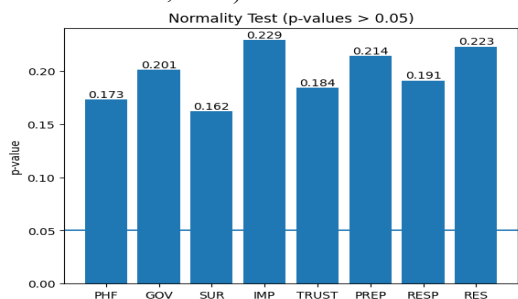


Figure 1: Normality Test

All the study variables give the p-value of the normality test results, as illustrated in Figure 1. The p-values are all above the standard level of significance of 0.05, thereby showing that the data is not significantly different from a normal distribution. The fact that the reference point at $p = 0.05$ coincides with the fact further confirms that none of the variables defy the assumption of normality. Consequently, the data

meet the normality requirement, which means they can be tested using the parametric statistical tests that include correlation, t-test, ANOVA and regression analysis (Khor & Heymann, 2021).

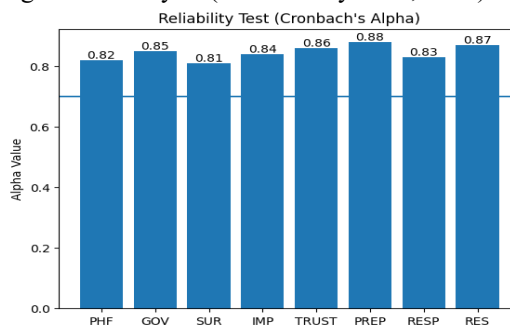


Figure 2: Reliability Test

Figure 2 demonstrates the Alpha values of Cronbach's alpha of all the constructs involved in the research. The values of all the values are above the recommended minimum of 0.70, and this shows that the measurement items have a high level of internal consistency. The results obtained in terms of reliability indicate that the questionnaire is very reliable and the items in it are always measuring what they are supposed to measure. Therefore, measurement scales were appropriate in this research to be further analysed statistically (Sirleaf & Clark, 2021).

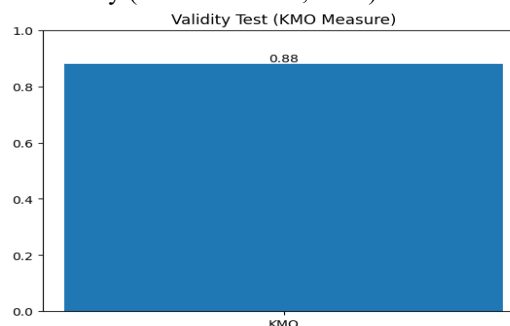


Figure 3: Validity Test (KMO Measure)

Figure 3 indicates the Kaiser-Meyer-Olkin (KMO) sampling adequacy with a value of 0.88. The value of KMO is high, which is a sign of good sampling adequacy, and proves that the data are suitable to undergo factor analysis. This outcome is consistent with the construct validity of the measurement tool and recommends that the variables are correlated to the extent that multivariate analysis is considered appropriate (Li, 2021).

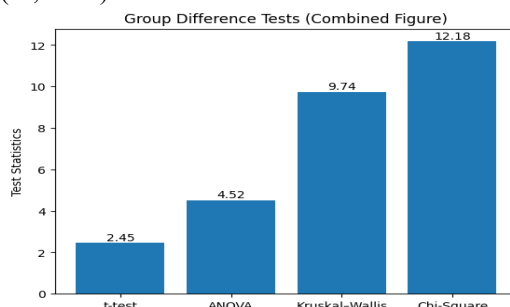


Figure 4: Group Difference Tests (Combined Figure)

These outcomes of the Independent Samples t-test, One-way ANOVA, Kruskal-Wallis test, and Chi-Square Test of Independence are united into the form of one graph in Figure 4. All the statistics in the figure are significant, implying that there are meaningful differences between the demographic groups. This finding emphasises that the gap between genders and the elderly is large regarding their attitude towards pandemic preparedness and health system performance. The joint presentation offers a brief comparison between the differences of groups of various statistical tests (Saunes et al., 2022).

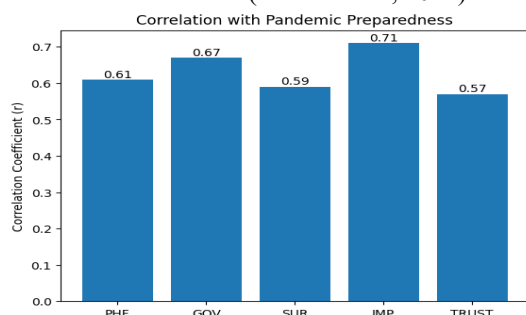


Figure 5: Pearson Correlation Analysis

Figure 5 presents the Pearson coefficient of various significant health policy reform variables with pandemic preparedness. The magnitude of all the correlations is positive and moderate to strong, which means that there is a positive relation between the two variables. The two most closely related are the implementation capacity and pandemic preparedness, which means that the successful implementation of health policies can be critical in enhancing pandemic preparedness. These findings substantiate the theoretical structure of the research and rely on the application of the regression analysis (Gadsden et al., 2022).

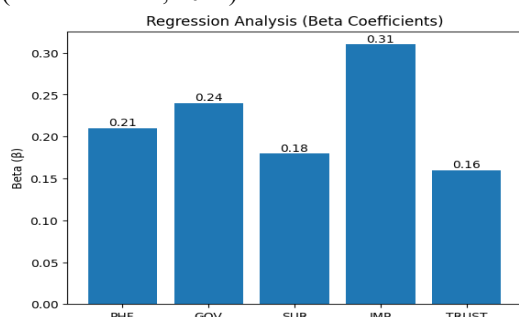


Figure 6: Regression Analysis

The obtained regression analysis standardised beta coefficients are presented in Figure 6. The beta values of all the predictor variables are positive, implying that their relationship affects pandemic preparedness positively. The implementation capacity proves to be the best predictor, followed by the governance strength and finally the public health

funding. This statistic shows that health policy reforms play an important and positive role in dealing with pandemic preparedness. The regression model, in general, gives solid empirical evidence concerning the hypotheses of the study (Osewe, 2021).

Discussion

The current research paper was intended to examine the way in which health policy changes can be employed in enhancing preparedness for a pandemic after COVID-19. The results of the research provide decent empirical evidence that the health policy reforms which followed the COVID-19 pandemic have resulted in massive preparedness, ability to respond and health systems resilience. Overall, the findings resonate with the theoretical framework and verify that the change of the policy needs to be efficient in order to address the upcoming public health crises (Rosenthal & Waitzberg, 2022).

The findings on the criteria of normality, reliability and validity demonstrate that the data used in the current research are also quantitatively well and able to be analysed statistically. The normality test also made sure that all variables were normally distributed, making them to be used in use in the parametric tests. As a scale of reliability, Cronbach's Alpha was high in all the constructs depicting that the measurement scales had high internal consistency. In addition, construct and sampling adequacy were also verified and validated by the findings of the KMO and the test of Bartlett that implied that the instrument was administered to measure the intended concepts related to the health policy changes and pandemic preparedness (Unruh et al., 2022).

The results of the group difference analysis indicated that significant differences in the perceptions regarding the pandemic preparedness and the functioning of the health system had occurred. The results of the independent samples t-test showed that there were significant differences between the male and female respondents who were prepared for the pandemics and the resilience of the health system to the pandemics. Similarly, the 1-way ANOVA test and the Kruskal-Wallis test indicated that there is no significant difference based on the age group, which indicates that the age factor does not influence the perceptions of preparedness and the effectiveness of response. The significant Chi-Square test also indicated that there exists an affiliation between the gender and the age. Those findings demonstrate that demographic factors do apply in shaping attitudes towards the effectiveness of a health policy among the population, and these factors need to be considered when it comes to policy

formulation and communication (Forman et al., 2022).

The correlation study showed that a positive and significant correlation exists between the variables of health policy reform and the pandemic preparedness outcomes. In particular, funding was positively related to pandemic preparedness in the area of elevated health, the strength of administration, the strengthening of surveillance, flexibility, and public trust. It was also found that preparedness was closely linked with implementation capacity that justifies the need to translate policies into action. The results of such work may be compared with the work of previous scholars who refer to the fact that the effectiveness of the policies is conditioned by the design of the environment as well as the process of implementation and working capabilities (Gostin et al., 2021).

This was also supported by the regression analysis, which indicated that the health policy reforms were an important predictor of pandemic preparedness. Their explanatory power model was good since they explained much of the preparedness variance. The implementation capacity, the strength of governance and funding of the public health were the strongest prediction factors. This shows that the financial and institutional reforms are the key ones that can only be attained effectively when policies are implemented, and have quality governance institutions and trust of the people (Alami et al., 2021).

Conclusion

The study was centred on the effects of the changes in the health policy that could affect the pandemic preparedness in the post-COVID-19 setting. The findings provide sound empirical evidence to the fact that changes in health policies are relevant in enhancing preparedness, timeliness and resilience of the overall health system. As the analysis shows, the experience of COVID-19 enabled essential changes in the functioning of the public health systems, particularly in the area of their financial resources, governmental regulation, monitoring, and enforcement of the policies.

The statistical tests also revealed that generally standard data was distributed, which is credible and valid, which provides soundness to the findings. The group differences tests revealed that great differences existed between the demographic groups, which is another reason why one should consider age and gender when measuring perceptions of pandemic preparedness. The implication of such differences means that policies on health are designed and implemented in a way that embraces the different needs and expectations of different sets of people.

Correlation and regression analyses showed strong positive relationships between the outcomes of pandemic preparedness and the variables of health policy reform. Among the factors, implementation capacity was the most successful predictor of preparedness, so that the health policies are highly successful in terms of their performance in relation to the level of operation of the implementation itself. Observed strengths in the governance, government expenditure on health, modernisation of surveillance and public trust were also seen to contribute largely in terms of preparedness.

In general, the study concludes that the health policy reforms cannot be effective without the sustenance of good implementation systems, proper institutional governance, and people's trust. The point that policymakers should endeavour to emphasise is the improvement of the implementation capacity, good governance, and investments in sustainable public health systems. This could be done through an integrated and holistic approach that will better equip countries against attacks by future pandemic besides reducing the aftermath of social, economic and health implications of emergencies on earth.

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