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Exploring COVID-19 preparedness and response effectiveness in Zimbabwe: A case of two public hospitals in Harare (January 2020 – June 2021)

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Abstract
The study focused on the efforts made by the Ministry of Health and Child Care (MoHCC) to prepare and mitigate towards the COVID-19 pandemic. A case study approach was employed focusing on two public hospitals, namely Parirenyatwa and Wilkins Hospitals in the city of Harare. A mixed research methods approach was used utilizing both quantitative and qualitative data. For the quantitative data, a questionnaire was used while interview guides were applied for the qualitative data . In terms of the number of study participants, 50 health personnel responded to the questionnaires while 21 health personnel hospital administrators were intereviewed including three key informants. . The study revealed that, the preparation efforts made by the MoHCC towards the pandemic were minimal and more could have been done to reduce the number of deaths. The implementation of the Zimbabwe Preparedness and Response Plan was said to be a little too late given the magnitude fatal nature of the COVID-19. Therefore, mitigation and preparedness stages were prompted in Zimbabwe well after the first case of the COVID-19 was detected in Harare. The major conclusion is that the MoHCC under-estimated the COVID-19 risk and burden to the overall health administration. Furthermore, the subsequent efforts beyond the initial reaction were effective due to the systematic approach adopted guided by the World Health Organization (WHO) guidelines.

Introduction
The COVID-19 pandemic has caused havoc economically and socially across the globe which inturn has affected sustainable development (Millard, 2020) worse in the poor countries (Arteta, Guenette, Kirby & Wheeler, 2021) such as in Africa. Increasingly, the world is experiencing a plethora of pandemics with many lives being lost every time a pandemic occurs in society. In fact, Epidemiology Dictionary (2001) describes a pandemic as a widespread disease that affects a large population. Globally, the pandemics have had adverse effects on economies, social lives, and political dimensions (Qui, Rutherford, Mao & Chu, 2017, p.9). The globalized world with dense interactions among people through improved modes of travel and almost seamless business dealings across regions, continents and countries tend to accelerate spread and magnitude of disease outbreaks (Marsh and McLennon Companies, 2020, p.8). Furthermore, Kuzawa, McDade and Armlagos, (2020) identify the close interaction between the humans and the environment, urbanization, increasing the population

in the urban areas leading to overcrowding as some of the fuelling factors for disease outbreaks in the present day.

Regarding pandemics, governments that have strong health systems and response plans are most likely to manage them better (Marsh & McLennon Companies, 2020, p.3). Thus, pandemic preparedness should be among the health priorities for any government and the World Bank (2017, p.11) has viewed it as an aspect embodied in "disaster risk management." This suggests that it is the duty of the government to ensure the health system is well equipped, prepared, and competent to react to any disease outbreak. With the efforts from the international community, pandemic frameworks and global measures like the International Health Regulations ([IHR], 2005) were designed to prepare for effective and efficient response to the spread of epidemics in the world, a strategy which is supported by the World Health Organization ([WHO], 2016, p.1). Following the IHR, a Joint External Evaluation Tool (JEE) was developed for use to assess the level of preparedness within countries and to date, only 55 (28%) out of 196 countries that are part of the IHR have completed the assessment (Gupta, 2018, p.4) which might be a cause for concern. Clearly, this implies that nearly three quarters (72%) of the countries who signed the IHR have no concrete information about the state of their preparedness because they have not conducted the assessment as per the JEE guidelines. This weak preparedness outlook is quite unfortunate because the frequency of pandemics are likely to sustain into the future during this current century (Marsh & McLennon, 2020).

There is evidence of weak preparedness for pandemics by countries worldwide especially the less developed countries. To illustrate, the Human Immunodeficiency Virus (HIV) has been present for the past 40 years (Global AIDS Epidemic Report, 2008; UNDP, 2006). Another example is the 2013 Ebola pandemic that mostly affected Western African countries which claimed 11,323 human deaths with Liberia, Sierra Leone and Guinea having more acute cases (Marsh and McLennon Companies, 2020). The World Bank (2017, p.5) pointed out that the West African countries were ill-prepared to effectively respond to the Ebola pandemic in the affected countries. Other pandemics that occurred within the past 20 years are Sever Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) that broke out in 2002 and 2012 respectively (Hadi, Kadhom, Hairunisa, Yousif & Mohammed, 2020, p.7234). In view of the observed weak preparedness for pandemics globally and in less developed countries, WHO (2021) and Phil, Sweidlow and Finelli (2020) recommend sustainable strengthening of health systems through improved investments and science-based responses to pandemics. On the health investment, 17 (81%) of the 21 interview participants expressed that the health sector was not adequately financed to support health delivery requirements including salaries of the health personnel. Regarding science-based health service delivery, Hurlbut (2017) recommends intrinsic involvement of science in policy-making and political decisions to ensure better results in pandemic preparedness and response.

It is clear that COVID-19 pandemic has negatively impacted the world in terms of health, economic and social dimensions. Apart from COVID-19, Zimbabwe had experienced similar health pandemics in the past which include cholera outbreaks in 2008 and 2018. In the context of COVID-19, not much had been documented in Zimbabwe to understand the government's preparedness. In an attempt to explore COVID-19 vaccination in Zimbabwe, Muyambo, Sibanda and Chitando (2023) revealed that religion played a major on acceptance or resistance to vaccination among Zimbabweans. While Mutizwa (2020); Mackworth-Young, et al (2021) and Makurumidze (2020) have outlined the response strategies and processes implemented by the government of Zimbabwe, little has been studied on their effectiveness. In light of this, the study sought to explore the effectiveness of the Ministry of Health and Child Care's (MoHCC)

preparedness and response to the COVID-19 pandemic in the country. Given this problematization, two objectives guided the study which were to:

a) Identify the preparedness measures implemented by the MoHCC in mitigating the impact of the COVID-19 pandemic; and
b) Assess the Zimbabwe Preparedness and Response Plan Coronavirus Disease 2019 (COVID-19).

Literature review

The key theoretical underpinning that anchored the study was the Kimberly Model on Disaster Preparedness (2003) which is designed to manage health related disasters. The key components of the Kimberly Model are preparation, mitigation, response, and recovery as shown in Figure 1 below.

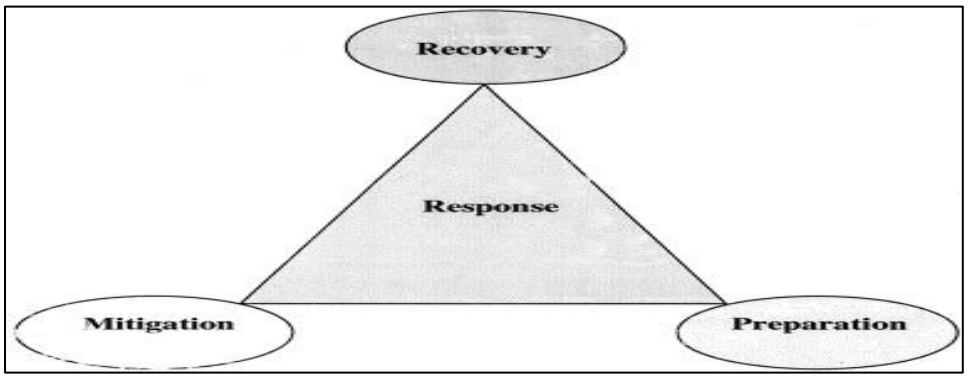

Figure 1: Kimberly Model on Disaster Preparedness (2003)

As depicted in the triangular representation in Figure 1 above, the central focus of the model is response which is dependent on preparation and mitigation. It has been noted that mitigation and preparation are significant disaster management dimensions (United Nations, 2020, p.16), thus, they form the foundation for an effective disaster response and management (Dube, 2018). When response is successfully achieved, this will lead to the final stage, which is recovery. A close look at the model reveals that it encompasses both preparedness (preparation and mitigation) and response (response and recovery) which suggests that the model is holistic in nature and can be applied in different social, economic, geo-political settings and across sectors (Dube, 2018). It is against this backdrop that the authors found the model suitable for the study's subject matter.

The unforeseen and unpredictability nature of pandemics is the cause for preparedness (WHO, 2007, p.9). In as much as preparatory planning is pertinent in preparedness, Staupe-Delgado and Kruke, (2017) note that literature presents preparedness as more focused on "response" than "mitigation". In fact, preparedness has shifted from "response" to "sustainable emergency preparedness" as pointed out by WHO, (2017, p.9) which suggests that disaster planning and implementation should be durable and not once-off activity or short-term. In other words, preparedness is recognized as an initial stage in planning for disasters before an emergency occurs (International Federation of Red Cross and Red Crescent Societies, 2000). The International Federation of Red Cross and Red Crescent Societies, (2020) views disaster preparedness as more of a goal that needs to be accomplished instead of a once off venture, only experienced due to the circumstance of a disaster or pandemic. Preparedness takes a planning process and for it to be considered effective sustainable development trajectory must be considered. In the final analysis, preparedness entails frameworks and strategies to be implemented in case pandemics occur. In other words, disaster preparedness comprises planning, resourcing, laws, frameworks, and coordination as alluded to by the International

Federation of Red Cross and Red Crescent Societies, (2000). The coordination is required between and among the various stakeholders and institutions as posited by Nelson, Lurie, Wasserman and Zakowski (2007) and UN, (2008, p.3).

Response is generally understood as a measure or set of activities that follow preparedness plan of action. In the view of Vestergren (2011), Todd & Todd (2011), and Knezic et al. (2015), response is the effort towards limiting the negative effects of a disaster or pandemic and it is usually implemented immediately after a disaster has been experienced. Todd & Todd (2011) and Vestergren (2011) concur that response has two stages, namely emergency response and longer-term response. Emergency response is action immediately after the disaster has struck while longer-term response is employed during the disaster to ensure normalcy to life and systems (Todd & Todd, 2011; Regional Office for Asia and the Pacific, 2017). Therefore, it is clear that response takes an emergency and future perspectives, and both are critical towards pandemic management. UNISDR (2009) illuminates that response is mainly concentrated on emergency and prompt activities. In this regard, Heymann (2020) proposes that response must be adequate in all perspectives because if it is minimal, it becomes less likely to halt the pandemic under consideration.

In the Kimberly Model on Disaster Preparedness displayed in Figure 1 earlier, recovery is the immediate and ultimate outcome after successful response. International Recovery Platform (2020) and Todd & Todd (2011) conflate that recovery emphasizes on restoration of disaster or pandemic induced destruction and bringing out sustainable development with improved current systems and institutions. Essentially, two main issues involved in recovery are restoration and improvement (UNISDR, 2009; Todd & Todd, 2011). Therefore, it appears that recovery is a process that occurs in phases of restoration followed by improvement. The concepts presented above seem to have a close link to one another in a hierarchal manner. This is to say that the extent of success at preparation and mitigation level, directly influences the effectiveness and scale of response and eventually, the recovery.

Methodology

A case study research design was employed focusing on Wilkins and Parirenyatwa hospitals in the City of Harare (CoH). The choice for the two hospitals was because of Wilkins having been designated as an infectious disease health facility while Parirenyatwa is a major and biggest referral hospital in the country. A total of 71 health personnel and hospital administrators participated in the study, disaggregated as 50 questionnaire respondents and 21 interview participants. In this sample, there were 15 doctors from Parirenyatwa Hospital and 5 from Wilkins Hospital and the rest were nurses and hospital administrators. The doctors and administrators were selected using purposive sampling technique which was guided by criteria of one's direct experience dealing with COVID-19 patients and had been working at the hospital under investigation for at least 10 years. Concerning the questionnaire respondents, a simple random sampling technique was used to select the nurses from each hospital. A Convergent Parallel Mixed Methods research approach was applied utilizing both quantitative and qualitative data to achieve comprehensive understanding of the subject matter investigated. In this regard, pragmatic-constructivism research philosophy underpinned the study to allow for pragmatism, the use of both quantitative and qualitative approaches, and constructivism which emphasizes on interpretation and understanding of phenomena within context (Adom, Yeboah & Ankrah, 2016). Without a doubt, COVID-19 preparedness and response in Zimbabwe presents a unique economic, social, and political context which was considered in the study. A semi-structured questionnaire was used to collect quantitative data from the medical doctors and nurses while interview guide for gathering qualitative data from the

administrators of the two hospitals and selected officials from the Ministry of Health and Child Care. Descriptive statistics were used for the quantitative data analysis while thematic method was applied for qualitative dataset with the help of computer applications, namely Statistical Package for Social Sciences (SPSS) and NVivo respectively. In addition to the primary data obtained through the questionnaire and interviews, various documents were reviewed for secondary data and information. What about ethical considerations given the nature of your study?

Presentation and Discussion of Results

In this section, we present and discuss the study findings, arranged by the two research objectives that guided the study. Before the findings are presented, a profile of the study participants' information and response rate are presented to provide context.

Study participants' information

As shown in Table 1 below, 71 people participated in the study where 50 were questionnaire respondents and 21 were interviewed.

Table 1: Gender disaggregated participants' information

n = 71

	Gender	Participants	%	Total
Questionnaire	Female	33	66	50
	Male	17	34	
In-depth interview	Female	2	67	3
	Male	1	33	
General Interview	Female	12	67	18
	Male	6	33	

It can be seen from Table 1 above that female and male study participants constituted 66% (47) and 34% (24) respectively. The high proportion of women who participated in the study resonates with Bonoil et al. (2019), the International Finance Corporation [IFC] (2019) and WHO (2008) who conclude that women dominate the health sector. Studies in the past have revealed that the explanation on why women dominate the health sector is due to their traditional roles as care givers (Liminana-Gras, Sanchez-Lopez, Roman & Corbalan, 2013). This also suggests that women are at a higher risk of getting affected by infections and diseases than their male counterparts (Regenold & Vindrola, 2021) because they occupy more of the nursing and care jobs in the health sector (WHO, 2008 and IFC, 2019).

Response Rate

Table 2 on the next page shows the response rate within the context that 105 respondents were targeted for participation in the study.

Table 2: Response rate

Data Collection tool used	Target Sample Size	Actual Sample Size	Response Rate
Questionnaire	80	50	62.5%
In-depth Interview	5	3	60.0%
General interview	20	18	90.0%

Overall response rate	**70.83%**

The above table shows the highest response rate (90%) in the general interviews and the lowest in the questionnaire (62.5%) and the in-depth interviews (60%). The overall response rate is 70.83 % and it is an acceptable level in research of this nature as it resonates with Fincham, (2008) and Galea & Tracey, (2007) who concur that a 60% and above of response rate is satisfactory. As noted by Galea & Tracey, (2007), response rates in health studies often do not go beyond 70%. The reality is that in any study, participants have to spare time to participate which they may not have. In the case of health studies like this one, their commitment to care for the patients or administrative work at a health facility increases the chance for them not to be available to participate in studies (Morton, Bandara, Robinson & Atatoa Carr, 2012).

Presentation and discussion of findings

A Likert scale format was used in the study questionnaire which had the following response points: 1=Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; and 5=Strongly Agree. The interpretations of the descriptive statistics given in the constructs investigated are based on this scale applied in every question in the questionnaire. It should also be noted that in adherence to confidentiality and anonymity, pseudonyms were used to identify the interview participants using a combination of letters and unique numbers.

Views on preparedness strategies implemented by the Ministry of Health and Child Care

Table 3 is a presentation of views from respondents with regards to the preparedness strategies implemented by MOHCC in response to the Covid-19 pandemic.

Table 3: Respondents' mean scores on COVID-19 preparedness strategies implemented

Statements on Covid-19 preparedness strategies implemented	**Mean**	**SD**
MoHCC was well prepared before recording the first case of coronavirus	3.60	.881
Hospitals have managed other pandemics well in the past	2.98	.892
MoHCC has been well prepared for pandemics in the past	2.78	.910
Hospitals have managed to deal with the COVID-19 to date	2.70	.995
Average means	**3.015**	**.9195**

Table 3 above shows that the highest mean score is 3.60 which indicates that, generally, the respondents agreed that MoHCC was well prepared before the first case of COVID-19 was recorded. The lowest mean score of 2.70 reveals that respondents were neutral that the hospitals under investigation have managed to deal with COVID-19 up to the time of this study. The overall mean score is 3.015 with standard deviation (SD) of 0.9195 which reveals that, on average, the respondents were neutral to indicate their views on MOHCC's Covid-19 preparedness strategies implemented. The SD of 0.9195, which is below 1, shows that the respondents' responses on the four statements shown in Table 3 above varied slightly and were generally close to the mean of 3.015 (neutral). This finding can be attributed to the general high staff turnover in the ministry of health with new health workers having less knowledge on the state of both the MoHCC and the hospitals investigated (Chimbari et al., 2008). The indecisiveness of the respondents can further be attributed to the fact that the efforts by the MoHCC to prepare for the COVID-19 pandemic were minimal which suggests that the pandemic was not given adequate response. The quotation below from one of the participants interviewed provides some insights on this aspect of preparedness and response strategies to COVID-19 by the MoHCC.

> *But I must admit, before our first case, we were not as prepared as we should. Obviously, it has to do with capacity. Our preparedness was not the best, but our response was excellent (KW1).*

The quotation above reveals two main dimensions of MoHCC preparedness and response to the COVID-19 pandemic. Firstly, it is clear from the quotation that the MoHCC was not sufficiently prepared for the COVID-19 pandemic. Secondly, when it became known that there was COVID-19 including its symptoms and guidelines on how to prevent it, the MoHCC responded appropriately. It can be seen that there is a clear distinction between the questionnaire respondents and interview participants on their level of knowledge about the preparedness and response to the COVID-19 pandemic where the latter were more knowledgeable than the former. The difference of knowledge level can be ascribed to the fact that the key informants have been in the MoHCC for a longer period of time and in decision-making positions than the questionnaire respondents. Another quotation below from an interviewed participant sheds more light on the preparedness and response of MoHCC to the COVID-19 pandemic.

> *We received training that was organised by the MoHCC in collaboration with WHO, Oxfam Zimbabwe, Plan International and other global and national players in the health sector. The training was meant to equip doctors and nurses with critical tools to respond to the pandemic particularly the handling of COVID-19 patients, contact tracing, suspecting handling and screening using basic tools like temperature and travel history (KP2).*

The quotation above reveals two critical issues on the strategies implemented by the MoHCC to respond to the COVID-19 pandemic in the country. The first one is that implementation of trainings and workshops for the health workers were a priority in dealing with the pandemic. The second dimension of the quotation is that the health personnel had no or little knowledge about the COVID-19. The specific training of health personnel on COVID-19 was important given that the pandemic was a new virus experienced in the country and the world at large. The fact that the COVID-19 was a new disease, this is possibly another explanation why the questionnaire respondents were generally neutral in their responses as the findings in Table 3 have shown. Nevertheless, the findings indicate that the government made efforts on response although it was not sufficiently prepared beforehand. This is despite the fact the MoHCC had effectively responded to pandemics in the past for which it was expected to leverage on its experience to achieve effectiveness and efficiency in the COVID-19 response. This notion is supported by Mutizwa (2020) who pointed out that the MoHCC's preparedness and subsequent response to COVID-19 was quite similar to the pandemics in the past.

The word cloud analysis below from the data obtained from the interviews shows that the workshops and trainings were mentioned more frequently that the other issues as the main strategies implemented by the MoHCC to prepare for the COVID-19.

Figure 2: Word cloud on the strategies implemented by the MoHCC

A close examination of Figure 2 above reveals that the most frequently mentioned COVID-19 response strategies were trainings, isolation, sanitization, separation and lockdowns with workshops for health personnel being the most prominent strategy implemented. This finding denotes that the MOHCC made use of workshops to prepare its staff to deal with the Covid-19 in the health institutions. This finding reveals that since Covid-19 was unknown, the MOHCC prioritised workshops so that all the health personnel could gain the necessary information about the symptoms, effects, and treatment of the disease effectively and efficiently. The effectiveness of the workshop strategy implemented by the MOHCC is confirmed by Dandara, Dzobo & Chirikure (2021) who identify lockdowns and social distancing as the main strategies implemented in the country to manage the Covid-19 pandemic. The link here is that health personnel gained knowledge about the importance of social distancing and lockdowns in the workshops and it became easy for them to implement and enforce. The strategies identified in the word cloud shown in Figure 2 also reveal preventive guidelines outlined by WHO to minimize the spread of the corona virus with Statutory Instruments (SI) 77, 83 of 2020 and S1 10 of 2021 implemented to reinforce lockdowns. It also emerged that the MOHCC used a collaboration strategy with the civil society organizations and private companies to enhance Covid-19 response efforts. From the interviews conducted, 12 (57.1%) of the 21 interviewed expressed that there was need to encourage more donors to contribute in the Covid-19 containment efforts across the country. In many countries, involvement of non-state actors especially in low income countries is not uncommon with their financial, material and expert contributions (Maulani, Nyadera & Wnadekha, (2020). It has also been noted that the non-state organizations usually play a pivotal role in capacity development and dissemination of health information during pandemics (Global Health Risk Framework Commission [GHRFC], 2016; Whiteside & Bradshaw, 2014). Within the efforts to respond to Covid-19, the study found that the MOHCC was guided by a specific response action it developed called the Zimbabwe Preparedness and Response Plan (ZPRP). Thus, the next section focuses on the study participants' perceptions about the ZPRP.

Zimbabwe Preparedness and Response Plan

Table 3 below shows the respondents' perceptions on the ZPRP which formulated and implemented by the MOHCC as a specific framework to contain the Covid-19 pandemic in the country.

Table 4: Mean scores on respondents' perceptions on ZPRP

Perceptions statements investigated	Mean	SD
The design and implementation of ZPRP was inclusive of the health personnel at all levels	3.00	0.881
The ZPRP is effective in dealing with Covid-19 pandemic in the country	2.94	0.978
The health personnel at all levels at the hospital have a clear understanding of the ZPRP	2.72	0.948
Overall mean score	**2.87**	**0.94**

The Table 4 above displays that the mean scores range from 2.72 to 3.00. The highest mean score of 3.0 indicates that the respondents were neutral on the notion that the design and implementation of ZPRP was inclusive of the health personnel at all levels. The lowest mean score of 2.72 denotes that respondents were neutral that the health personnel at all levels at the hospital had a clear understanding of the ZPRP. The remaining mean score of 2.94 also indicates that respondents were also neutral on the statement that ZPRP is effective in dealing with COVID-19 pandemic in the country. It is also seen that the overall mean score is 2.87 with 0.94 SD. The overall mean score (2.87) reveals that the responses were more aligned to neutral and distributed slightly varied around the overall mean score (2.87) because the SD (0.94) is less than 1. The neutral responses the respondents provided reflects their lack of confidence in the effectiveness of the ZPRP in containing COVID-19. The lack of confidence has been attributed to the limited inclusivity of the health personnel and the citizens' representatives in strategy and policy formulation on health issues in the country (Masuku & Macheka, 2021). Earlier, African Union (2017) and Ritcher and Panday (2007) concluded that African countries often struggle to practically engage citizens in policy and law formulation. A review of the ZPRP (2020) showed that the response strategy was not implemented immediately at the onset of the COVID-19 but four months later. Contrary to the neutral perceptions by the questionnaire respondents (nurses), two of the interview participants expressed explicit positive perceptions about the ZPRP as presented below.

> *At Parirenyatwa, we are quite satisfied with the way the MoHCC led the implementation of the Zimbabwe Preparedness and Response Plan because we managed to keep the cases low. In addition, we have been able to make sure that we work with limited resources that the budget……. KW1*

> *The response was greatly effective in reducing the covid cases and infections across the nation although I think it was more effective after witnessing a death due to the pandemic. KP2*

It is clear that the quotations slightly differ from the neutral perceptions illustrated earlier through the neutral mean score. The possible explanation could be that the questionnaire respondents (nurses) had limited information about the ZPRP implementation while the interview participants (doctors and hospital administrators) had up to date data and information (statistics) regarding the extent to which the ZPRP was being implemented. Nevertheless, the

quotations above reveal two critical themes relating to the ZPRP and one of them being the reduction of cases in the country as the main strength of the plan. The reduction of COVID-19 cases became the major success of the ZPRP as indicated by 15 (71.4%) of the 21 interviewed respondents above. In fact, it became evident that the plan was largely centred on the reduction of COVID-19 cases and less on human livelihood and sustainable development. The COVID-19 cases reduced moderately following the implementation of the ZPRP and went up around June 2021. The unpredictable increase and decrease in COVID-19 cases might be another reason why the responses in the quantitative findings were neutral. This suggests that the nurses had less confidence in the capacity of ZPRP to make a meaningful impact in the management of the COVID-19 pandemic. Nonetheless, the reduction of cases is highly dependent on the capacity of the health sector to screen, test and treat COVID-19 patients and this assumes that health personnel were already capacitated with knowledge and skills prior to the onset of the pandemic. This highlights the importance of preparedness, a crucial precursor to response as illustrated in the Kimberly Model on Disaster Preparedness (2003).

The second theme evident in the quotations above is that the MoHCC efforts through the implementation of ZPRP were appreciated by the doctors and this is supported by Ipsos's (2020) observations. Again, this contradicts the neutral responses obtained from the questionnaire respondents (nurses) who appeared like they did not have trust and faith in the MoHCC's response plan for the country. The contradiction can be attributed to the fact that key interview participants (doctors and hospital administrators) participated in both the formulation and implementation of the ZPRP. The National Health Strategy for Zimbabwe (2009-2013) corroborates on this aspect where it highlights that health personnel should deliberately be involved in the policy processes to increase ownership, effectiveness, and accountability in implementation. We attempted to determine association between inclusivity in the formulation of the ZPRP and its effectiveness in containing Covid-19 and the statistical results are provided in Table 4 below.

Table 2: Correlation between inclusivity in ZPRP formulation and its effectiveness

		Inclusivity in the ZPRP formulation process	**Effectiveness of the ZPRP implementation**
Inclusivity in the ZPRP formulation process	Pearson Correlation	1	**.782****
	Sig. (1-tailed)		.000
	N	50	50
Effectiveness of the ZPRP implementation	Pearson Correlation	**.782****	1
	Sig. (1-tailed)	.000	
	N	50	50

**. Correlation is significant at 0.01level (2-tailed).

The correlation statistics shown in Table 4 above indicates a positive linear association between the inclusivity of health personnel in the ZPRP formulation and effectiveness of its implementation at a coefficient of 0.782. This Pearson Correlation Coefficient (.0782) denotes that 78.2% of ZPRP implementation effectiveness is attributed to inclusivity of health personnel in its formulation while 21.8% is due to other factors. The significance score (pvalue) obtained of 0.000 clearly reveals that the positive relationship between the inclusivity

of health personnel in the ZPRP formulation and effectiveness of its implementation is very statistically significant at Pvalue of 0.01 level, 2-tailed. These correlation findings argue alongside the Organisation for Economic Co-operation and Development (OECD), (2015) which posits that inclusivity has a positive effect on the successful implementation of policies and strategies in organizations and countries. As alluded to earlier, the other factors that contribute to effective or successful implementation of policies and strategies like the ZPRP are availability of adequate resources and leadership commitment.

Another perception that emerged is that the ZPRP was under-resourced as depicted in the qualitative findings shown in Figure 3 below.

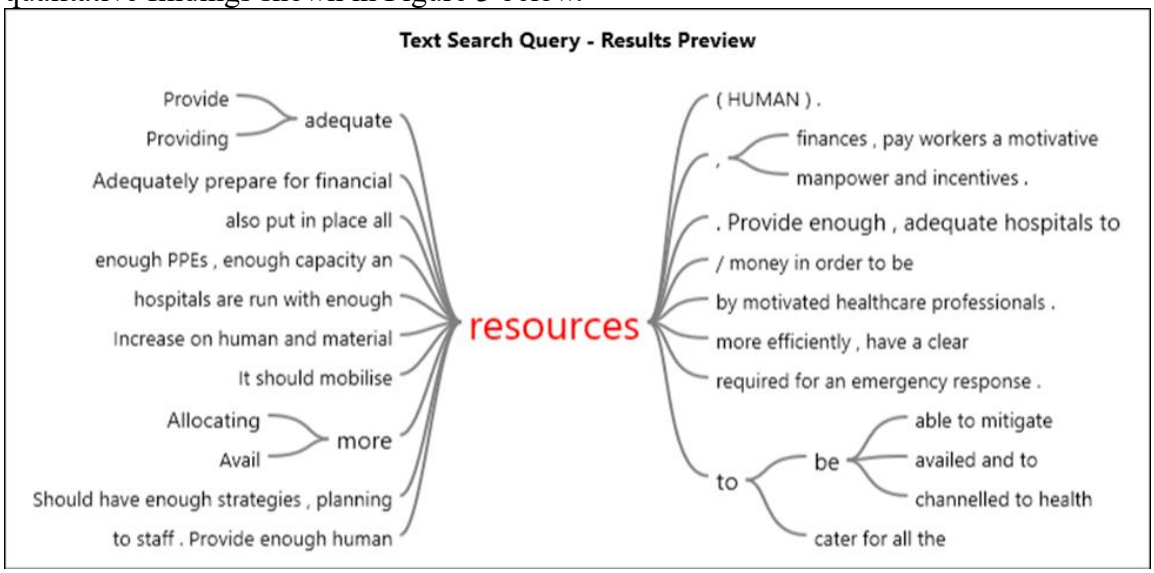

Figure 3: Under-resourcing of ZPRP implementation source? If own, indicate so

The findings shown in Figure 3 above reveal that the interviewed participants had the view that resources are central to the success of any preparedness and response plans to contain a pandemic like Covid-19. The interviewed study participants regarded financing of the health sector as vital to ensure availability of resources towards pandemic preparedness and response

Conclusions

The research found out that the MoHCC and the government did not have a long-term preparedness plan for any pandemics in the country. This was because the MoHCC did not have adequate health financing and pro-active strategies to prepare, mitigate and respond to health pandemics. In the advent of COVID-19 pandemic, the MoHCC developed a response plan whose implementation was viewed as moderately effective. Despite the governments relative effectiveness to respond to the COVID-19, the study findings have also shown that inclusivity of health personnel in the formulation of the response plan is positively associated with the effectiveness of implementation at the coefficient of 0.782.

Implications

The findings indicate that it is critical for the government of Zimbabwe, through the MoHCC, to review the public health policies and strategies with the aim to make them more proactive as opposed to being largely reactive. During the COVID-19 pandemic, the government seemed to have been more reactive which is response but with a weak preparedness. To enhance proactiveness, the policy should have a provision for the MoHCC to develop or adopt pandemic early detection systems for prevention and mitigation measures on time.

In view of the MoHCC's efforts towards the COVID-19 pandemic, the study reveals the inefficient and ineffective response which may have been influenced by the economic and financial challenges in the country. This suggests that the government should be more innovative to optimize the limited financial resources as well as to increase health financing to strengthen investment in pandemic preparedness and mitigation.

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