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RESEARCH ARTICLE

Validating Developed Strategies for Integrating Indigenous Health and Modern Health Systems for Improved Adolescent Sexual Health outcomes in Umguza and Mberengwa Districts in Zimbabwe

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Abstract:

Background:

Adolescent Sexual Health strategies developed and implemented in different country settings need to be contextualised through validation to align with the populace's needs. This study sought to validate developed strategies meant to facilitate the integration of Indigenous Health System and Modern Health System for improved Adolescent Sexual Health outcomes.

Methods:

The Delphi Technique was used to validate the strategies by recruiting fifteen experts in Indigenous Health systems, Health Systems and Policies, Adolescent Sexual Health and Program, Guideline, and Strategy Development to evaluate the developed strategies and assess their feasibility. Furthermore, 100 key stakeholders in Umguza and Mberengwa responded to a semi-structured checklist to express their opinions on the developed strategies and their feedback used to refine the strategies.

Results:

Experts suggested minor changes to one strategy and agreed with the other four strategies. Most key stakeholders (97%) endorsed the proposed strategies. The strategies were, therefore, refined and presented as per the suggestions of these consulted actors.

Conclusion:

Therefore, it is imperative that these strategies be piloted and implemented in the two districts and the progress monitored and evaluated. Suppose they are yielding positive results in as far as Adolescent Sexual health-related issues are concerned. In that case, an implementation must be expanded and rolled out in other districts that have a similar setup.

Keywords: Adolescents, Indigenous health systems, Integration, Modern health systems, Sexual health, Strategies, Validation.

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1. BACKGROUND

Adolescent Sexual Health (ASH) strategies developed and implemented in different country settings must be contextualised to the populace's needs [1]. Strategies usually fail to attain the intended outcomes if they are divorced from the populace's expectations that it intends to serve [2]. Involving key actors in strategy development ensures that robust, appropriate, and acceptable strategies are developed and implemented to achieve the desired outcomes [3, 4]. Therefore, developed strategies should rely on evidence specific to the areas targeted for implementation [5].

In line with SDGs Number 3 (Good Health and Wellbeing) and Goal number 10 (Reduced inequality), it is imperative to ensure that the rural populaces in Mberengwa and Umguza districts also enjoy quality care and reduce inequities in access

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to ASH services. The strategy validation process creates an opportunity to refine and improve developed strategies to make the intended impacts once implemented [6]. The validation process aims to assess the validity and reliability of these strategies in attaining intended outcomes in ASH issues if they are to be implemented [1]. Strategies to facilitate safe sexual practices in adolescents through integrated Health Systems (HSs) were developed in another paper as guided by the research have to be subjected to the validation process to determine their suitability, accessibility, and sustainability in as far as the key stakeholders and experts are concerned [7].

The strategy validation process is key in contextualising developed strategies and getting feedback on whether the proposed strategies are appropriate in addressing the key aspects of a program and ensuring that the strategies do not violate the key stakeholders' beliefs [8]. Different communities have varied value systems and different contextual factors that influence their willingness to adopt and implement strategies [9, 10]. There is a need for careful consideration and involvement of all key stakeholders and consider their input during this planning stage. Necessary adjustments should be made to come up with strategies that are going to be efficient and acceptable at the same time being effective and achieving the desired goals and objectives [10, 11]. Involving key stakeholders makes them part of the change process, thus owning the developed strategies and actively lobbying for their implementation and playing active roles during implementation and monitoring [12]. This study, therefore, sought to validate developed strategies to facilitate the integration of Indigenous health System (IHS) and Modern Health System (MHS) for improved ASH outcomes as guided by the study protocol [7].

2. METHODS

The strategy validation involves two major steps to ensure the validation process is as comprehensive as possible. The first part involved the Delphi Technique, and the second recruited key informants, and stakeholder consultations were done. These key areas are discussed in-depth below:

2.1. The Delphi Technique

A total of 15 experts specialising in Indigenous Health systems, Health Systems and Policies, Adolescent Sexual Health and Program, Monitoring and Evaluation Experts, Guideline and Strategy Development were engaged to review the developed strategies benchmarking it with the objectives they are meant to achieve. Experts were given a week to review the strategies and make notes or comments. A discussion workshop was then set on the ZOOM online platform, where the researcher facilitated some discussions and notes taken to refine the strategies. It was a two-day workshop with two sessions per day for two days. Each session lasted a maximum of two and a half hours. Feedback was consolidated and used to refine the strategies. The Delphi Technique is an interrogation process that allows for decisions to be made by consulting experts in the field of interest [13 - 15]. It allows for constructive contributions to be made [13]. It collects opinions of different experts on a subject of interest and premises that pooled intelligence enhances individual judgment and captures the collective opinion of a group of experts, thus improving the quality of output [14]. This technique enables the interrogation of softer skills and tries and understands how the different combinations come into play in fostering an outcome of interests while ensuring that participants reflect on their contributions and interrogate their thought processes [15, 16].

There was an identification of the key common areas presented by the experts. Furthermore, there was comparison and ranking of these aspects and prioritisation that enabled the critical facts presented to be noted [13, 15, 16]. Therefore, this technique was critical in benchmarking the proposed strategies and evaluating them in a manner that interrogates whether they are capable of bringing about the intended integration of the health systems (MHS and IHS) [15, 16]. Therefore, the participants could debate and deliberate and agree on the key issues that needed to be altered, enhanced, or replaced on the proposed strategies presented to them. The findings are going to be presented thematically.

2.2. Key Stakeholder Consultations

The second part involved consultations with key community stakeholders in Umguza and Mberengwa District. Traditional Leaders, Healers, Herbalists, parents/ guardians, adolescents, and Health Service Providers were selected. Stratified Random Sampling was used to ensure that all the stakeholder groups were represented. One hundred (100) participants were recruited (*i.e*., 50 from Umguza and 50 from Mberengwa) to participate in the strategic review. A sample size calculator on EPI INFO was used to estimate the number of stakeholders that could give a meaningful inference at 95% Level of Confidence with a Width of Confidence of 10% and an expected value of the attribute of 50% (since the population size was not known in the specific areas). This gave a minimum sample size of 96, rounded to 100 spread equally in the two districts. These allowed for stratified sampling to be made. The characteristics of the stakeholders are presented in Table **1**. Firstly, the participants were introduced to the proposed strategies and made aware that their critique and input were key in ensuring that sound strategies for this integration were developed. Furthermore, after the appraisal of the proposed strategies, the key stakeholders completed the semi-structured checklist that sought to solicit their views regarding the proposed strategies. The checklist is appended to this dissertation as Appendix 14. The completed checklists were then captured on Excel and imported to STATA Version 13 SE for analysis. Proportions were computed, brief explanations were given and analysed, and suggestions were considered to refine the strategies further. The refined strategies (ready for implementation) are then presented as the final output of this paper. It is imperative to get the views of the key stakeholders that are directly or indirectly affected by the developed strategies to ensure the developed strategies are acceptable, appropriate as well as sustainable, taking into consideration the different roles that would be played by the different stakeholders and the different contextual settings they are confronted with [17, 18].

Table 1. Overall Judgement of Strategy by key stakeholders.

-	Overall Judgement									
Score	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Freq (%)	-	-	1	2	-	-	2	29	41	25

Table 2. Proposed strategies to facilitate the integration of IHS and MHS.

Proposed Strategies	Goal / Target	Indicators	Responsible stakeholders
The revival of Committees with all key stakeholders for the management of adolescent	♦ Facilitate collaborative efforts between stakeholders ♦ Aide information sharing and foster teamwork approach in tackling matters associated with ASH ♦ Fundraise for adolescent sexual health-related activities and services	♦ At least four committee meetings per year ♦ The proportion of Stakeholders knowledgeable and involved in the integrated programs ♦ Available resources to fund the ASH activities and services	♦ Health Service Providers, Indigenous Health System Practitioners, Police, Traditional Leadership, NGOs, Parents/Guardians representatives and Researchers
Allocating Indigenous Health System practitioners working space in clinics	♦ Ensure there are collaborative efforts and teamwork ♦ Ensure smooth flow in the referral of adolescents between the two HSs	♦ The proportion of clinics that would have accommodated Indigenous Health Practitioners	♦ Ministry of Health and Child Care (MOHCC), HSPs, Traditional Healers, Herbalists, and other relevant key stakeholders
Establishing Adolescent Friendly clinics throughout the two Districts	♦ Improve HSPs and Indigenous Health Practitioners communication skills and relations with adolescents	♦ The proportion of Adolescents accessing SH services in the two HSs	♦ Adolescents, MHS and its practitioners, MOHCC, IHS with the different key stakeholders
Intensify Sexual Health Information Dissemination	♦ Improve access to sexual health services and information even through using platforms such as social media and training workshops in the two systems	♦ The proportion of adolescents who have access to information	♦ Adolescents, MHS and its practitioners, MOHCC, IHS with the different key stakeholders
Provision of Terms of Reference	♦ Provide a basis for integration and give procedures for collaboration and conflict resolution procedures between the two HSs (IHS and MHS)	♦ Efficient referral systems ♦ Availability of policies to govern the integration	♦ MOHCC, Donors, NGOs, HSPs, Herbalists, Traditional Attendants, Traditional Healers, Parents as well as other key stakeholders

3. RESULTS

3.1. Proposed Strategies to be Validated

Five proposed strategies were subjected to the validation process described above. These strategies included allocating Indigenous Health Practitioners (IHPs) space to work from in the health facilities in Umguza and Mberengwa Districts. These strategies are presented in Table **2**.

3.2. The Outcome of the Delphi Technique Consultations

Fifteen experts participated in these consultations, and their expertise was distributed as captured in Table **3**. These experts were drawn from different fields that need to be considered to successfully integrate the IHS and the MHS as far as ASH is concerned.

Table 3. Participants in the delphi consultations.

Participants	Number
Health Systems Specialists	3
Health Policy Specialists	2
Adolescent Sexual Health Specialists	3
Program Guideline and Strategy developers	4
Monitoring and Evaluation Experts	3
Total	**15**

The participants' opinions were captured collectively after deliberations regarding the five proposed strategies as detailed in the following subsections.

3.2.1. The Revival of Committees with all Key Stakeholders for the Management of Adolescent

Participants felt that this strategy could assist in the integration process. However, participants noted that there would be a need to carefully consider (at implementation) the committee members' composition and ensure that it is as inclusive as possible to ensure its efficiency and effectiveness. It was further noted that there is a need to make sure the committee selection process would ensure information exchange between the two HSs regarding ASH-related issues.

3.2.2. Allocating Indigenous Health System Practitioners Working Space in Clinics

Participants generally felt that this proposed strategy would enable working together of different practitioners from the two HSs and ensure ease of referrals between the two systems, thus facilitating their integration.

3.2.3. Establishing Adolescent Friendly Clinics throughout the two Districts

Participants felt that this strategy should be rephrased to read “Establishing Adolescent Friendly Health Systems throughout the two districts.” Participants felt focussing only on clinics would exclude other Health Systems that also play an important role in ensuring adolescents have access to ASH-

related services. Thus, if not included in these strategies, it would derail the potential of this possible integration of the HSs.

3.2.4. Intensify Sexual Health Information Dissemination

Participants supported this strategy as one of the vehicles to facilitate integration. The general feeling was that this would help ensure different stakeholders in IHS and MHS share information and are also given enough information to establish a level of understanding of how they will complement each other. Participants felt that this would create a conducive environment for integrating the two HSs and minimising the chances of potential conflicts.

Table 4. Characteristics of Stakeholders that were consulted.

Stakeholder Type	Mberengwa	Umguza
Traditional Leadership		
Traditional Leaders	5	5
Traditional Healers	5	5
Herbalists (and some of who double up as prophets)	5	5
Traditional Attendants	5	5
Totals	**20**	**20**
Parents/Legal Guardians		
Parents /Guardians	15	15
Totals	**15**	**15**
Health Service Providers		
Nurses	6	6
Environmental Health Technicians	3	3
Doctors	3	3
Nurse Aides	3	3
Totals	**15**	**15**
Grand Totals	**50**	**50**

3.2.5. Provision of Terms of Reference

Participants cited that a clear provision of Terms of Reference that would govern the integration is critical, and they concurred that this proposed strategy is very valuable in fostering the integration. Most of these participants also felt that having clear Terms of Reference would make it easier to monitor and evaluate the progress of implementing other strategies to facilitate integrating the two Health Systems at any stage. They also felt that this would provide a basis and a framework for this integration.

3.3. Outcomes of Key stakeholder Consultations

A total of one hundred key stakeholders participated in the validation process of the proposed strategies. Stakeholders were drawn from different classes with regards to the roles that they played in the communities. These stakeholders are presented in Table **4**.

3.3.1. Overall Judgement of Strategy by key Stakeholders

Respondents were asked to rate the proposed strategies on a scale of 1-10 in light of whether they will facilitate integrating the two Health systems (IHS and MHS). The majority of the respondents cited that these strategies were in line with their expectations. These findings are presented in Table **1**.

3.3.2. Detailed outcome of key Stakeholder Consultations

Generally, most respondents felt the strategies were appropriate and would facilitate integrating the IHS and the MHS. Some, however, had reservations, particularly on ensuring that Health systems are adolescent-friendly, meaning adolescents could access services at any given point, even at some point, without the consent of their parents or legal guardian. These findings are presented in Table **5**.

Table 5. Outcome of the key stakeholder consultations regarding developed strategies (n=100).

	Progress Toward Result Quality Criteria	Yes	No	Missing or No Response	Comments or Revisions to be Made
1	Do you think the strategies present credible outputs, outcomes and impacts?	97	03	-	-
2	Do you think the strategies are in line with your values and beliefs, if not what do you think needs to be incorporated or changed	93	03	04	Some Traditional Health Practitioners felt they might not be able to leave their places where they work from and go and work from the clinic facilities as they felt that their ancestors do not give those; therefore, they will not be able to discharge their duties to the best of their abilities.
3	Do you think the proposed activities would facilitate the integration of IHS and MHS	96	04	-	-
4	The proposed intervention strategies are appropriate for adolescents? If not, what do you think needs to be changed?	78	18	02	Some were citing that if HSs are made to be adolescent-friendly, this will promote promiscuous behaviour in adolescents and lead to a lack of accountability and authorisation by parents of which services they should access and which ones they should not access.
5	The proposed duration of the implementation of strategies appropriate to adolescents and you as a key stakeholder	80	11	09	Some respondents were not sure whether this integration would kick off well as a lifetime investment. Therefore, some were not sure whether or not the issue of time frame played a role.

(Table 5) contd.....

	Progress Toward Result Quality Criteria	Yes	No	Missing or No Response	Comments or Revisions to be Made
6	Outcomes reflect reasonable, progressive steps that adolescents can make toward longer-term results	91	09	-	-
7	Outcomes address awareness, attitudes, perceptions, knowledge, skills and/or behaviour of adolescents	96	04	-	-
9	It seems fair or reasonable to hold the program accountable for the outcomes specified	91	09	-	-
10	The outcomes are specific, measurable, action-oriented, realistic and timed	96	04	-	-
11	The outcomes are written as change statements (for example things increase, decrease, or stay the same).	78	22	-	-
12	The outcomes are achievable within the proposed budgets and reporting periods specified.	92	08	-	-
13	The impact, as specified, is not beyond the scope of the strategies to achieve	92	08	-	-

Table 6. Refined strategies for implementation.

Refined Strategies	Goal / Target	Indicators	Responsible Stakeholders
The revival of Committees with all key stakeholders for the management of adolescent	♦ Facilitate collaborative efforts between stakeholders ♦ Aide information sharing and foster teamwork approach in tackling matters associated with ASH ♦ Fundraise for adolescent sexual health-related activities and services	♦ At least four committee meetings per year. ♦ The proportion of Stakeholders knowledgeable and involved in the integrated programs. ♦ Available resources to fund the ASH activities and services.	♦ Health Service Providers, Indigenous Health System Practitioners, Police, Traditional Leadership, NGOs, Parents/Guardians representatives and Researchers.
Allocating IHS practitioners working space in clinics	♦ Ensure there are collaborative efforts and teamwork ♦ Ensure smooth flow in the referral of adolescents between the two HSs	♦ The proportion of clinics that would have accommodated Indigenous Health Practitioners.	♦ Ministry of Health and Child Care (MOHCC), HSPs, Traditional Healers, Herbalists, and other relevant key stakeholders.
Establishing Adolescent Friendly Health Systems throughout the two Districts	♦ Improve HSPs and Indigenous Health Practitioners communication skills and relations with adolescents	♦ The proportion of Adolescents accessing SH services in the two HSs.	♦ Adolescents, MHS and its practitioners, MOHCC, IHS with the different key stakeholders.
Intensify Sexual Health Information Dissemination	♦ Improve access to sexual health services and information even through using platforms such as social media and training workshops in the two systems	♦ The proportion of adolescents who have access to information.	♦ Adolescents, MHS and its practitioners, MOHCC, IHS with the different key stakeholders.
Provision of Terms of Reference	♦ Provide a basis for integration and give procedures for collaboration and conflict resolution procedures between the two HSs (IHS and MHS)	♦ Efficient referral systems ♦ Availability of policies to govern the integration.	♦ MOHCC, Donors, NGOs, HSPs, Herbalists, Traditional Attendants, Traditional Healers, Parents as well as other key stakeholders.

3.4. Refined Strategies

With regard to the outcome of the validation process, there was a minor adjustment on the third strategy that read "Establishing Adolescent Friendly Clinics throughout the two Districts" to "Establishing Adolescent Friendly Health Systems throughout the two Districts. The refined strategies are presented in Table **6**.

4. DISCUSSION

The Delphi Technique outcome did not result in significant changes to the proposed strategies. Some of the experts (not necessarily those who were part of the validation process) were consulted during the strategy development. Expert consultations have been key in strategy development as their guidance and varied input must be interrogated [19].

The key community stakeholder consultations also yielded positive results, with the majority feeling the strategies could facilitate this integration and produce positive results in ASH-related issues. Involving key stakeholders ensures that the contextual factors over and above content-related factors addressed by the proposed strategies are considered to ensure sustainability, relevance, and acceptability of the proposed strategies within the community setup [19]. These strategies were developed and validated, considering different factors as explored guided by the research protocol. Contextualised and validated strategies are bound to be accepted by the actors concerned and thus increase their chances of implementing and yielding intended outcomes [20].

CONCLUSION

The proposed strategies were relevant and stood better

chances of facilitating the integration of Indigenous and Modern Health Systems as other studies have also confirmed some of these findings in some literature sources [21 - 26]. The majority of the key stakeholders and experts were in agreement with the proposed strategies. Therefore, these strategies must be rolled out and implemented in the two districts and monitored and evaluated. In case they are yielding positive results, they expanded to other districts with a similar setup.

AUTHORS' INFORMATION

WNN was a PhD in Public Health student at the University of Venda in South Africa and a Lecturer in the Department of Environmental Science at the National University of Science and Technology in Bulawayo, Zimbabwe. LM is an Associate Professor, and JTM is a Senior Lecturer in the Department of Public Health under the School of Health Sciences at the University of Venda in Thohoyandou in South Africa. RTL is a Research Professor at the School of Health Sciences at the University of Venda in Thohoyandou in South Africa.

LIST OF ABBREVIATIONS

ASH	=	Adolescent Sexual Health
HSs	=	Health Systems
IHPs	=	Indigenous Health Practitioners
IHS	=	Indigenous Health System
MHS	=	Modern Health Systems
SDG	=	Sustainable Development Goal

AUTHORS' CONTRIBUTION

WNN was a PhD in Public Health student at the University of Venda when this study was conducted. The author conceptualised the protocol as partial fulfillment of the requirements of the PhD requirements. LM is the Promoter, while JTM and RTL are Co-Promoters who contributed by guiding the PhD student in conceptualising the research idea, carrying out the research and preparation of the paper. All authors read and approved the final paper.

ETHICAL STATEMENT

This paper was part of the PhD studies that were conducted at the University of Venda. Ethical clearance was sought from the University of Venda's Ethics Clearance Committee (Ethics Number: SHS/19/PH/17/2608) and the Medical Research Council of Zimbabwe (Ethics Clearance number: MRCZ/A/2611).

CONSENT FOR PUBLICATION

Informed consent was obtained from the participants.

AVAILABILITY OF DATA AND MATERIALS

Not applicable.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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