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Health researchers' efforts in bridging evidence into policy and decision making in Malawi

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Background: Health research is typically disseminated through peer-reviewed journals and academic forums. However, evidence suggests limited exploration of alternative communication methods for effective knowledge dissemination.

Objectives: This study aimed to determine the extent to which policymakers in Malawi consult health researchers while translating their knowledge. This study aimed to determine the post-research endeavours of Malawian health researchers to incorporate research findings into policy and decision making.

Method: Conducted at Kamuzu University of Health Sciences (KUHeS), this cross-sectional study employed a 5-point Likert scale survey to collect data from researchers, offering a snapshot view without indicating temporal changes or causality.

Results: Researchers rarely created suggestions, take-home messages, or actionable instructions for use by health officials. They seldom give users access to a searchable database of papers, studies, and syntheses that summarise recommendations for policymakers in the field of health. They seldom send reprints of papers from scientific publications to decision-makers. Few researchers have created summaries of articles or systematic reviews for health officials' use.

Conclusion: Traditional channels, such as journals and conferences, dominate the dissemination of health research. However, limited evidence suggests the need for broader communication strategies. The current landscape lacks effective products and methods, urging researchers to produce accessible formats with clear, key messages to address policy questions.

Contribution: Researchers should develop research products in compelling formats by using clear key messages. The summarised evidence should answer important policy questions. Researchers should involve the media to communicate their research outputs.

Keywords: health research; communication; dissemination; policy making; decision making; knowledge translation.

Introduction

Enhancing the health and well-being of intended beneficiaries is the goal of using evidence from health research in policymaking (Ellen et al. 2018:64). Numerous health research findings have been presented at conferences, seminars, and workshops, in addition to being published in peer-reviewed publications. According to Tripathy et al. (2017), presenting health research findings to peers enhances the researcher's visibility as well as that of the study findings, relevant research institutes, and their tenure. Certain results of health research should be shared with health professionals outside peer-reviewed publications, conferences, and seminars, because they have real-world applications. In multidisciplinary fields, such as technology transfer, information dissemination, research utilisation, innovation diffusion, sociology of knowledge, organisational change, policy research, and interpersonal and mass communication, there has been interest in the underuse of health research evidence beyond its publication in peer-reviewed journals, conferences, and seminars (Estabrooks et al. 2008:49). The use of health research findings in policymaking outside journals, conferences, and seminars has been covered by a number of writers; they have classified this use as conceptual, instrumental, tactical, and imposed (Loncarevic et al. 2021:1; Makkar et al. 2016:315). Makkar et al. (2016:320) developed a tool to measure the use of research and noted that it is important to identify the following: how research evidence can be used to meet funding, organisational, legal, or legislative requirements for the use of health research evidence; how research evidence can provide ideas and clarify concepts to think about policy issues and, consequently, indirectly influence the content of policy; how research evidence

can justify or exert weight on the pre-existing decisions and courses of action or make a case for changes to be made to the existing policies; and how research evidence can be used to satisfy organisational, legislative, or funding requirements for the use of health research evidence.

In addition to journals, conferences, and seminars, several strategies have been used to guarantee the use of evidence from health research. Among them is an examination of the literature on health research to find information that can be applied in practice (Amri, Chatur & O'Campo 2022:21). According to Basu et al. (2019:116), some scholars have recommended assessing health research studies to ascertain their applicability. According to Prihodova et al. (2019:313), other researchers have noted the use of health research information in practical activities. Others, however, contend that researchers should schedule the application and assessment of research utilisation in practice and should stop or reject practice activities in accordance with the strength of the evidence from health research (Shelton, Cooper & Stirman 2018:55).

Research evidence that is easily understood (Coon et al. 2022:56), research evidence presented in compelling formats (Anderson 2010:141), clear key messages about the research evidence (Udovicich, Kasivisvanathan & Winchester 2017:396), and suggestions for using research findings to answer important policy questions and build relationships with policymakers, media experts, and social media (Cairney & Kwiatkowski 2017:1; Cairney & Oliver 2017:1; Phoenix, Atkinson & Baker 2019:1) are among the other effective techniques for communicating research findings to decision-makers, which are also described in the literature.

Policymakers' application of evidence from health research depends on five key areas. Policymakers are more likely to depend on information from reliable sources such as peers, industry leaders, or people with first-hand knowledge of conditions, needs, or priorities; hence, the source of health research evidence is important (Kruk et al. 2018:1). Policymakers are more likely to employ research evidence related to issues they are presently encountering or expected to face in the near future; therefore, the credibility of the evidence matters (Cairney & Oliver 2017:1). Policymakers are more likely to pay attention to research if a policy related to study findings is clearly stated; hence, knowledge translation is important (Guleid et al. 2022:1). Policymakers are more likely to adopt health research information presented in a clear and enticing fashion; therefore, the way evidence has been presented matters (Fadlallah et al. 2019:26). According to Van de Goor et al. (2017), policymakers favour early preliminary outcomes over late definitive outcomes; hence, the timeliness of the presentation of health research information is important. Policymakers are drawn to tools that make it easier for them to identify the most crucial information because they are overloaded (Bawden & Robinson 2020). Therefore, information overload is a concern.

Nonetheless, evidence-based decision making is not significantly influenced by disseminating health research findings in a format and vocabulary that caters to policymakers' requirements (Poot et al. 2018:3). Rather, because policymakers mostly access health research data through written channels, consideration should also be given to aspects of design, navigation, organisation, aesthetics, and semiotics (Poot et al. 2018:4). The existing difficulty mainly involves training health researchers to work beyond conference presentations, peer-reviewed journal publications, seminars, and workshops. This study aimed to determine how Kamuzu University of Health Sciences (KUHeS) health researchers were involved in knowledge-translation initiatives. The following areas of interest were identified:

1. To assess the strategies employed by researchers to enhance the accessibility of their research to policy and decision-makers in the field.
2. To gauge the extent of collaboration between researchers and various research partners, particularly in the context of knowledge translation, for the effective dissemination of research findings.
3. To investigate the methodologies used by researchers to evaluate the impact of their research on the formulation of health policies within the specific context of Malawi.

Research methods and design

The research design employed in this study was cross-sectional and utilised a quantitative approach. This study focused on researchers affiliated with KUHeS and employed systematic data-collection methods and analytical techniques to investigate specific research objectives. The selection of cross-sectional studies is based upon the nature of the study and research aims. Studies that use cross-sectional design provide an overview of a population at a particular moment in time. With regard to time and money, cross-sectional research is frequently more economical than longitudinal research. A cross-sectional design makes it possible to examine several aspects simultaneously without requiring extensive follow-up in circumstances where resources such as time, money, or staff are scarce. Studies with cross-sectional designs are useful for examining possible relationships between variables. Researchers can compare populations or groups at a particular period using cross-sectional studies. Cross-sectional data can be useful for planning actions and guiding policy decisions, particularly when quick situation assessment is needed.

Study design, sampling, and recruitment

This cross-sectional study used a quantitative approach and employed stratified simple random sampling. Four fourth-year students from the College of Medicine were recruited as research assistants to collect the data. The process of data collection at the Kamuzu College of Nursing was facilitated through the utilisation of a questionnaire implemented via the Google Docs platform.

Data collection

The study involved the collection of quantitative data through the administration of closed-ended questionnaires, conducted both online and in a paper format, targeting academic

researchers. This data collection spanned a duration of two months. Online submissions were left open for 3 months.

Data analysis

The quantitative data in this study were analysed using SPSS version 24 and inferential statistics. To find correlations between categorical data and assess the possibility that observed differences were the result of chance, Pearson's chi-square test was used. The associations between variables were investigated using the Kruskal–Wallis H test. A non-parametric statistical test called the Kruskal–Wallis H test was used to determine whether the medians of three or more independent groups differed in any statistically meaningful way. When the assumption of normality is broken, indicating that the data do not follow a normal distribution, the Kruskal–Wallis test is appropriate. It is a non-parametric substitute for the normally assumed one-way analysis of variance (ANOVA). Ordinal data, in which the numbers have a meaningful order but the intervals between them might not be uniform or well-defined, are suitable for this test. In contrast to ANOVA, the Kruskal–Wallis test does not require the assumption of interval-level data. When observations in one group are independent of or unrelated to those in another group, the Kruskal–Wallis test is intended for independent samples. The Kruskal–Wallis test is a good option when there are three or more independent groups and an ordinal or non-normally distributed outcome variable. The test determines whether equality exists between the group medians. The median of at least one group may differ from that of the others if the p-value is significant. The Kruskal–Wallis test is a useful option when the homogeneity of variances assumption is not satisfied, because it is thought to be resistant to outliers. The test presupposed that the independent variables (faculties) were composed of five category groups, each of which had a separate researcher and no researcher belonging to more than one group, and that the dependent variables were measured at the ordinal level (Likert Scale). Tables displaying the means, standard deviations (SD), and p-values of the data are also presented.

Ethical considerations

Ethical approval for this study was obtained from the University of Cape Town Library and Information Studies Center (Ref. UCTLIS2017 06-05, the National Commission for Science and Technology in Malawi under Protocol P05/17/197 Ref No: NCST/RTT/2/6//), and institutional approval from the Ministry of Health Malawi, College of Medicine, and Kamuzu College of Nursing (now KUHeS).

Results

Table 1 shows the distribution of academic researchers at KUHeS.

Table 1 shows that, of the 246 researchers, data were collected only from 166 researchers, representing a 67.5% response rate.

Table 2 shows that 12 researchers were included from the departments of basic studies, midwifery, obstetrics, and gynaecology.

Figure 1 illustrates that among the 166 participants, there were 480 responses (where $N = 480$ denotes the cumulative count of multiple responses received from the 166 researchers surveyed). Approximately 125 researchers (26%) were involved in university non-teaching hospital activities, 120 (25%) in college non-teaching activities, and 20% ($n = 96$) in teaching hospitals.

Accessibility of research by policymakers

On a 5-point Likert scale (1 = never, 2 = rarely, 3 = occasionally, 4 = frequently, and 5 = always), academics and researchers were asked to rate how often they carried out the specified knowledge-translation activities linked to health research evidence. Table 3 presents the results.

Most researchers (45.8%) reported that they had never created suggestions, take-home messages, or actionable communication for health policymakers that outlined potential courses of action. Fifty percent of the researchers
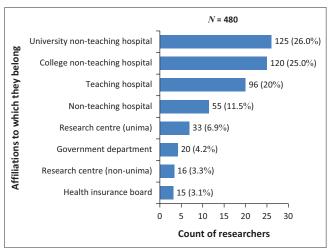

FIGURE 1: Distribution of researchers by affiliation.

TABLE 1: Distribution of academics in the health-related faculties of Kamuzu University of Health Sciences.

College	Faculty	Number of researchers	Number of Respondents	Percentage of respondents to total faculty researchers
KUHeS (Formerly College of Medicine)	Faculty of Medicine	75	54	21.9
	Faculty of Biomedical Sciences	69	34	13.8
	School of Public Health	29	26	10.6
KUHeS (formerly Kamuzu College of Nursing)	Faculty of Nursing	52	38	15.4
	Faculty of Midwifery	21	14	5.7
Total		**246**	**166**	**67.4**

Source: Kamuzu University of Health Sciences Staff Register 2016

had never given policymakers access to a searchable database containing summaries of papers, reports, or syntheses. Similarly, 51.8% of the researchers never sent copies of papers written for scientific publication to decision-makers. Half (56.0%) of the researchers did not provide health policymakers with research literature syntheses. A total of 53.6% had never created formal systematic reviews, summaries, or syntheses of the research literature for use by health officials. Similarly, 54.8% of participants had never created research reports or article summaries for use by health officials. Over 66.9% of those surveyed said they had never given health officials comprehensive and systematic evaluations of the research.

The overall mean rating scores showed that, generally speaking, participants did not communicate with health policymakers that included suggestions, take-home messages, or actionable messages (M = 2.11, SD = 1.26). A searchable database of article, report, or synthesis summaries that suggested potential courses of action for health policymakers was infrequently made available by researchers (M = 1.97, SD = 1.167). They seldom sent reprints of papers published in scholarly journals to health policymakers (M = 1.93;

SD = 1.207). Additionally, they rarely gave health policymakers summaries of the scientific literature (M = 1.87, SD = 1.189). They have never undertaken the development of formal systematic evaluations of scientific literature or synthesis summaries intended for utilisation by health officials (M = 1.81, SD = 1.073). They rarely produced research reports or article summaries for legislators (M = 1.77, SD = 1.06). Additionally, they rarely gave health policymakers formal, systematic evaluations of the research literature (M = 1.62, SD = 1.042). Table 4 displays the variations in knowledge-translation efforts among faculty members.

The ratings for reprints of papers published in scientific journals (χ^2 [4] = 9.149; p = 0.047) and syntheses of research literature provided to policymakers (χ^2 [4] = 9.278; p = 0.041) differed statistically according to the Kruskal–Wallis H test. Regarding involving policymakers in the creation of searchable databases, systematic reviews of research, article summaries, synthesis summaries, and policymaker communications, there were no statistically significant variations in rating scores. Reprinting articles from scientific publications and providing policymakers with summaries of the literature were found to be statistically significant across all faculties.

Collaboration between researchers and policymakers

On a 5-point Likert scale (1 = never, 2 = rarely, 3 = occasionally, 4 = frequently, and 5 = usually), researchers and academics were asked to rate how often they worked with other health research partners in knowledge-translation activities connected to health research evidence. Table 5 presents the results.

A noteworthy observation is that, for 33.7% of the researchers, conferences or knowledge translation courses represented the exclusive avenues through which they had never honed their knowledge translation skills. Additionally, it is noteworthy that 40.4% of the researchers had never encountered or collaborated with knowledge translation experts beyond the confines of their respective academic institutions. Similarly, 46.4% never collaborated with experts in knowledge translation to encourage the application of research findings from health studies. Conversely, 46.4% said they had never got along with journalists covering health-related topics for print, radio, or television. Out of the total participants, 48.8% had never heard of or collaborated with knowledge brokers

TABLE 2: Distribution of researchers by departments.

Department	Number of respondents	Relative frequency %
Basic studies	12	7.2
Midwifery	12	7.2
Obstetrics and Gynaecology	12	7.2
Biomedical sciences	12	7.2
Community and Mental health nursing	11	8.4
Internal medicine	10	6.0
Physiotherapy	10	6.0
Public health	10	6.0
Surgery	10	6.0
Paediatrics and Child health	9	5.4
Ophthalmology	8	4.8
Clinical nursing	7	4.2
Health systems and Policy	7	4.2
Medical-surgical nursing	6	3.6
Pharmacy	6	3.6
Clinical studies	5	3.0
Family medicine	5	3.0
Medical laboratory services	5	3.0
Pathology	5	3.0
Anaesthesia	2	1.2
Mental health	2	1.2
Total	**166**	**100.0**

TABLE 3: How frequently do researchers perform knowledge-translation activities.

Knowledge-translation activities	Never (%)	Rarely (%)	Occasionally (%)	Frequently (%)	Always (%)	M	SD
Developed messages for health policymakers that specified possible action	45.8	21.1	14.5	13.8	4.8	2.11	1.260
Provided access to a searchable database of summaries of articles, reports, and syntheses that specified action for policymakers	50.0	18.1	21.1	6.6	4.2	1.97	1.167
Provided reprints of articles published in scientific journals to policymakers	51.8	21.1	15.1	6.0	6.0	1.93	1.207
Provided syntheses of the research literature to policymakers	56.0	17.5	15.7	5.4	5.4	1.87	1.189
Developed summaries of syntheses of the research literature for policymakers	53.6	24.7	11.4	7.8	2.4	1.81	1.073
Developed summaries of articles for policymakers	54.8	25.3	10.8	6.0	3.0	1.77	1.060
Provided formal systematic reviews of the research literature to policymakers	66.9	14.5	11.4	4.2	3.0	1.62	1.042

M, mean; SD, standard deviation.

TABLE 4: Testing the differences between faculties in knowledge-translation activities.

Dependent variable	Independent variable				χ^2 (4)	p
	Faculty	N	MR			
Provided access to a searchable database of summaries of articles, reports, and syntheses that specified possible action for health policymakers	Faculty of Medicine	54	86.08		6.822	0.144
	Faculty of Biomedical Sciences	34	93.54		-	-
	School of Public Health	26	80.79		-	-
	Faculty of Nursing	38	80.51		-	-
	Faculty of Midwifery	14	62.29		-	-
Provided reprints of articles published in scientific journals to health policymakers	Faculty of Medicine	54	90.44		9.149	0.047
	Faculty of Biomedical Sciences	34	92.22		-	-
	School of Public Health	26	73.10		-	-
	Faculty of Nursing	38	79.33		-	-
	Faculty of Midwifery	14	66.21		-	-
Provided syntheses of the research literature to health policymakers	Faculty of Medicine	54	82.72		9.229	0.041
	Faculty of Biomedical Sciences	34	98.68		-	-
	School of Public Health	26	83.12		-	-
	Faculty of Nursing	38	76.87		-	-
	Faculty of Midwifery	14	68.36		-	-
Provided formal systematic reviews of the research literature to health policymakers	Faculty of Medicine	54	81.41		5.880	0.206
	Faculty of Biomedical Sciences	34	75.25		-	-
	School of Public Health	26	84.00		-	-
	Faculty of Nursing	38	88.28		-	-
	Faculty of Midwifery	14	97.71		-	-
Developed summaries of articles or research reports for health policymakers	Faculty of Medicine	54	79.89		6.499	0.165
	Faculty of Biomedical Sciences	34	74.63		-	-
	School of Public Health	26	86.33		-	-
	Faculty of Nursing	38	90.34		-	-
	Faculty of Midwifery	14	95.14		-	-
Developed summaries of syntheses or formal systematic reviews of the research literature for health policymakers	Faculty of Medicine	54	80.63		7.532	0.112
	Faculty of Biomedical Sciences	34	75.85		-	-
	School of Public Health	26	98.31		-	-
	Faculty of Nursing	38	86.53		-	-
	Faculty of Midwifery	14	77.43		-	-
Developed messages for health policymakers that specified possible action	Faculty of Medicine	54	82.57		4.301	0.368
	Faculty of Biomedical Sciences	34	76.29		-	-
	School of Public Health	26	95.13		-	-
	Faculty of Nursing	38	86.66		-	-
	Faculty of Midwifery	14	74.39		-	-

MR, mean rank.

TABLE 5: Collaboration with other health research partners in knowledge-translation activities.

Collaborative activities	Never (%)	Rarely (%)	Occasionally (%)	Frequently (%)	Always (%)	M	SD
Participated in knowledge-translation skill-building activities	33.7	20.5	23.5	16.9	5.4	2.40	1.260
Identified and worked with knowledge-translation specialists outside of the Colleges	40.4	25.9	14.5	15.1	4.2	2.17	1.229
Worked with knowledge-translation specialists to promote health research evidence use	46.4	21.7	9.0	18.7	4.2	2.13	1.294
Developed relationships with print, radio, or television journalists reporting on health issues.	46.4	23.5	19.3	6.0	4.8	1.99	1.157
Identified and worked with knowledge brokers outside of the Colleges	48.8	22.9	15.1	8.4	4.8	1.98	1.191
Identified and worked with credible messengers for health policymakers	50.0	25.3	9.6	9.6	5.4	1.95	1.215

M, mean; SD, standard deviation.

outside their institutions. Half (50%) of the researchers had never been able to relate to or collaborate with reliable advocates for health policy.

The average mean rating scores showed that participants, on average, did not often engage in knowledge-translation skill-building activities like conferences or courses (M = 2.4, SD = 1.26); they did not often identify and work with knowledge-translation specialists outside of their colleges (M = 2.17, SD = 1.229); they did not often collaborate with knowledge-translation specialists to promote the use of health research evidence (M = 2.13, SD = 1.294); they did not often form connections with print, radio, or television journalists covering health-related issues (M = 1.99, SD = 1.157); they did not often identify and collaborate with knowledge brokers outside of their colleges (M = 1.98, SD = 1.191); and they did not frequently identify and work with credible messengers for policymakers (1.95, SD = 1.215).

The results of the Kruskal–Wallis H test showed that there was a significant difference in the rating scores for working with knowledge-translation specialists to promote the use of

health research evidence between faculties (χ^2 [4] = 16.223; p = 0.002), with a mean rank of 108.19 for the Faculty of Public Health and 84.22 for the Faculty of Medicine; for identifying and working with knowledge translation specialists outside of colleges (χ^2 [4] = 12.763; p = 0.010), with a mean rank of 81.06 for the Faculty of Medicine and 79.61 for the Faculty of Biomedical Sciences and 72.07 for the Faculty of Midwifery. Table 6 presents the results.

However, the rating scores for finding and collaborating with reliable sources and building connections with print, radio, and television journalists covering health-related topics did not show a statistically significant difference. In summary, the faculty from which the participants were surveyed was statistically associated with those who participated in knowledge-translation skills building, particularly conferences, developed research design and methods, collaborated with knowledge translation specialists to encourage the use of health research evidence, identified and collaborated with knowledge brokers outside colleges, and worked with knowledge translators.

Impact of health research and health policy formulation in Malawi

A 5-point Likert scale was used to gauge the influence of academics and researchers on health study findings and policy formation in Malawi (1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, and 5 = highly agree). Table 7 presents the findings.

A significant portion of the researchers (27.7%) agreed that their findings had potential significance but were not utilised by health policymakers. Similarly, a consensus among 25.9% of researchers indicated that health policies and practices were influenced by their research or reviews. Regarding the development of research-assisted health policies, nearly one-third (32.5%) of the researchers were unsure of their conclusions. Policymakers were able to select alternate policies by considering the uncertainty held by approximately 30% of researchers. That said, 26.5% of respondents strongly disagreed that their research assisted health policymakers in selecting their favoured course of action.

Remarkably, 31.3% strongly disagreed that their findings supported the health policies they had in place. Participants' mean rating scores revealed that they were unsure whether their research or reviews were used to inform health policy or practice (M = 2.96, SD = 1.363), whether their research helped health policy formulate health policy issues (M = 2.72, SD = 1.205), whether their research had assisted health policymakers in identifying potential policy alternatives (M = 2.68, SD = 1.221), and whether their research helped health policymakers select their preferred policy options.

TABLE 6: Test for differences in knowledge translation between faculties.

Dependent variable	Independent variable			χ^2 (4)	p
	Faculty	N	MR		
Participated in knowledge translation skill-building activities	Faculty of Medicine	54	84.79	19.674	< 0.001
	Faculty of Biomedical Sciences	34	69.72	-	-
	School of Public Health	26	115.58	-	-
	Faculty of Nursing	38	76.26	-	-
	Faculty of Midwifery	14	72.07	-	-
Worked with knowledge translation specialists to promote health research evidence use	Faculty of Medicine	54	84.22	16.223	0.002
	Faculty of Biomedical Sciences	34	67.65	-	-
	School of Public Health	26	108.19	-	-
	Faculty of Nursing	38	82.38	-	-
	Faculty of Midwifery	14	76.39	-	-
Identified and worked with knowledge translation specialists outside of the Colleges	Faculty of Medicine	54	81.06	12.763	0.010
	Faculty of Biomedical Sciences	34	73.74	-	-
	School of Public Health	26	108.58	-	-
	Faculty of Nursing	38	79.61	-	-
	Faculty of Midwifery	14	80.64	-	-
Identified and worked with knowledge brokers outside the colleges	Faculty of Medicine	54	79.05	15.331	0.002
	Faculty of Biomedical Sciences	34	74.78	-	-
	School of Public Health	26	108.77	-	-
	Faculty of Nursing	38	84.59	-	-
	Faculty of Midwifery	14	71.96	-	-
Identified and worked with credible messengers for health policymakers	Faculty of Medicine	54	75.72	6.832	0.141
	Faculty of Biomedical Sciences	34	79.93	-	-
	School of Public Health	26	92.13	-	-
	Faculty of Nursing	38	92.75	-	-
	Faculty of Midwifery	14	81.04	-	-
Developed relationships with print, radio, or television journalists reporting on health issues.	Faculty of Medicine	54	82.30	5.963	0.200
	Faculty of Biomedical Sciences	34	83.94	-	-
	School of Public Health	26	82.23	-	-
	Faculty of Nursing	38	92.95	-	-
	Faculty of Midwifery	14	63.79	-	-

MR, mean rank.

TABLE 7: Impact of health research and health policy formulation in Malawi.

Impact	Strongly disagree (%)	Disagree (%)	Uncertain (%)	Agree (%)	Strongly agree (%)	M	SD
Had findings that were not used by policymakers but were potentially important	13.9	11.4	26.5	27.7	20.5	3.30	1.299
Own research or reviews have been used to inform health policy or practice	22.9	12.0	25.3	25.9	13.9	2.96	1.363
Own research assisted health policy in formulating health policy issues	19.9	22.3	32.5	16.9	8.4	2.72	1.205
Own research helped policymakers to identify policy alternatives	21.7	22.3	30.1	18.1	7.8	2.68	1.221
Own research helped policymakers choose the preferred policy options	26.5	24.7	21.7	18.7	8.4	2.58	1.29
Own research was used to justify the final health policy	31.3	23.5	27.7	13.3	4.2	2.36	1.176

M, mean; SD, standard deviation.

Discussion of the findings

A critical stage in the research-to-policy continuum is the incorporation of health research evidence into policy and decision making (Erismann et al. 2021). Health researchers play a crucial role in properly translating their findings into policies that can positively impact public health.

Therefore, well-considered dissemination strategies are necessary for health researchers. This entails developing focused communication plans to successfully interact with decision-makers and policymakers (Cairney & Kwatkowski 2017). Policy briefs, executive summaries, and plain-language summaries customised to the target audience's unique requirements and preferences may fall under this category. It is crucial to engage actively with legislators, medical professionals, and other stakeholders. Through these interactions, researchers are better able to comprehend the policy environment, pinpoint influential decision makers, and cultivate connections that support the conversion of research findings into policy.

Through participation in or administration of training initiatives, researchers can facilitate the integration process. The goal of these programmes may be to improve the ability of practitioners and policymakers to comprehend and apply research evidence to make informed decisions (Hawkes et al. 2016). An atmosphere of perpetual learning is promoted via networks of collaboration between scholars and policymakers. To promote continuous communication and knowledge sharing, researchers may endeavour to create and maintain these types of networks.

Scholars have the ability to proactively promote the incorporation of evidence into policymaking procedures. This entails stressing the value of making decisions based on the best available data and the possible consequences of implementing laws supported by a thorough study (Porcelli & Delgado 2017). Creating clear and understandable policy briefs is a good method to obtain research results for decision-makers. These briefings should present the research's significance, ramifications, and practical suggestions in a manner consistent with the decision-making process.

Strong frameworks for monitoring and evaluation should be developed and researchers should contribute to this process. This entails creating metrics to evaluate how research findings affect policy and decision-making procedures over time (Siar 2023). The creation of feedback loops guarantees that learning never ceases. Researchers can gather inputs on how policies are implemented, modify their research plans in response to this input, and improve their methods for subsequent partnerships.

Scholars can utilise both conventional and digital media platforms to distribute their results to a wider audience. This increases awareness and exerts pressure on decision makers to consider evidence-based approaches (Dwivedi et al. 2021). Public participation in research and policy processes is essential. There is a growing demand for evidence-based policy because of researchers' ability to directly convey their findings to the public through a variety of venues.

In conveying the study findings, researchers should respect ethical norms and ensure that data are provided truthfully and openly. This creates a climate that is favourable for the use of evidence by creating trust between the public and politicians. It is critical to understand the cultural context. Understanding the sociocultural elements that affect policy choice is necessary for effective integration. Researchers should adjust their communication plans to consider these aspects.

Researchers must exercise caution when it comes to resolving potential conflicts of interest and biases that could affect how evidence is translated into policy. These difficulties are lessened by compliance with ethical standards and transparent reporting. Policymakers could resist reforms based on the study findings for a variety of reasons. Researchers can foresee these obstacles and collaborate with decision-makers to address issues, offering further proof and help when needed.

International cooperation is beneficial, because health issues are interconnected. To address common health challenges, researchers can collaborate to share findings and best practices across national boundaries. Scholars can examine effective instances of integrating research into policies from many nations and areas. Context-adaptive methods can be informed by lessons learned from these experiences.

Health researchers employ a variety of strategies in their post-research work to incorporate evidence into policy and decision making. Strategic communication, advocacy,

capacity building, and continuous cooperation are necessary for effective knowledge translation. Health researchers play a vital role in bridging the gap between research and meaningful policy effects by actively engaging in such efforts.

Study limitations

The results may not be broadly applicable because of Malawi's unique health systems, laws, and relationships between researchers and policymakers. Response bias is one of the possibilities that arises from this, as participants might provide answers that are socially acceptable or might not accurately recollect their post-research activities. An image captured at a particular moment in time was provided using the cross-sectional configuration of the study. They can overlook temporal patterns or shifts because they fail to convey the dynamic and ever-changing characteristics of the integration process. Capturing a complete spectrum of events and viewpoints may be hampered by the selected data-collection method. A more comprehensive understanding can be achieved by employing diverse methodologies, alternative approaches, or mixed methods, thereby enhancing the depth of knowledge obtained.

The dependability of reported integration activities may be impacted by the lack of external validation tools or checks. The study might not offer a thorough longitudinal analysis of post-research initiatives because of budget limitations or the nature of the research design. This makes it difficult to investigate the long-term changes and patterns. The scope and depth of the investigation may be affected by resource constraints, including those related to time and money. More resources may be required for a more thorough examination.

Conclusion

In the context of Malawi, this study clarifies the intricate terrain of health researchers' post-research endeavours to incorporate knowledge into policy and decision-making procedures. The results offer insightful information about the difficulties, approaches, and dynamics that influence how research findings translate into real effects on health policy. The significance of a nuanced approach to comprehending the integration process is highlighted by the contextual subtleties of the Malawian health system and varied relationships between researchers and policymakers. Even though the study has shed light on important variables impacting post-research endeavours, it is critical to recognise the inherent constraints that could affect the conclusions' profundity and generalisability.

A careful interpretation of the findings is warranted given the noted limitations, which include the study's specificity to Malawi, possible sample biases, and dependence on self-reported data. These restrictions provide opportunities for additional studies that use longitudinal designs and a wider variety of variables to examine the more complex aspects of this relationship between health researchers and

policymakers. Nevertheless, this study offers a basis for appreciating the complex character of post-research endeavours and provides insightful information to those involved in making evidence-based decisions concerning Malawi's healthcare system.

The joint endeavours of scholars and decision-makers are vital in promoting favourable health consequences, even when healthcare systems undergo continuous modifications. To address the changing nature of policy environments, this study highlights the importance of adaptable methods and promotes ongoing discussion among various stakeholders.

Addressing the identified limitations and building on the findings of this study can contribute to the development of targeted interventions and best practices. By fostering a culture of knowledge translation, researchers and policymakers can collectively enhance the impact of research on health policies, ultimately advancing the well-being of the population in Malawi and serving as a model for evidence-based decision-making in similar global contexts.

Implications

Research on health researchers' post-research efforts to integrate evidence into policies in Malawi can have broad implications for improving the effectiveness of health policies and decision-making processes. It has the potential to shape future research priorities, influence resource allocation, and foster a culture of evidence-based policymaking.

Recommendations

Training programmes must be established and attended to improve health researchers' abilities in knowledge translation, communication, and policy advocacy. It is necessary to support the exchange of knowledge between seasoned researchers and those just starting out in their careers through mentoring programmes. It is necessary to provide efficient channels of communication between researchers and policymakers for discussions and information-sharing, such as meetings and workshops. It is necessary to improve accessibility for policymakers by creating policy briefs and plain language summaries of study findings. To ensure meaningful and usable findings, it is necessary to support collaborative research projects, including scientists, decision makers, and stakeholders. Interdisciplinary teamwork should be promoted to tackle intricate health problems from several perspectives. More financing should be provided to help research, knowledge translation, and dissemination initiatives to overcome resource limitations. Interacting with funding agencies stresses the value of sponsoring studies that directly influence public health policies. To ensure the efficient application of evidence-based policies, policy implementation research was conducted to identify barriers and facilitators. Incorporating

communities into the study process, making findings more applicable, and creating plans for public outreach should also be incorporated.

Competing interests

The author declares that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Author's contributions

P.M. contributed to the conceptualisation design of the work, data collection, data analysis and interpretation, drafting of the article, and the critical revision of the article. P.M. also analysed the data and was involved in the critical revision of the article. The manuscript was authored by P.M.

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Data availability

The author confirms that the data supporting the findings of this study are available within the article.

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