

Translation of Health Research Evidence into Policy and Planning in Nepal: An Appraisal 2016



Government of Nepal
Nepal Health Research Council



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Executive Summary

Background: Knowledge derived from research may be of little value unless it is put into practice. Although a large number of studies have been carried in different health related issues in Nepal, the use of evidences from such studies in policy making process has not been fully explored. Therefore, this study was undertaken to assess the country level efforts to link research to action in the present scenario and to develop appropriate mechanisms to strengthen assessing, appraising and translating evidence for policy makers.

Method: It was a qualitative study based on key informant interview of policy makers and researchers. The Ethical Review Board of Nepal Health Research Council (NHRC) granted the ethical approval for this research. Twenty-five researchers and twelve policy makers were sampled using the theory of saturation. All the interview were audio recorded, transcribed in participants original language (Nepali), translated to English, coded line by line and then developed into themes. Data were analyzed manually using thematic analysis technique. A training workshop on critical appraisal of evidence and protocol development on systematic review and meta-analysis was organized to enhance the competency of health researchers in the field and ultimately help policy makers on evidence based decision making in Nepal after the completion of research project as most of the research participants highlighted the need of capacity development for evidence synthesis.

Results: Research participants were involved in a diverse type of research, including research designed to improve program effectiveness, feasibility study of community-based interventions, entomological, epidemiological and serological study on disease like *Visceral leishmaniasis* (Kala-azar), national health survey and interventional study. The number of health research in past decades was reported to be in increasing trend with increasing resources. However, quality of those researches was not up to the standard. Generation of new information, addressing some practical challenges, forming a base for policy or guideline and catering the interest of donors in a particular field were cited as main reason for conducting research.

Contradictory opinions were put forward regarding the base of health-related policies. Most of the researchers opined that national and international research findings

create the base for drafting policy while other depicted the prominent role of politicians presenting them as the ultimate decision makers.

Policy makers identified stakeholders/experts consultation as measures to pull evidence when needed. Researchers seem to have considered dissemination in workshops, presentation in conferences and publication in scientific journals as measures to push their findings to policy making level. Participants identified conducting of a workshop as the most common exchange effort.

Participants shared their realization of the need for evidence synthesis, which could facilitate policy makers to find all relevant quality assured research findings in single document. According to the participant, it could take the form of meta-analysis, systematic review or simply the synopsis of main result of research in the form of a fact sheet or annual abstract book.

Instability in the leadership, limited opportunity for interaction between researchers and policy makers and poor research reading culture of decision makers were highlighted as key challenges in linking health research to the policy.

Close group media interaction, communication/dissemination of research findings in the presence of local leaders in districts and regions, orientation to the Member of Parliament on health-related indicators, updating political leaders on latest research findings were suggested as options for utmost utilization of health research findings.

Conclusions: With increasing resources, a number of health researches seem to have increased covering diverse areas in the present time. Although the use of health research seems to be increasing, there are some challenges which if addressed could further improve evidence-informed decision-making in Nepal. Promotion of systematic review and meta-analysis of studies can contribute in promoting evidenced based health policy and plan formulation in Nepal.

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List of Abbreviations

CBNCP	Community Based Newborn Care Programme
CBS	Central Bureau of Statistics
GPS	Global Positioning System
IDI	In-depth Interview
INGO	International Non-Governmental Organization
KII	Key Informant Interview
MoH	Ministry of Health
NCD	Non- Communicable Disease
NGO	Non-Governmental Organization
NHRC	Nepal Health Research Council
NHSS	Nepal Health Sector Strategy
NHSSP	Nepal Health Sector Support Program
NMC	Nepal Medical College
NPC	National Planning Commission
TB	Tuberculosis
VDC	Village Development Committee
WHO	World Health Organization

Chapter I

Introduction

There have been attempts to understand the process of utilization of evidences in policy making process globally. However, very little is known about the factors that come into play while drafting policies and the challenges in utilization of research evidences into policy. Furthermore, the mechanism to improve the utilization of research findings in policy and programmes may differ globally and need to be explored in local context to have idea of what works and what does not work in our context. In this context, this study was designed to assess the present scenario of the utilization of health research in policy making process, major gaps and challenges faced while translating evidences into policy and appropriate mechanism to promote utilization of research evidences.

1.1 Background

The utilization of knowledge derived from health research has underpinned significant gains in health and economic development in countries all over the world.¹ Knowledge derived from research and experience may be of little value if it is not put into practice. New National Health Policy 2014 of Nepal has also put emphasis on health research and its utilization.² Large numbers of researches are carried with the objective of expanding the horizon of understanding different issues in health worldwide.¹ The policy makers on the other side, often formulate policy with very limited consideration of research evidences, and have few active connections with either independent researchers or the research community. So, there is need of policy-informed research initiatives and evidence-informed policy making which warrants the need to understand challenges in utilization of research evidences and appropriate mechanism for coordination or a platform to link research to action.³

Although evidence translation has often been dealt with under different terminologies like 'knowledge management,' 'knowledge utilization,' and 'research dissemination, it has been receiving global attention in recent years.^{3, 4} Utilization of evidence in the policy making process or designing health programme is also the secondary objectives of the most of research projects after publication as a scientific paper. The underlying assumption of knowledge utilization related to policy-making is that policies that are research informed end to be better than otherwise would have been the case. Research exposes policy makers to the wide range of concept and experiences.³ Evidence from research can enhance policy development by identifying new issues for the policy agenda, informing decisions about policy content and direction, or by evaluating the impact of policy.³

Research gives information about the reasons that cause some policies to succeed and the others to fail. It can make connections between factors such as the nature of the substantive field and organizational patterns dealing with the problem, or the power of environments over health outcomes which would otherwise operate separately.³ Sometimes research also serves to legitimate some policies.³

However, not all examples of health knowledge utilization go through policy making stage and in some case, the policy comes after partial or incomplete translation of the findings into practice.⁵⁻⁸ Research may sometimes be utilized in designing health programme by non-governmental organizations (NGOs) that are largely difficult to track.³ The most consistent findings of health research is the gap between evidence and practice captures leading to non-linear transformation of research evidence into policy.^{3,9,10} Evidence may be only a component of any decision-making process but it can be made as an integral part of 'inquiry culture' based on continual learning and development. It informs part of the decision-making process for addressing inequalities in health but is inadequate and sometimes inappropriate in meeting an agenda which is also driven by values of social welfare and equity, and where effectiveness may lie in how decisions are reached as well as an assessment of the evidence which underpins them.¹

The utilization of research findings in policy making may be instrumental, conceptual, or symbolic.^{3, 12} Instrumental refers to the use of research findings directly in policy formulation; conceptual use denotes to the gradual sedimentation of insight, theories, concepts, and perspectives; and symbolic use refers to use of research findings to support or strengthen continuation of an already established position.^{3, 12} Despite the commitment and efforts of the Government of Nepal, Ministry of Health (MoH) to strengthen evidence generation and informed policy-making, there has been limited progress achieved in this area.^{2, 13} Although there are notable exceptions, health policies are often developed without sufficient engagement with available evidence. Therefore, there is a need at the national level for effective and timely mechanisms linking decision-makers with relevant, high quality research evidence throughout the policy development process.

The need for evidence-informed policy-making is well established in the global policy environment today, particularly in the health policy arena. However, translating knowledge into policy presents significant challenges and opportunities. These challenges and opportunities are not limited to Nepal. The unique environment in Nepal requires the development of a tailored approach to this process.

This research brings to light the present scenario of the health research and their utilization in policy making process in Nepal. This research also identifies the major

challenges in utilization of health research in policy making and mechanism to facilitate the utilization of evidences which can be useful in developing strategies to improve the utilization of evidences.

Qualitative research was designed with an objective to assess and appraise the country level efforts to link research to action in present scenario and to develop appropriate knowledge translation platform to strengthen assessing, appraising and translating evidence for policy makers.

1.2 Objectives of the study

General Objectives

- To assess the country level efforts to link research to action in the present scenario and to identify appropriate mechanism to strengthen assessing, appraising and translating evidence for policy makers.

Specific objectives

- To assess the country level efforts to link research to action in present scenario.
- To identify the gaps and challenges in evidence informed policy making process
- To identify appropriate mechanisms to strengthen assessing, appraising and linking evidence in policy making process.

1.3 Organization of the report

The research report has been organized into five chapters including this introductory chapter. The first chapter discussed the concept of evidence informed policymaking. The second chapter is a detail description of research strategies executed in the study. The third chapter moves on to present the study finding focusing on key themes. Altogether nine overarching themes and the related subthemes will be summarizes around the three specific research objectives. The fourth chapter will discuss the research findings in relation to pertinent literatures in the field of knowledge management and evidence based policymaking. The final chapter gives a brief summary of the entire report and concludes with suggestions for future research and practices.

Chapter II

Methods

The previous chapter introduced the concept of evidence-based policymaking and highlighted the role of evidence in policy and planning. The specific research objectives outlined in the chapter guided the research strategies in this study, which are the focus of this chapter. This chapter describes and discusses methods used during the study.

2.1 Conceptual framework of the study

Evidence-informed policy and policy informed evidence go side by side. Researcher after generating the evidence through research makes efforts to push the evidences to policy makers, whereas policy makers attempt to pull the needed evidence from the pool of evidence whenever they need to make some decisions.⁸ Sometimes they come in contact with a platform like workshops, seminars etc and share the information or in some cases; the third party mediates the exchange of information through various mechanisms. This research attempts to identify all efforts at all level. Very often policy makers fail to find the evidence that could be relevant to them and researcher find it difficult to push their research evidence to policy making.⁸ Through key informant interview the researcher and policy makers, this research attempted to identify the challenges in pulling research evidence by policy makers and challenges encountered by researchers in pushing their research findings to policy making.

2.2 Study population

Policy makers currently working as an employee of the Government of Nepal or past government employee working independently having the capacity to influence the policy making process, and institutional, independent and academic researchers were enrolled as the study population of the study.

2.3 Sampling method

Purposive sampling of independent researchers, researchers affiliated to search institute and academic researcher was done. Also, researchers working in universities or deemed universities running health and medical science program were sampled purposively.

Policy makers were sampled purposively from among employees holding at least officer level post under the Ministry of Health (MoH). Government employee including key figures from different divisions and centers of MoH, directors of Regional Health Directorates, retired executives were selected for the interview.

2.4 Sample size and justification

Twenty-five researchers and twelve policy makers were enrolled in the study. Sampling was done based on the theory of saturation. The sampling process was discontinued when participants while repeating the interview among researchers and policymakers shared no new ideas.

2.5 Data collection technique

The key informant interview (KII) was used as a data collection technique.

2.6 Data collection tool

A tool developed by Levis et al was used to assess and appraising country level efforts for knowledge translation after some modifications.¹⁴ Consultative meeting with researchers and policy makers was used to finalize the issues to be explored in the process of creating an appropriate knowledge translation platform. KII of policy makers and researchers was conducted to explore the scenario of knowledge translation, challenges faced and ways forward for improvement in Nepal.

2.7 Data management and analysis

Field Notes: Field notes were maintained to keep a written account of events that the researcher hear, observe, experiences and thinks in the course of KII. Field notes were taken in order to supplement the audio record to ensure real life depiction of the KII in the papers.

Transcription Process: Interviews were transcribed in Nepali language from the notes and audio record. Nepali transcript was then translated to English before further processing of the data. All the information including incomplete sentences, interrupted conversations, agreements, pause, facial expressions and gestures and non-verbal behaviors, etc. were recorded so that anyone reading the transcript can really feel the real field scenario of the interview went on.

Coding Process: Transcripts were subjected to open coding. English version of the transcripts was coded in Microsoft word using functions like highlight, track changes and comments. Considering sentence as the lowest chunk of words with some meaning, each of the sentences were coded. If any sentence fits two or more codes at the same time, such sentences were subjected to double coding.

Development of Theme: Data were reduced and narrowed to certain themes based on inductive approach. Open codes in Microsoft Word were copied to Microsoft Excel. Codes with similar meaning were put together using cut and paste technique and organized as a theme into broader and more general category that cover the meaning

of all codes. Fitting of the codes into themes were constantly checked and shifted to appropriate themes in case of poor fitness.

Data Analysis: Separate Excel sheets were prepared for each theme. Every sentence from the open coded Microsoft Word document was then copied to the Excel sheet of corresponding theme. Summary was developed in the same sheet in such a manner that all the sentences or ideas were covered. Each sentence that has been picked up in summary and process of summarization continued till all sentences were covered. Verbatim was picked up as quotation in final report were listed in separate cell in Excel in such a manner that they justify the theme.

Analysis of data was done systematically and rigorously to reflect the views of all participants, not only the most important or most common topics and researcher's own agendas. Research team made best efforts to make sure that none of the ideas were missed due to subjective view point of researchers regarding their relative importance.

2.6 Validity of the data

Care was given to maintain the natural setting to generate ideas. Rather than asking questions, issues were raised and probing was done to facilitate flow of information.

Credibility of the study was maintained by jotting down notes, which added to the defensibility of results, as findings were not solely based on memorizing by researcher. It contributed the trustworthiness (reliability) of qualitative research. Use of variety of process for data gathering (field notes, audio record, memos) in this study ensured credibility.

2.7 Possible biases

Observer bias: The background of researchers might have impact information gathered through interviews.

Selection bias: Views of policy makers being approached and available to participate in interviews might have differed significantly from other those who do not.

2.8 Ethical consideration

An independent Ethical Review Board of the NHRC ethically approved the research protocol of this study. Written informed consent was obtained from all the research participants. Before obtaining written informed consent, participants were explained about the objectives of research, potential harm and benefit to the participants, approximate time required for the interview, confidentiality and anonymity of data obtained and autonomy to withdraw from the interview in case they feel uncomfortable at any point of time.

Alphaneumeric Characters such as R1 to R15 and P1 to P6 are used to represent researcher and policy makers respectively for the purpose of anonymity

2.9 Workshop on Critical Appraisal of Evidences and Protocol Development on Systematic Review and Meta Analysis

NHRC conducted residential training workshop on critical appraisal of evidences and protocol development on systematic review' at the Balthali Village Resort, Balthali -4 Kavre, Nepal on 26 June to 2 July 2016. The residential workshop was designed to facilitate participants to learn how to plan, critically analyze, conduct and communicate the results of a systematic review and meta-analysis so that the research evidence can be more easily translated into policies and programmes.

The seven-day residential workshop combines a series of short lectures and exercise, critical appraisal of evidences led by the Prof. Dr. Torkel Snellingen, Beijing University and systematic review and meta-analysis was led by the Prof. Prathap Tharyan / Director Cochran South Asia and his team Dr. Anand Viswanathan and Mr. Richard Kirubakaran.

Chapter III

Results

The purpose of this chapter is to present the findings from key informant interview, which were conducted with researchers and policymakers. In line with the three specific objectives outlined in the first chapter, this chapter summarizes the study findings into nine striking themes and related subthemes. The chapter begins by outlining the context of the study participants. Then the chapter moves on to explain country level efforts to link evidence with policy and to describe the gaps and challenges in linking evidence, policy and action. Describing the mechanism to link evidence with policy and practice will conclude this chapter.

3.1 Context and climate

3.1.1 Research experience of participants

Participants, both researcher and policymakers, were involved in a diverse type of research ranging from research designed to improve program effectiveness, feasibility study of community based interventions, entomological, epidemiological and serological study. Some researchers had the experience of cost effectiveness study of programs although it was uncommon.

" We did epidemiological, entomological and serological study. Our study found that the vector of the Kala-azar was also found in mountains." R1

3.1.2 Trend in Health Research

Participants opined that health sector research has not received priority, as it deserves. The number of health research in past decades was reported to be in increasing trend with increasing resources and increased realization of the need of health research. Furthermore, participants shared that the process was further speed up by opening of new medical colleges and inception of graduate programmes which require submission of thesis for completion of the degree and increased consciousness regarding the need of research for professional growth. With increasing number of health research, number of index journal was also reported to have increased. Although participants reported the increase in resources, they pointed out that resources is still not enough and need to be prioritized.

" [...]in last one decade, there are good improvements. But, I feel that is not satisfactory. Establishment of large number of academic institution in Nepal and research as a major component of academic requirement might have led to the improvement of this scenario." R2

Participants pointed out that quality of health research has not improved in line with the quantity because many of them are conducted for mere completion of degree requirement, promotion and limited knowledge regarding scientific methodologies among health researchers.

" There is improvement in quantity but a lot need to be done in terms of quality. By quality, I mean quality in terms of research proposal, conduction of research work, scientific writing and dissemination." R2

Dealing with the utilization, most of participants, both researchers and policymakers, had experienced the increasing use of research findings in policy making or designing health programme. However, few participants pointed out that situation has been degraded in the last few years due to political interest and political pressure.

" We are working in resource limited setting. We have limited resource that needs to be prioritized. Another thing to be noted is that, in context of developing countries, the uptake is relatively low, but the trend is increasing." R3

" There are not such calls on clinical trial but we do have in field trial [...] That often comes in newspaper for bidding in topics like TB, rural health etc. But that is very less. We have not been awarded such bid." R4

3.1.3 Funding Calls

Most of the participants had come through funding calls mainly through international organizations like European Union, WHO , TDR, Bill Gates Foundation, Swiss fund etc. on issues like Tuberculosis, rural health etc. Participants pointed out that there is limited funding calls in some areas like clinical trials. Some of the researchers affiliated to the government academic institution shared their experiences that international organization does not generally award such project to them citing the difficulties in working with the government bodies. Researchers opined that the international funding call often involve large budget and there are challenges seeking to bid for that owing to limited competency and capacity.

"There are not such calls on clinical trial but we do have in field trial [...]. That often comes in Newspaper for bidding in topics like T.B., rural health etc. But that is very less. We have not been awarded such bid." R4

"We don't have that capacity or competency to access such funds. The minimum amount European Commission grants is 4/5 lakh dollar. There are challenges in coordination." R5

3.2 Reason for Doing Research

Participants had a similar opinion regarding the reason for doing research. Generation of new information, addressing some practical challenges, forming base for policy or guideline and interest of donor in particular field were cited as main reasons for doing research.

3.2.1 Generate New Information

The study suggests that researches are mostly done to generate new information like that about the needs in local context, causative agent of emerging disease and change in epidemiology of existing disease. Participants opined that research adds something new to the existing body of information.

"Research is about search of new things." R4

3.2.2 Addressing Practical Problems in Programme

With reference to their experience, participants opined that research could address some practical problems (e.g. relapse in case of some diseases like Kala-azar) and facilitate proper allocation of limited resources).

"There were relapse cases on Kala-azar under melitofosin treatment. We did lab study and found that it was Leishmania donovani." R1

3.2.3 Forming Base for Policies, Guidelines and Programme

Apart from generating new information and addressing practical problems in programme management, participants including both researchers and policy makers depicted the role of research in drafting policies, guidelines and designing programme. They also acknowledged the need of research in making necessary revision in policies, guideline and programme. Research was narrated as means to bring about better output in health programme, guide programme in right tract thereby improving the effectiveness and help in achieving predetermined targets.

"We can control the disease through evidence generation. We can draft the policy with relevant evidences." R4

3.2.4 Other reasons

Fulfillment of academic requirements for promotion and completion of degree, interest of donor were cited among other reasons for doing research.

"Health researches are often done to cater the interest of donor agencies." R5

3.3 Factors Considered in Policy Drafting

3.3.1 Research Evidence

Contradictory opinions were put forward regarding the base of health related policies. Most of the researchers opined that national and international research findings form the base for drafting policy while other depicted the prominent role of politicians presenting them as ultimate decision makers. Opinion and experience of bureaucrats and concerned stakeholders were also reported to influence the policy-making process. Practicability of research recommendation was also reported to guide policy-making process.

Participants acknowledged the challenges in utilization of research findings for policy making. Participants shared that at times, it might be difficult to translate evidence into policy since several factors like political interest of the political parties, personal experience of the policy makers etc come into play along with the findings of research.

"Its global practice, besides research evidence, political factor also influences the policy making process." P1

Majority of both researchers and policy makers opined that research evidence form the base for formulation of policies and programme. In contrast to opinion of the majority of participants, some researchers as well as policy makers opined that policies are drafted based on blanket approach without appropriate use of evidence. They highlighted the inadequacy of research evidence in certain areas like human resource requirement, human resource retention, location of health facilities etc that could guide the health policies. Participants also highlighted the importance of operational feasibility of any intervention while drafting policy.

"I feel that they have been used. But in the context where the government has felt the need or there are unanswered questions." R4

3.3.2 Political Influence

Politicians being the ultimate decision makers were depicted to have influence in the policy making process. The experience of some politicians, political interest of some politicians and political parties was considered dominant in drafting some policies. Some policy makers even depicted that we have moved from evidence-based policy-making to non-evidence based policy making in recent years.

"Trend of utilization of evidence in technical level is increasing but not in the political level. They [politicians] make the ultimate decisions." R6

"Few leaders might be suffering from kidney diseases, high blood pressure, cancer etc. we are guided by political pressure in developing policy" P2

3.3.3 Personal Experience of Policymakers

Health policy was sometimes reported to be influenced by personal experience of policy makers. Some of the participants preferred to define this as empirical evidence.

3.3.4 Blanket Approach

Participants also shared the experience of health policies being drafted on blanket approach without analysis of actual need, human resource, financial burden and strategic location of health facilities that could serve the best catering health need of greater proportion of population. One participant illustrated thus:

"There was a blanket policy earlier, which envisioned one health facility in every VDC. But the required human resources were not analyzed." P3

3.4 Push, Pull and Exchange Efforts

3.4.1 Pull Efforts

Policy makers identified stakeholders/experts consultation as measures to pull evidence when needed. Although it was less frequent, researchers shared the experience of being called for consultation from government agencies while drafting policy.

"They invited us while drafting national neonatal health strategy. We had our presentation [...] CBNCP was evidence based." R7

Expressing their opinion that evidences should be considered while drafting health policies, researchers highlighted the absence of mechanism to track the work done in different field and seek consultation with the experts whenever needed. Researchers pointed out that some policy makers do not seek evidence while drafting policy despite the easiness with which they can access the important evidences online. Some of the researchers highlighted the lack of research reading culture in policy makers.

"They don't have mechanism to track the work done by different people and call them for evidence". R8

Facilitation of Pull Efforts

Most of researchers had not posted their research articles in website or blog or submitted their research in the form of CD ROM to policy makers that could serve as one stop shopping which helps policy makers to get all necessary evidences in a place.

Blogs: Although participants acknowledged the role of blog, website and social media in facilitating the utilization of research findings, none of them had posted their findings in such blogs. Some researchers reported that they were not internet savvy while other opined that only the articles published in open access journal can be posted in website, blog and social media. They highlighted the issue of authenticity and reliability as challenges. Some researchers suggested using GPS mapping while posting articles or research papers on website.

"We can post published articles only if they are in open access journals. There is issue of copy right of the journal. There is issue of authenticity of the research findings as well" R8

"I am not that internet savvy. But there is issue of reliability of such posts." R9

On the other side, policy makers raised concern regarding the quality of the information posted in blogs and expressed their reluctance in using them for policy making.

"I don't consider any articles below index journal for policy making. I would prefer to recognize you as a researcher, if your article is published in index journal". P4

Advocacy: Although most participants recognized the role of advocacy to promote the utilization of research findings, very few had been carried out for advocacy for the same. Some researchers had considered advocating through funding agencies or non-governmental organization as a strategy to push their evidence to policymaking level.

"There is big role of advocacy to push the research findings. I have not done that" R10

"We are preparing to send evidence to key stakeholders. We have planned pooling together Ministry of Health, concerned stakeholders and researchers in our action plan but we have doubt whether we will be able to do that." R8

3.4.2 Push Efforts

Researchers seem to have considered dissemination in workshop, presentation in conference and seminar and publication in scientific journal as measures to push their findings to policy making level. Most of researchers acknowledged that they

have not shared their findings officially to policy makers. Very few researchers had prepared policy brief to be given to policy makers. Besides, sharing findings in unofficial conversation was also considered to promote utilization of research findings.

"I have not sent them officially. But, we do have unofficial conversation." R8

Participants said that lack of scientific writing skill is a major challenge to utilize research findings. Some considered publishing in newspaper in simple language without technical details as an appropriate strategy to push research findings to policy makers. Other participants shared their understanding that researchers are often reluctant to publish article in online journals that can be easily accessed because universities often ask table of contents of the journal along with the full article for promotion to higher-level post.

"Even if the article is published in BMC journals [BioMed Central journals], they don't consider it for promotion. They ask for table of content of the journal which is often difficult for online open access journals". R11

Press Release: Although participants acknowledged the role of press release in pushing their research findings to policy makers, most of participants had not done press release of any of their research findings. Participants pointed out that media need palatable and sensitized matters. In between they suggested for dedicated wing in NHRC for the same.

"Media has a big role in present time. Media need palatable matters, sensitized matters". P4

3.4.3 Exchange Efforts

Participants identified organization of workshop as the most common exchange effort. Although some participants did not clearly mention the name of platform, they shared their understanding that the platform where researchers and policy makers can come together and could facilitate exchange efforts. Besides circulation of published journal, communication through email and stakeholders or experts meeting were other exchange efforts that can be carried out by researchers and policy makers. Participants also pointed out that there is lack of rigorous discussions on research evidences among policy makers and researchers. Some of the research participants raised concern on the effectiveness of the dissemination program owing to lack of interest in health research.

"Dissemination workshop is the platform for that (exchange of research findings between researcher and policy makers)." R1

Sharing some international experience where government uses some network to track the research done in particular field and seek help from the researchers, participants depicted the role of the third body to pull evidences on behalf of government of Nepal. Participants highlighted that such body could be useful as bureaucrats are overburdened with number of other tasks and do not have enough time to search and go through research reports. Some researchers expressed their willingness to support policy makers voluntarily with advices based on their expertise if requested.

"I was in NPC and got opportunity to go through such (policy) document. I felt like enough consultation was not done as there were some laggings. I gave my input based on my experience. I even formed committee to seek opinion of experts. For example, health service facilitation and coordination committee was formed." R2

3.5 Evidence Synthesis

Evidence synthesis was reported to be in primitive stage except for some fields. According to participants (both policy makers and researchers), meta-analysis can serve two purposes at the same time namely capacity development and increased uptake. Participants opined that meta-analysis could be beneficial when research findings are contradictory and policy makers do not have to go through all the articles. Most participants opined that NHRC should carry out the task of evidence synthesis while other suggested that it should work for promotion of evidence synthesis through experts in different fields.

"Nationally representative research should be synthesized in national level so that interested people can get all the relevant articles in a single day." R2

They opined that only those having experience of health research with a publication in international journal should take the task of evidence synthesis. Participants suggested publication of abstract book collecting articles published in national and international journals if evidence synthesis seem impossible at this stage.

Lack of acceptance of systematic review and meta-analysis articles as research paper for promotion in university was cited as one of the reason for few numbers of meta-analysis study in Nepal. Participants also suggested the cost effectiveness analysis following meta-analysis or systematic review in suggested interventions.

"Universities should have discussion. They do not consider review article for promotion. I opine that it should be considered for the promotion. Might be this will change." R2

3.6 Utilization of Health Research

Participants had mixed opinion regarding the utilization of research findings in policy formulation process. Majority of participants shared their opinion that the trend of using research findings is increasing over years while other participants depicted the declining trend.

"The utilization of research evidence is good in some fields. For example, evidence were utilized in maternity incentive schemes." P1

"For the last few years, we have been moved to non-evidence based policy making. For example, 20,000 neonatal death within 4 weeks of birth, but we allocated resources to dialysis, even without stringent criteria and screening on who is poor and who is not poor, even X (a political leader) received amount for that." P2

Further, elaborating the context where research is being utilized, participants opined that researches are utilized in areas where the government has felt the need of evidence or where there are unanswered questions. Elaborating about who makes the utilization of research findings, shared that the trend in utilization of research findings has increased among bureaucrats or in technical level while it was still problem in political level.

"Trend of utilization of evidence in technical level is increasing but in political level [...]they call data of CBS as fake. Might be there are some exceptions, some errors." R6

"There is double burden now. NHRC did a risk factor study. The burden of disease study before also showed that NCD is increasing. Prevention is more cost effective than treatment. In NHSS III, a lot has been done. It (findings of the burden of disease study) has been addressed in bulk. But it has not been utilized to the extent it should have been utilized." R3

"I feel that they have been used. But in context where the government has felt the need or there are unanswered questions." R3

Researchers said that the government should identify their priority areas and should inform researchers about evidence gap. Researchers had also shared their research findings in stakeholders meeting convened to draft health policy or design a programme in specific area. Policy makers pointed out that only very few researches can be utilized in policy level considering their quality and representativeness. Some researchers acknowledged that the concern of policy makers regarding the quality of research are rational. Policy makers also shared where health targets were achieved in time when research evidences were incorporated in programme. Policy makers suggested

carrying out operational research that could be easily used in programme.

"Ninety percent of the research results are not of the use of policy makers. Few are picked by policy makers. Doing research is a costly business." P4

"The concern of decision makers is also rational. Quality of data published in report should be considered seriously." R2

3.7 Challenges in Evidence Informed Decision-making

Changes in Leadership: Frequent change in leadership leads to loss of institutional memory was cited as one of the common challenge encountered in utilization of health research findings. The problem was further found to be complicated by overburdened top-level bureaucrats having limited time to go through articles and relevant research.

"Institutional memory is in question when there are changes in leadership." P6

Direct contact and Negotiation: Lack of direct contact of researchers and policy makers thereby limiting the opportunity of direct negotiation was cited by researchers as challenge in pushing research findings to policy making level. In some cases, geographical inaccessibility like being located outside Kathmandu Valley was found to limit the opportunity of interaction and thus utilization of research findings.

"We are located outside Kathmandu. Might be we have limited approach. We have considered publication as base." R8

Poor Research Reading culture: Among other factors impeding the utilization of research findings were lacks of coordination between concerned stakeholders, poor culture of reading articles among policy makers, unethical conduct of research, noncompliance of research findings with interest of donor agencies, lack of scientific writing failing to write appealing papers.

Organizational interest: Researchers also narrated the bitter experience of research findings not being accepted when it did not match to the organizational interest of donor agencies.

"They lobby for utilization of findings when the findings are favorable to them and discard them when the findings are not favorable to their interest." R6

Unplanned Action: Sometimes when the research findings picked up by policy makers and implemented in the form of programme, they seem to have failed to yield

result because of limited preparation in implementation of the problem like projection of human and other financial resources.

"Maternal mortality and morbidity study of 2008/09 shows that previously maternal deaths used to occur in home. When incentives are given, service utilization increased utilization and it further increased deaths in health facilities[...]It's of no use of bringing policy when required human resource and financial resources are not provided." R6

Management Issues Creating Difficulties in Research: Some issues like the participants also highlighted difficulties in procurement of medical devices and instrument, testing of some biological samples in international labs.

Lack of Dedication and Sincerity: Even though Nepalese researchers have sound knowledge, they lack sincerity viewed the participants which will ultimately result in compromising of quality of data.

"The same person does very good research when he/she represents the foreign team and the quality is not up to the standard when he represents Nepali team. Sometimes they are involved in plagiarism and publish it somewhere in their own name." P4

Conduction of research for mere completion of academic requirement rather than national interest, duplication of researches, poor design and quality of the research, poor dissemination, biased and unethical conduct of research, lack of representativeness of research, limited interaction and inability to convince policy makers, lack of clear guideline regarding knowledge translation and lack of budget for implementation of research findings were cited as common challenges in utilization of research findings.

"Research team should convince policy makers. What my boss taught me is that you should convince me to make me do what you want[...] if I am convinced, that is your cleverness if not, that is your weakness." P4

3.8 Way forward for improvement

Participants suggested strengthening of the capacity of NHRC, capacity development of researcher through appropriate training, establishing biomedical lab within the country, strengthening of other labs, simplifying procurement procedure, evaluation/ review of research report through experts for increasing the quality for health research

in Nepal. The participants also suggested identification of priority areas for health research through interaction with concerned divisions of MoH.

"There is need of capacity development for researchers. Training needs to be conducted in regional level as well." R12

Close media interaction, communication/dissemination of research findings in presence of local leaders in district and regional level, orientation of Member of Parliament on health related indicators, updating leaders of latest research findings were suggested as option for promotion of utilization of health research findings.

"Members of parliament, in different committees, basically those in health related committees should be oriented on health related indicators. Politicians give decisions as they wish." R6

"There should be closed door media interaction, and the number should be limited within 5. It should not cross 10. It is best in the context of Nepal." R13

3.9 Role of NHRC

Research participants were asked to share about the appropriate mechanisms to strengthen assessing, appraising and linking evidence in policy making process. Participants shared that NHRC can play a vital role in bridging the gap between researchers and policy makers. Participants opined that NHRC should pull research evidences from the researchers, appraise the quality of evidences and develop the policy briefs or synthesized message for policy makers. Participants further clarified that it can prepare roster of experts in different field to pool relevant evidence in health on behalf of MoH. Furthermore, participants opined that NHRC should identify potential source of funds, help researchers in obtaining those fund and engage its networking members in health research. Participants shared their idea that carrying out regional and national workshop and publication of annual abstract book with abstracts of research conducted in Nepal published in national and international journals can be a better way to bridge a gap between researchers and policy makers. They also suggested to carry out negotiation with major media houses for allocating dedicated column in newspaper to publish health research findings through NHRC which could serve the objective of informing general public. According to participants, evidence synthesis also comes as a legal mandate of NHRC.

"There is a gap between policy makers and researchers[...]to bridge this gap, NHRC should have a compulsory provision that all researchers who published their articles in indexed journal have to submit the article to NHRC. NHRC should compile their abstract and publish that as a year book. That can help a lot." R14

"A roster of the experts in different areas of health need to be prepared so that they can pull evidence on behalf of MoH." R15

Participants also identified the role of NHRC in identification of the priorities of health research to reduce duplication of resources in field where there are adequate resources and encourage researches in areas where evidences are lacking.

3.10 Workshop on critical appraisal of evidences and protocol development on systematic review and meta analysis

Participants of the study recognized the fact that the systematic reviews are becoming increasingly important in decision making process. The increasing number of health researches are producing conflicting results in some cases. Systematic reviews offer many potential benefits to policy-makers, including identifying interventions that are effective (or not effective), are considered to have a lower risk of bias than other studies, and offer more confidence in results than single studies.

In this context, NHRC conducted a workshop on 'critical appraisal of evidences and protocol development on systematic review and meta analysis' as a step towards synthesis of evidences in line with the recommendation of research participants. The training-workshop was attended by twenty two participants from the different institutions representing NHRC, Institute of Medicine (IOM), BPKIHS, Kathmandu University and Nepal Public Health Foundation. The major objective of the training was to develop capacity of health researchers on critical appraisal of evidences and systematic review so as to facilitate translation of evidences into policies and programs. Seven days residential training held in Balthali Village Resort, Panauti concluded with draft of four protocols for systematic review in different areas of national priority covering communicable disease, non-communicable disease, traditional medicine, human resource for health.

Topics finalized for the systematic review are as follows

- Efficacy and tolerability of Fenugreek seed in Type 2 Diabetes Mellitus
- Effectiveness of Diphtheria Toxoid in pregnancy to prevent neonatal Diphtheria
- Cardiovascular outcomes of structured non pharmacological interventions in adult patients on antihypertensive drugs: a systematic review
- Policy Interventions in low and middle income countries(LMIC) to increase the retention of physicians working in the Rural areas.

Chapter IV

Discussion

This chapter discusses the key findings of the research with relevant literatures in the areas of knowledge management and evidence-based policymaking. The chapter will highlight possible implications of the research findings in the national context.

The number of health research was found to have increased covering diverse areas. Although the use of health research seems to be increasing, there seem to be some challenges which if addressed could improve the evidence-informed decision-making in Nepal. Promotion of systematic review and meta-analysis of nationally representative studies can contribute in promoting evidenced based health policy and plan formulation in Nepal.

The number of health research in past decades was reported to be in increasing trend with increasing resources however quality of those researches was not up to the standard. Establishment of new medical colleges and initiation of postgraduate programmes, which require mandatory submission of thesis, was reported as one of the reason for the increasing number of health research.

With the increasing number of medical college, there might have been pressure for publication of a journal article for promotion. This study found that the academic pressure to 'publish or to perish' also has important role in increasing number of health research in Nepal. Researchers also came through funding calls from different multilateral and bilateral agencies like World Health Organization, European Union, the Swiss Government etc. which hint towards increasing resources and interest in health research.

Science is meant to be cumulative.¹ Growing number of research seems to add large body of knowledge to existing understanding of any issues related to health. Participants also cited that health studies are often done to cater the interest of donor agencies which may be in many instances not comply with the need of evidence at national level. This factor can be linked to the utilization of health research since most of policy makers reported non-relevance of research papers as one of the most common factors for non-utilization of research findings.

Contradictory opinions were put forward regarding the base of health-related policies. Most of the researchers opined that national and international research findings create the base for drafting policy while other depicted the prominent role of politicians presenting them as the ultimate decision makers. Personal experience of policy makers and international experience were other factors guiding policy-making process

as cited by participants. As in other countries, researchers recognize that research evidence is just one source of information for policy makers.¹ Policy makers opined that research would be utilized if they come out with feasible recommendations with clear idea on what should be done, how it should be done and what barriers could be encountered which clearly hints towards the need for developing the culture of scientific writing and putting emphasis on recommendation section of the study apart from methodology of the study. Feasibility of the recommendation appeared as concern of policy makers and it seem rational to think about practicability of the recommended actions. It needs to be considered that public policy-makers also work within a particular institutional structure that makes some options feasible and others virtually impossible. Policy-makers normally face competing interests from international donors, pharmaceutical companies, INGOs, physicians, patient groups, and civil society groups who may be pursuing their own professional interest.¹ Health research in developing countries is often the result of collaborative partnership where foreign donor agency or founder usually has more power in deciding the research agenda thereby influencing its translation into policy. This might have skewed research into areas that are not priority health problems for the local population and put under pressure the policymakers to make policy changes in areas other than national priority.³

Policy makers identified stakeholders/experts consultation as measures to pull evidence when needed. Researchers seem to have considered dissemination in workshop, presentation in conference and seminar and publication in scientific journal as measures to push their findings to policy making level. As highlighted by our participants, lack of direct contact was recognized as one factor impeding the utilization of research findings. In a systematic review by Oliver et al, organizational factors, including availability and access to research were considered to be important influences on whether evidence was used in policy, and the quality of the relationship and collaboration between researchers and policy makers to be the single most mentioned facilitator.³ Although there is recognition of the need of collaboration, efforts of policy makers and researchers often proceed largely independent as highlighted in the previously published article by Lomas has as "*it's like two people trying to assemble a jigsaw puzzle, each with half the pieces but each working in a separate room.*"¹⁵ Gathering together or regular interaction between policy makers and researchers is for other reasons like limited publication of research article in international journals from developing countries, or countries with similar setting like Nepal, contradictory research findings and time constraint of policy makers.

Participants shared their realization of the need for evidence synthesis that could facilitate policy makers to find all relevant quality assured research findings in a single document. They opined that it could take the form of meta-analysis, systematic review or simply the compilation of major research findings in the form of fact sheet or annual abstract book. Research to date has focused on the generation of new knowledge but has tended to neglect the role and contribution of existing knowledge.¹ Public health decision-makers are often overwhelmed with large quantities of data, evidence, reviews and summaries.¹⁶

Individual studies are often considered as unit of evidence translation. This may be appropriate when the targets for knowledge translation are research funders, but might be inappropriate when the targets for knowledge translation are consumers, health care professionals and/or policymakers because the single research does not provide sufficient evidence for any programme or policies. It would be better that the result of individual studies be interpreted within the context of existing global evidence before deciding whether it is ready for knowledge translation. So, evidence translation warrants the need of systematic review and meta-analysis as highlighted by research participants.⁴ Systematic review and meta-analysis could also solve the problem encountered by policymakers while choosing the research findings to be considered for policy making when they come with conflicting results.

It is generally acknowledged that systematic reviews, which apply highly restrictive inclusion criteria based on the strength of internal validity and research design may be of limited value in public health.¹⁷ Such reviews may also be based on a randomized trial of weak interventions, while more promising interventions are omitted due to the study design used.¹⁶ However, the articles selected for systematic review could be of concern as articles selected needed to be of assuring quality. Systematic reviews have become the 'gold standard' for assimilating and digesting research.¹

Despite their central role in a knowledge-based health system, and despite the skill and time they require, systematic reviews do not attract anywhere near the same level of academic recognition or public attention as primary (especially biomedical) research.¹

Instability in leadership, limited opportunity of direct contact and negotiation between researchers and policy maker's poor research reading culture were highlighted as key challenges in linking health research to policy.

Involvement of civil society and political commitment are also necessary. "The triangle that moves the mountain" is a concept developed by Wasito represent the idea that addressing complex problems requires not only researchers. Researchers must work

together with policy makers, politicians, media, consumers and civil society towards a common goal and equally share power, influence and responsibility.¹⁸

Briefly, although the number of research is increasing we still have miles to go for evidence informed decision-making and policy informed evidences. Close group media interaction, communication/dissemination of research findings in presence of local leaders in district and regional level, orientation of Member of Parliament on health related indicators, updating leaders of latest research findings were suggested as option for promotion of utilization of health research findings.

Chapter V

Conclusions

Participants were involved in a diverse type of research, including research designed to improve program effectiveness, feasibility study of community based interventions, entomological, epidemiological and serological study of disease like *Visceral leishmaniasis* (Kala-azar), large scale national health survey and interventional study. Generation of new information, addressing some practical challenges, forming base for policy or guideline and interest of donor in particular field were cited as main reasons for doing research.

With increasing resource, a number of health researches seem to have increased while quality was not up to the standard. Although, the trend of utilization of health research seems to be increasing, there seems to be some challenges which if, addressed could further enhance evidence informed decision making in Nepal. Frequent changes in leadership, limited opportunity of direct contact and negotiation between researchers and policy maker's poor research reading culture were highlighted as key challenges in linking health research to policy.

Close group media interaction, communication/dissemination of research findings in the presence of local leaders in district and regional level, orientation of Member of Parliament on health related indicators, updating leaders of latest research findings were suggested as option for promotion of utilization of health research findings. Promotion of systematic review and meta-analysis studies could contribute in promoting evidenced based health policy and plan formulation in Nepal.

Role of third party mediating between researchers and policy makers could be crucial for improving the utilization of evidences. Further, research assessing the organizational capacity for utilization of health research findings could be beneficial.

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Annex

Data collection Tools Interview guidelines for researchers

Elements	Key issues to be assessed	Main questions	probing question/ topic
Contest and climate	<p>place value on promoting use of research</p> <p>Commitment to linkage and exchange</p>	<p>In your opinion, what are the main reasons for doing research? What are the factors that are considered in policy making process? (Note the order)</p> <p>Have you ever participated in programs where researchers and policy makers come together for information sharing like workshop, seminar etc.?</p>	<p>Why research is done?</p> <p>If yes, where did you participate? Please, share your experience</p> <p>Mail/calls/ or any other form of consultation from policy makers</p>
Production of research	<p>Response to funding calls in high priority areas</p> <p>Precipitation in skill development program for systematic review</p>	<p>Have you ever come through funding calls by any agencies for research in priority area? Did you express your interest in that? Often, we come through several researches in same or similar topic. What can be done to facilitate the choice of research to be considered in policy making?</p>	<p>Share your experience if yes</p> <p>Do you think it is necessary to synthesize the research findings from different research? Have you ever participated systematic review training or other skill development program on systematic review?</p>

Push efforts	<p>Identification of actionable message and media releases and evidence briefs</p> <p>Participation in Skill assessment and development program</p>	<p>What was your last research project? What was/were key actionable message in your research? Did you present that finding to policy makers in the form of evidence brief or did you make any media releases? What can be the role of evidence informed advocacy in policy making process? Have you ever participated in advocacy skill development program?</p>	<p>If yes, what did the policy makers say? Did they use your research findings in action or policy?</p> <p>Have you come through any difficulties in pushing your research findings to policy makers?</p>
Efforts to facilitate user pull	One stop shopping for users like website/CD-ROM	<p>Do you think it is necessary/ or useful to share your research findings in any blog or websites? Do you operate any blog or website? Did you ever post your full report/ key research findings in website or blog?</p> <p>Do you think providing one stop shopping facilitates the use of your research?</p>	Do you think policy makers or relevant stakeholders come through such websites and blogs?
User pull	Any call from policy makers?	Has any policy makers expressed interest in your research? Did they express their willingness to use that research so as to facilitate their work?	Did they use that research to policy making?

Exchange efforts	Knowledge Brokering, Partnership, Skill development	Do you know any organization that synthesizes the research findings from different researchers or advocates the utilization of research findings? Are you in contact with that particular agency? Did you share your findings to such agencies?	Mediating agencies advocating for utilization of research findings? Do you submit your report to any organization that mediates between policy makers and researchers?
Evaluation	Participation in rigorous evaluation of linking research to action	Have you ever participated in programmes with rigorous discussion on linking research to policy or action?	Share your experience...
Challenges and expectation	Challenges encountered by funding agencies in facilitating the use of research (In push, exchange and integrated efforts), expectation from key stakeholders in each stage	Did you face any difficulties in pushing your research findings to policy makers? What should be done to improve the utilization of research findings in health policy or actions?	Any recommendation that third parties like NHRC can play in facilitation of use of research findings in action?

Question for policy makers

Elements	Key issues	Main probing questions	Probing topic
Contest and climate	<p>Do they place value on promoting use of research?</p> <p>Commitment to linkage and exchange</p>	<p>What are the bases of making decisions? What are the factors do you consider while making policies in health? (Note the order that factors are mentioned)</p> <p>What is the last health policy that was drafted with your involvement? Which research findings did you consider in that process? Were they useful? How easily research reports are available for use?</p>	<p>Probe whether it is policy guidelines, or individual decisions, or other evidences.</p> <p>Perception about the usefulness of research findings.</p> <p>Is there library where research reports are available?</p> <p>Is there frequent dissemination activities?</p> <p>Major difficulties in obtaining research reports</p>
Production of research	<p>Provide priority areas to researchers and incentives to conduct research in such areas</p>	<p>What do you think about the sufficiency of researches in health sector? Do you set priorities for according need of evidence in policy making process?</p>	<p>Areas where the evidence is lacking</p> <p>Areas where the evidence is sufficient</p>

User pull	Use of self assessment tool to acquire, assess, adopt and apply research Structure and process to help them acquire, assess, adopt and apply research Participation in skill development programs to enhance capacity to acquire, assess, adopt and apply research	If you need information or analysis for your work: a) Who do you ask/where do you get this information? b) In what form do you access evidence? c) Do you prioritize the research findings? d) Local and/or international evidence? Have you come through any difficulties in the process of utilizing the research findings in policy making processes? If yes, what did you do to tackle the problem? Have you ever participated in training/ skill development program?	Process of acquiring, assessing adopting and applying research findings
Exchange efforts	Knowledge Brokering, Partnership, Skill development for partnership	Do you have any mechanism or procedure to that facilitates the process of utilization of research findings?	
Evaluation	Participation in rigorous evaluation of linking research to action	In your opinion/experience, to what extent the research may have influenced the policy decision?	Some examples of relationship between research and policy decision

Challenges and expectation	Challenges encountered by policy makers in utilizing research finding (In push, pull, exchange and integrated efforts) possible solutions	<p>Challenges encountered by policy makers in utilizing research finding</p> <p>Is there library where research reports are available?</p> <p>Is there frequent dissemination activities?</p> <p>Major difficulties in obtaining research reports</p> <p>Who/ where would you <i>like</i> to get information from?</p> <p>a) E.g. government organizations, the NHRC, NGOs/INGOs, researchers/ academia, written information (from where- news, online, journals, reports); RANK</p> <p>b) Why?</p> <p>c) Local and/or international evidence? In what form would you <i>like to</i> access evidence?</p> <p>Directly</p> <ul style="list-style-type: none"> • If so: what kind of evidence (systematic reviews, single articles, reports, journal articles, etc.) • What is the benefit of systematic review over an article or report? • Would you like training/support to review evidence yourself? • If training- what kind of training? • Options: in person, independent, etc. <p>Interpreted or summarized evidence?</p> <ul style="list-style-type: none"> • If so: what kind of summary? • Verbal (<i>formal/informal, presentations, discussions, individual meeting, face-to face briefings, networks, workshop</i>) • Written (<i>news article, op-ed, short paragraph, summary brief of a few pages, journal article, report, online</i>) 	<p>Challenges at push, pull, exchange and integrated efforts</p> <p>Expectations from researchers, funding agencies and Mediating agencies to facilitate the process?</p> <p>Relevance of results</p> <p>Reliability</p> <p>Accuracy</p> <p>Usefulness/usability of results</p> <p>Understandable</p>
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