

## METHODOLOGICAL APPROACHES OF HEALTH POLICY ANALYSIS IN DEVELOPING COUNTRIES

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### ABSTRACT

**Background:** Policy analysis is the process of identifying problem, defining and analyzing process, qualitative and quantitative analysis, evaluation, recommendation, aiming to inform choices leading to an improved healthcare system. In developing country, the analysis of health policy has been given limited attention. As health is influenced by many external sectors and the dynamic in healthcare system, it is a challenging task in health policies analyses. The aim of this manuscript is focusing on health policy analysis in developing countries using the methodological approaches of theories, frameworks and study designs.

**Materials and Methods:** Scoping systematic review was used for this manuscript writing. Recent ten year articles were searched from public domains with keywords of “health policy”, “developing countries”, “theory”, “framework” and “study design”. A total of 18 articles were finalized to be included, six for each methodological approaches.

**Result:** Theories such as Group Theory, Multiple Implementation Theory, and Kingdon Multiple Stream Theory are among the commonest theories used in policy analysis. In translating framework approach into health policy analysis, Policy Triangle Framework, 3-i Framework (idea, interest and institution) and Social Determinant of Health Framework are also widely used. The mixed method of qualitative and secondary data based quantitative; and cross-country comparative case study are frequently adopted for study design approach.

**Conclusion:** A common methodological approaches in health policy analyses were used an established theoretical approach, a feasible approach of study design and a comprehensive framework. However evidenced based approach is also use as a fundamental approach in health policy analysis especially in developing countries with limited resources.

**Keywords:** Health policy analysis, developing countries, theory application, framework application, study design application

## 1.0 Introduction

Policy analysis is a recognized research and academic discipline study of policy. Its application particularly in the health sector is crucial, especially in developing countries (Walt & Gilson, 1994). Health policy is defined as an “authoritative statements of intent, probably adopted by governments on behalf of the public, with the aim of altering for the better the health and welfare of the population” (Lee & Mills, 1982). Policy analysis includes the policy making process of problem identification, process definition, process analysis, qualitative analysis, evaluation, and recommendation (McLaughlin & McLaughlin, 2008). The aim of policy analysis is to inform the policy choices that lead to an improved health care system, which requires specific consideration to implementation strategy, planning, and feedback to the policy processes.

There are various approaches in performing health policy analysis, which include the study of the problem, and also the consequences of using one option above the others in addressing the problem itself. It can be supported and more focused by using relevant theory, clear conceptual frameworks, and different research designs apart from single case study on specific issues (Walt et al, 2008).

### 1.1 Health Policy Analysis in Developing Countries

The assessment of health policy in developing countries have started since the early 1990s, which mainly focused on the technical content and design. However, the components of the actors, processes, and contexts which is related to the development and implementation of the health policy have been neglected and was taken into little considerations (Gilson & Raphaely, 2008). A new analytical paradigm of thinking has integrate politics, process, and power into health policy study. This enables the policy makers to understand the factors which contribute to the experiences and results of policy change resulting in a strong health system that is evidence-based in operation.

As for public health policy formulation, it requires an independent, objective information on the magnitude of health problems and their likely trends, which are using standard units of measurement and equivalent methods. One of the major effort in fostering this evidence-based approach to the public health policy formulation is the Global Burden of Disease Study (GBD) that began in 1990. The purpose of the study is to develop reliable estimations of mortality, incidence, prevalence, duration, and case-fatality of major causes of death, and to develop projection scenarios of mortality and disability, based on the collaboration of over 100 scientists from more than 20 countries. This resulted in the policy impact as the combined demographic and epidemiological trends from the study shifted the focus of policy debate and research in developing countries to adult health agenda due to many of these countries facing increasing burdens of non-communicable disease and injuries (Murray & Lopez, 1996).

### 1.2 Challenges of policy analysis in developing countries

Health policy involves several sectors, services, organizations, and a country's health financing system. It is connected and cannot be tackled successfully by sections or agencies acting individually (Gilson, 2012). Any challenges in the health system affects the policy process and subsequently the health policy analysis. The main challenge is that, health is

influenced by many determining factors outside the health system itself (Buse, Mays, & Walt, 2005). Health is inclined by multiple outsider parties, therefore, the policies can be made within government, by non-government actors, and by organizations external to the health system not necessarily taking place at a single point in time and not clearly bound. It makes the analysis job complex in covering all aspects of the actions that are intended towards health and the need to see from different angles of the interested parties in which sometimes left unfolded.

Furthermore, researchers are expected to response by producing easily implementable policy recommendations in short period, even though the processes of policy analysis are usually long standing (Collins, 2005). In such cases, the investigators can be criticized for developing immature results and obscuring the complex phenomenon of analyzing and describing policies into its simplest form. Additionally, some policies are difficult to measure, analyze, or compare with as it has an opaque nature in getting the details due to different reasons (Walt et al., 2008). The researchers have to find a way to get engrossed in the particulars of the policy process in order to come up with a representative explanation of such extremely complex environment. According to one systematic review, it revealed that most health policy analysis is rather instinctual, ad hoc, and the conventions on which it is based are hardly ever identified (Gilson & Raphaely, 2008).

The world for which policies have to develop is becoming increasingly complex, indeterminate and changeable. There are variety of practical issues in health systems that are presently driving the agendas of the world's government which almost no country is immune from these pressures. The problems are increasing over time: after every change, new policies have to come up to deal with the situations that arise. For instance, demographic changes, aging population, emerging and re-emerging diseases, increasing health service demand along with decreasing of funding and the aspects of equity and equality (Gauld, 2009). Moreover, citizens now days are well-versed, with increased demand and higher prospects for health services delivers personalized to their needs. This rapid change makes the policy processing difficult as well as to the health policy analysis (Mbale, 2016).

### ***1.3 Methodological approaches in health policy analysis***

There are various studies on different methodological approaches in health policy analysis. The commonly used approaches are theory approach (Dye, 1995: Walt et al, 2008 & Kane, 2016), framework approach (Seavy, McGrath & Aytur, 2014), and study design approach (Woods, M.D., Agarwal, S., Jones, D., Young, B., and Sutton, A., 2005) .

Theory approach is a comprehensive, systematic, consistent, reliable explanation and prediction of relationship among specific variables, which can be a representation of a reality (Dye, 1995). However, most of the empirically-based theories on political science policy are not informing the improvement of population health and are also not reducing health inequalities (Green, 2000). Therefore, there is a need for clear attention to theory development, which may benefit public policy practice by expanding our understanding of causality, and combining the fragmented body of knowledge in conceptualizing the policy process. For example, Kingdon Multiple Stream Theory has been used as a well-established analytical framework for examining the agenda-setting aspect of the National Plan for Safe Motherhood process in Vietnam (Kane, 2016). Other theories which can be applied in health

policy analysis include Group theory and Multiple Implementation theory (Buse, Mays & Walt 2005; Birkland, 2005).

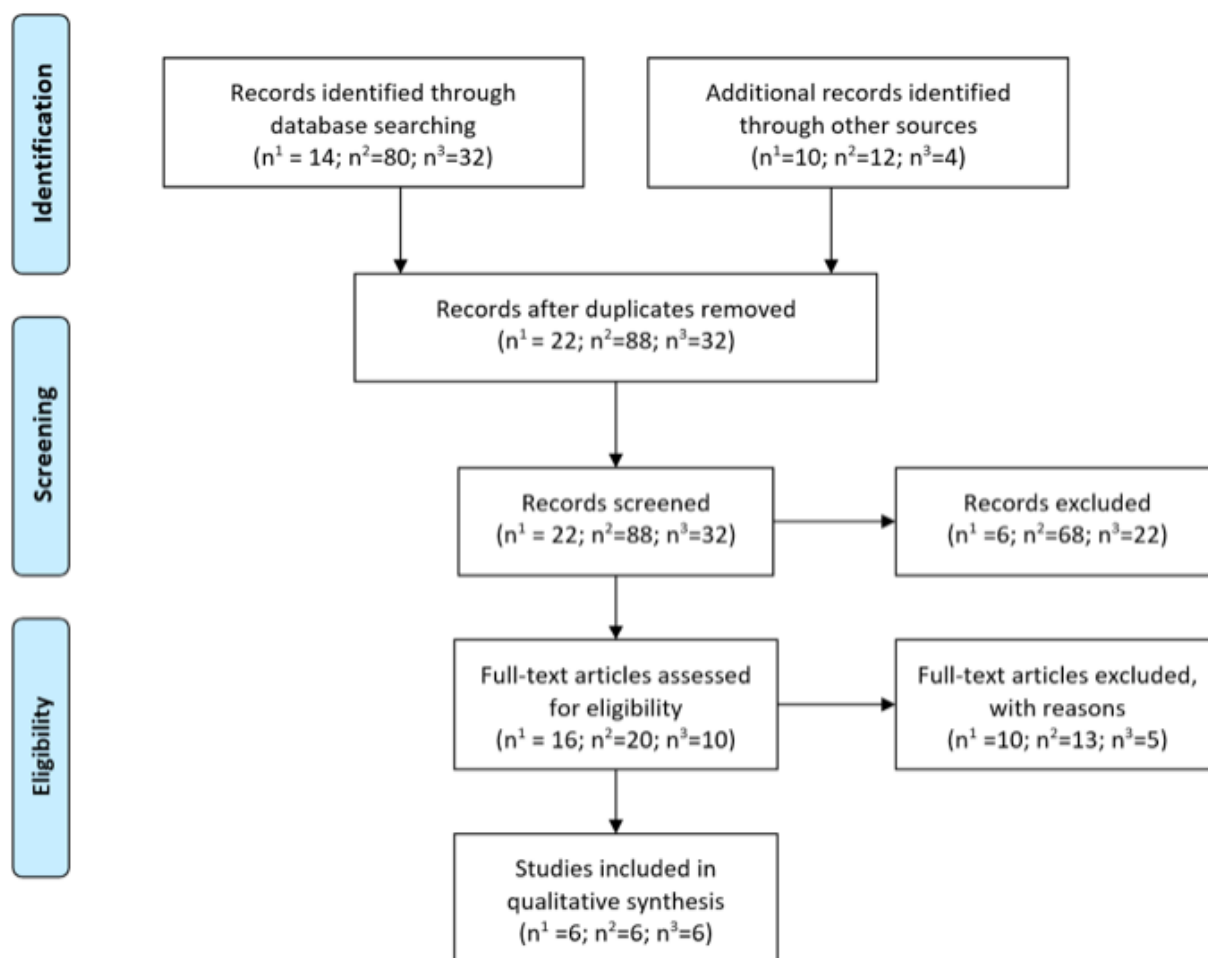
Framework approach is part of important tools in health policy analysis. It sets up inquiry by identifying elements and their relationships that need to be considered for theory formulation (Ostrom, 2007). There are many available frameworks that were used in health policy analysis (Seavy, McGrath & Aytur, 2014). The most used policy framework is the stages heuristics, which divides the public policy process into four stages: agenda setting, formulation, implementation, and evaluation (Lasswell, 1956). As for Policy Triangle framework, it is grounded in a political economy perspective, which considers how the policy's content, context, processes, and actors interact to shape policy-making (Walt et al, 2008). World Health Organization also came out with their own framework in health policy analysis such as Social Determinants of Health framework for equitable access to health care. Other related health policy analysis framework includes 3-i framework (idea, interest, institution) that used in policy development and implementation.

There are few health policy analysis in low and middle income countries that clearly discuss on research design approach. The field is worth to be further explored as there are various approaches of research design that can be used in performing health policy analysis. Numerous studies used quantitative approach but potentially adaptable with qualitative approach too (Woods et al, 2005). Research design is an important aspect of health policy analysis as policy decisions usually require longer term processes and dynamic evaluation. Although the gold standard for medical care studies has traditionally been the randomized clinical trial, in-depth investigations of qualitative studies are considered imperative in health policy analysis. Comparisons between different country contexts in policy adaptation, evolution and implementation can also be elicited by performing cross-country comparative study approaches (Walt et al, 2008).

As the world is evolving nowadays with emerging public health challenges, there should be an improvement in research approaches to health policy analysis, especially among low and middle income country settings. Thus, the aim of this manuscript is focusing on health policy analysis in developing countries using the methodological approaches including theories, frameworks and study designs.

## 2.0 Materials and Methods

Scoping systematic review has been used as the methodology for this manuscript writing. Article searches were conducted in the Public Domain of PubMed, MEDLINE, and Google scholar, using keywords of: (1) "theory" AND "health policy" AND "developing countries", (2) "framework" AND "health policy" AND "developing countries", and (3) "study design" AND "health policy" AND "developing countries". The inclusion criteria are all free full articles with 10 year-recent publications, related with health policy analysis in developing countries, and written in English language only. Those articles which are not related to health policy analysis in the developing countries, including the review articles are excluded from the result findings.



<sup>1</sup>Articles on theory application in health policy analysis. <sup>2</sup>Articles on framework application in health policy analysis. <sup>3</sup>Articles on study design application in health policy analysis.

**Figure 1:** Prisma 2009 Flow Diagram

Based on the Prisma Flow Diagram in Figure 1, total of 142 articles have been searched after duplicates removed. Primary screening of studies was done by reviewing the titles and abstracts of the articles. Ninety-six articles that do not meet the inclusion criteria were excluded. Secondary screening was done by examining the 46 full texts of the studies that passed primary screening. Full text articles were reviewed and examined thoroughly and 28 records were excluded with reasons. Finally, only 18 records were used to include in the literature of results, with six articles for each section of theory, framework, and study design.

### 3.0 Result and Discussion

#### 3.1 Theory application in health policy analysis

Critical application of existing theories of the health policy process is important to guide and inform health policy inquiry and to contribute to the theory development as a goal of health policy analysis (Walt et al, 2008). This review exemplified that common theories used in health policy analysis were Group Theory (Givel, 2006 & Hann, Pearson, Campbell, Sesay and Eaton, 2015) , Multiple Implementation Theory (Baum, 2007 & Monteiro, Ndiaye, Blanas and Ba, 2015), and Kingdon Multiple Stream Theory (Ridde, 2009 & RamJat, Ramchandra, Goicolea, Hurtig and San Sebastian, 2013). The findings were tabulated in Table 1 below.

**Table 1:** Theory applications in policy analysis

No.	Author/Year	Title of study	Theory	Findings
1.	Givel (2006)	Punctuated equilibrium in limbo: The tobacco lobby and US State Policy making from 1990 to 2003	Group Theory	Before 1990, the anti tobacco policy was unsuccessful because of the lobbying of pro-tobacco group in the states. Over the years, the movement and initiatives of public health group who were anti tobacco increased and developed policy that tried to punctuate the monopoly of pro-tobacco group.
2.	Hann, Pearson, Campbell, Sesay and Eaton (2015)	Factors for success in mental health advocacy.	Group Theory	Involvement of several group which included mental health steering committee, mental health coalition and the first lady Sierra Leone had made National Mental Health Policy been accepted to political sphere.
3.	Baum (2007)	Cracking the nut of health equity: top down and bottom up pressure for action on the social determinants of health	Multiple Implementation Theory, Top-bottom, bottom-up approach.	The combination of practical action from the government and policy makers with the civil society is needed to promote action on the health inequity. Civil society action is needed to pressure the government to see that the action is popular while the government needs to implement the policy to show their commitment to justice and equity.
4..	Monteiro, Ndiaye, Blanas and Ba (2015)	Policy perspectives and attitudes towards mental health treatment in rural Senegal.	Multiple Implementation Theory, Top-bottom	Mental health policy was formed by Ministry of Health, but lack of finance, lack of training among the primary car. Most of primary care clinics did not have official manual and there were no centralized data to collect the mental health data of patients.



5.	Ridde (2009)	Policy Implementation in an African state: An extension of Kingdon Multiple-Stream approach	Kingdon Multiple Stream Theory	The article is about the implementation of Bamako Initiative Health Policy in Bamako Fasso. The study explores the shortfall on implementation of the policy in order to increase equity according to each stream of Kingdon multiple stream theory.
6.	Ram Jat, Ramchandra, Goicolea, Hurtig and San Sebastian (2013)	The emergence of maternal health as a political priority in Madhya Pradesh, India: A qualitative study	Kingdon Multiple Stream Theory	Maternal health became a political priority in scarce resource area of Madhya Pradesh, India. The study discusses the important development factor in problem as the increasing of maternal mortality, policy as increasing international attention toward maternal mortality and political stream that made maternal health emerged as a political priority.

The theory application in health policy analysis allows to find the origin of the policy, it also gives the details behind how the policy come into the surface rather than just telling a 'story' on how the policy develops (Walt et al, 2008). In Group Theory, it is based on the number of health groups, bargaining between each other, and as the result of this interaction the health policy emerges after the state selects initiatives that give the best result to the society (Buse, Mays & Walt, 2005). Its strength is that this theory acknowledges the diversity of the group and illustrated how certain group with the belief and interest can influence in policy making. Thus, it allows certain group no matter how small they are, able to influence policy making as long as they associate with other group with the same idea. The success in mental health advocacy in Sierra Leone for example was in fact due to cooperation of several group that had special interest in mental health. The mental health coalition included service users, family members, service providers, NGO, government official and civil society with the first lady of Sierra Leone (Hann, Pearson, Campbell, Sesay & Eaton, 2015). In the other hand, the weakness in group theory is the policy has been displayed as the tug of power (Buse, Mays, & Walt, 2005), in which the dominating group will have the say in the policy making such as the contest of power in lobbying the United States of America's government between pro-tobacco group, against anti-tobacco group among public health group, public policy acted as the only equilibrium and the policy changed according to dominating groups (Givel, 2006).

Kingdon's Theory originated that the health policy emerged from three process or what the originator called stream namely problem, policy and political streams (Kingdon, 1984). The Kingdon's multiple stream theory allows us to display multiple interaction between various interaction between the streams of problem, policy and politics through the role of policy entrepreneur, function of window of opportunity (Ogden, Walt & Lush, 2003). A good example would be on how Kingdon Multiple Stream Theory able to describe the interaction of maternal health issue from the problem stream and how it interacted with politic and how the policy entrepreneur took the chance of window of opportunity to make maternal health policy a great priority in Madhya Pradesh (Tej, Goicolea, Hurtig & Sebastian, 2013). Through this way, the policy has been shown as a flexible and dynamic component rather than rigid systems and stages. In the mean while, the weakness of Kingdon's Multiple Stream Theory is that this theory not very good in looking into the policy in the future and the picture that been

given more appropriate to look the policy in the national or federal rather than in local context as in the case of Bamako Initiative Health Policy, although it provided good picture how the weakness of policy implementation in Barmako Fasso (Ridde, 2009), it settled at the implementation phase rather than prospective look into the future.

Looking into the Multiple Implementation Theory, it depicted whether the policy's decision making been dominating either top-down, bottom-up or the synthesis of both of them (Sabatier, 1986). This theory allows us to see the policy making in stages from policy making until the implementation. It also illustrates the relationship between the central government, regional and local implementer on how the top level authority ensure that the implementation will not derail from the initial plan (Dye, 2001). It is also good in showing the gap in implementation, such as in the case of Senegal, although the guideline and policy were clear cut from the top authority, but the lacking of resources made the implementation at the community and primary health care became difficult (Monteiro, Ndiaye, Blanas & Ba, 2015). However the weakness of this theory is that the policy been viewed as linear movement either from top to bottom or bottom to up (Nilsen et. al, 2013). Furthermore, such linear conceptualization of the policy overestimated role of the government or the implementation of the policy. This might be not be so bad, as in the case of overcoming inequity on how the multiple implementation theory give role of government in showing commitment in equity and the role of community in pressuring the government (Baum, 2007).

As a conclusion , the theory approach is good that it is able to showed the interaction between the actors in specific context of health policy (Group Theory), origin of health policy process (Kingdon Multiple Stream Theory), and relationship between stakeholders in health policy making (Multiple Implementation Theory). However careful interpretation need to be done while looking each theory as the dynamic of how policy goes from the process the policy making until the implementation differs in each theory.

### **3.2 Framework application in health policy analysis**

A policy framework is a logical structure that is established to organize policy documentation into groupings and categories that make it easier for the stakeholders to find and understand the contents of various policy documents. Policy frameworks can also be used to help in the planning and development of the policies for an organization. There are numerous frameworks which have been widely used for policy analysis process, such as; Policy Triangle Framework (Mori, Kaale and Risha, 2013 & Thow et. al., 2015), 3-i Framework - idea, interest and institution (Vania and Randall, 2016 & Eamer and Randall (2013), and Social Determinants of Health Framework (Thomsen et al., 2013 & Ajlouni, 2014). The results of review were tabulated in Table 2 below.



**Table 2;** Framework application in health policy analysis

No.	Author/Year	Title	Framework	Findings
1.	Mori, Kaale and Risha (2013)	Reforms : A quest for efficiency or an opportunity for vested interests? A case study of pharmaceutical policy reforms in Tanzania.	Policy Triangle Framework	In this study, the policy triangle framework is used to analyze the optimal policy options in order to increase the efficiency in pharmacy business regulation. The pharmaceutical policy reforms was discussed through the inter-relationship of policy triangle framework elements involving content, context, process and actors. The discussion concerned about the process of bargaining, negotiations and adjustments between interest groups. The groups play a major role to determine outcomes of the decision, to displace a critical analysis of optimal policy options. The study also discussed how the preferences and interests of the group of important actors will influence decision-making process.
2.	Thow et. al. (2015)	Regional trade and the nutrition transition: opportunities to strengthen NCD prevention policy in the Southern African Development Community	Policy Triangle Framework	This study emphasized on trade and economical aspect through policy triangle framework. In focussing on Southern African Development Community (SADC) regional trade flow, the analysis highlighted on the increasing of import trade of in-nutritious snack food and soft drinks into SADC countries as well as inter-countries marketing unhealthy food throughout the region. Therefore, the opportunities of developing regional framework policy that supports countries to implement the good food policy options as guided in the WHO NCD Global Action Plan is viewed urgently needed in SADC, yet on one hand not compromising its quest to increase regional trade and attract investment on the other.
3.	Vania and Randall (2016)	Can evidence-based health policy from high-income countries be applied to lower-income countries: considering barriers and facilitators to an organ donor registry in Mumbai, India	3-i Framework (idea, interest and institution)	This study used 3-i framework to examine how government decisions surrounding organ donation policies are shaped and the feasibility of organ registry to be implemented in Mumbai. Ideas domain : Poor awareness among public and misinterpretation among religious group. Interest domain : It was perceived that the interest of physician and organ transplant coordinator in private sector towards organ transplant and donation had been established as compared to those in public sector. Institution domain : The priority of government was clearly dedicated to the epidemic of communicable disease and increasing trend of non-communicable disease rather than organ donation programme. In conclusion, this analysis had revealed that implementing an organ donor registry in Mumbai was not a feasible or appropriate policy option, as the barriers which identified through the ideas, interests, and institutions

				lens, may be too difficult to overcome.
4.	Eamer and Randall (2013)	Barriers to implementing WHO's exclusive breastfeeding policy for women living with HIV in sub-Saharan Africa: An exploration of ideas, interests and institutions	3-i Framework (idea, interest and institution)	<p>This study was performed to explore on barriers towards implementing WHO's exclusive breastfeeding policy for women living with HIV in sub-Saharan Africa.</p> <p>Idea domain : The belief embraced by the leader that HIV caused by poverty as well as misbelief by the nurses on mix-feeding had obscured the implementation of WHO's policy.</p> <p>Interest domain : Poor interest and leadership by political leader had deviated the focus of policy implementation. In contrast, high interest of drug company to advocate for pharmacological approach as one of HIV policy indirectly marginalized Prevention of Vertical Transmission programme (PVT) and exclusive breastfeeding without drug treatment.</p> <p>Institution domain : PVT programme was not viewed as mainstream priority in healthcare.</p>
5.	Thomsen et al. (2013)	Bringing evidence to policy to achieve health-related MDGs for all: justification and design of the EPI-4 project in China, India, Indonesia, and Vietnam	Social Determinants of Health Framework	<p>Social Determinants of Health Framework that explores the difference of social hierarchy in term of structural (socioeconomic and political context, socioeconomic position) and intermediary social determinants (behaviours and biological factors, psychosocial factors) that leads the inequity of health.</p> <p>The framework was used to bridge the gap of Millennium Development Goals (MDG) in China, India, Indonesia, and Vietnam on equitable distribution of health. The introduction of MDG had improve the social welfare of the countries involved but less improvement in the inequity of health. This framework was used to facilitate in the establishment of "Evidence for Policy and Implementation project (EPI-4)". EPI-4 was set up to encourage research evidence based policy making in reduction of MDGs related health equity in these countries.</p>
6.	Ajlouni (2014)	Social determinants of health in selected slum areas in Jordan: challenges and policy directions.	Social Determinants of Health Framework	<p>In Jordan, Social Determinants of Health Framework was used to assess the social determinant of health in 2 slum areas. It was noted that the residents there not only lack behind in socio-economic and political context, their intermediary determinants also way behind. By understanding lacking of the social determinants, several policies that emphasize on social empowerment, social inclusion and social protection were recommended to curb the identified problems in these 2 slums.</p>

The identification of elements and its relationship allows the organization to determined framework that the theory based of health policy generation (Ostrom, 2007). Among those numerous frameworks which have been widely used for policy analysis process, there are 3

frameworks that form the center of discussion for policy analysis; these include Policy Triangle Framework, 3-i Framework (idea, interest and institution) and Social Determinant of Health Framework.

The health policy Triangle Framework focuses on content, context, process and actors. Actors are at the centre of the health policy triangle framework and it is used to denote individuals, organizations or even the state and their actions that affect policy. Whereas context refers to systemic factors such as political, economic and social, including national and international which may have consequence on health policy. The content refers to substance of a particular policy which details its constituent parts and policy process refers to the way in which policies are initiated, developed or formulated, negotiated, communicated, implemented and evaluated (Buse, Mays, & Walt, 2005). The framework is a very much simplified approach to a complex set of inter-relationship. It is valuable for helping to think systematically about all the different factors that might affect policy (Walt et al., 2008).

The 3-i Framework (idea, interest and institution) is viewed as the important framework influencing the policy development and implementation (Hall, 1997). On explaining idea, it can be defined as knowledge and belief those determine “how the actors define and perceived policy as effective, feasible and acceptable” (Hall, 1997 ; Pomey et. al, 2010). Pomey et al. (2010), described interest as “agendas of societal groups, elected officials, civil servants, researchers, and policy entrepreneurs” those drive the interest of various stakeholder towards power relationship between stakeholder and government. Finally, institution domain was defined as “the formal and informal rules, norms, precedents, and organizational factors that structure political behaviour” or description on government structure , policy network and policy legacy (Hall, 1997 ; Pomey, 2010). Apart from being an established application in political economy, 3-i framework has emerged as important tools in health policy analysis prominently in the developed countries (Bashir et al, 2015 ; Shearer et.al, 2016).

The Commission on the Social Determinants of Health (CSDH) developed Social Determinants of Health Framework for illustrating the two types of health determinants (structural, intermediary determinants) that affect health equity. Structural determinants include socio-economic and political context, and socioeconomic position. The intermediary determinants consist of behaviours and biological factors, and psycho-social factors. The difference of social hierarchy in structural determinants affect the intermediary determinants and compromising the health in the less advantage group. By using the framework, it allows the health care providers and policy makers identify the priority problems and specify the entry point of action. Level of intervention during policy analysis can be determined by tackling the priority social determinants in certain population to close the in-equities gap among the more advantaged and less advantaged social groups.

3-i Framework (idea, interest and institution), Social Determinant of Health framework and Policy Triangle Framework are useful in organize and analyze systematically about the different factors that might affect policy and facilitate the policy analysis process. All three frameworks give room for exploration on political, social and economical factors that influencing policy development. As compared with Policy Triangle Framework, 3-i Framework and Social Determinants of Health Framework are lacking in elaboration on the continuity of policy analysis process. Policy Triangle Framework and Social Determinant of Health Framework are demonstrating clear causality attribution and causal inference, however these elements are not seen in 3-i framework (idea, interest and institutions).

Health policy framework is integrated throughout engaging and contemporary process. It provides the crucial context needed to demonstrate how the presented theoretical constructs can be applied in the everyday use of a health practitioner and policy-maker. However, no matter how well formulated a framework, the successful of the implementation of health policy will be variable in the different culture, background and socio-economic of the communities. Thus, the framework needs to be adapted for local settings.

### 3.3 Study design application in health policy analysis

The application of study design in health policy analysis are mostly using combination of mixed method of qualitative and secondary data based quantitative (Khan, Dijk and Heuvel, 2006; Rawal, Joarder, Islam, Uddin and Ahmed, 2015 & Ravaghi, Goshtaei, Sari and Abdollahi, 2016 & ), and cross-country comparative case study (Hyder et al., 2008, King, Maman, Wyckoff, Pierce and Groves, 2013 & Haregu, Setswe, Elliott and Oldenburg, 2014). The results of review were tabulated in Table 3 below,

**Table 3:** Study design application in health policy analysis

No.	Author/Year	Title	Study design	Findings
1.	Khan, Dijk and Heuvel (2006)	Health Policy Process and Health Outcome: The Case of Pakistan	Mixed method	This study analysed policy document; and the ministry, department, agency related to health's official reports. Apart from that, a qualitative approach included open ended interviews of important policy process actors. The study revealed that the focus of agenda building and policy making are directed towards curative rather than preventive; the presence of insufficient time to achieve goals and implementation due to frequent changing of governments and lack of support; scarcity of financial inputs for health planning; and also inefficient monitoring and evaluation of regular site visits.
2.	Rawal, Joarder, Islam, Uddin and Ahmed (2015)	Developing effective policy strategies to retain health workers in rural Bangladesh: A policy analysis	Mixed method	The researchers adopted the four WHO recommendation on rural retention options of health professionals: educational policies, regulatory, financial incentives, professional and personal support. The government opened an opportunities for medical profession training for those who had rural background, mandatory training as part of the educational training and two years service for newly recruited doctors in the rural areas. Researchers also found out that despite the presence of policies regarding financial incentives and other support, none has been implemented so far. The results were obtained from analysing government documents, interviews with policy elites and roundtable discussion among policy makers and stakeholders.

3.	Ravaghi, Goshtaei, Sari and Abdollahi (2016)	Nutrition policy process challenges in Iran	Mixed method	This study performed a semi-structured, face to face interview and an open ended questionnaires among policy makers and nutrition officers respectively. The categorization of result was via four themes namely problem definition, formulation, implementation and evaluation of policy. Nutrition policy in Iran that made into the policy agenda was lacking priority from the policy maker due to weakness in lobbying and negotiating. The policy was lacking in organization, was not approved nor executed. Implementation was unsuccessful due to insufficient multisector collaborations and commitments. Scarcity in surveillance system with vague understanding of indicators among policy makers, resulted in the inefficiency of evaluation process.
4.	Hyder et al. (2008)	Integrating ethics, health policy and health systems in low and middle-income countries: case studies from Malaysia and Pakistan	Cross-country comparative case study	This study implements the approach of analyzing case studies from two different countries, discussing on the ethics integration into policy decisions regarding public health in low- and middle-income countries. Three core values were emphasized namely accountability, prevention and social justice that become apparent in the interface of ethics/public health policy.
5.	King, Maman, Wyckoff, Pierce and Groves (2013)	HIV testing for pregnant women: A rights-based analysis of national policies	Cross-country comparative case study	The researchers analyzed the national policies for HIV testing of pregnant women from 19 countries and subsequently analyzing the importance of integrating human rights into policy development. The results highlighted the need for more attention to issues of pregnant women autonomy in consenting to HIV testing, confidentiality in antenatal care settings, provision of counsel ling and care services.
6.	Haregu, Setswe, Elliott and Oldenburg (2014)	National responses to HIV/AIDS and non-communicable diseases in developing countries: Analysis of strategic parallels and differences	Cross-country comparative case study	In regards to policy response, this study focused on the policy process, frameworks and regulatory interventions between four countries. The similarity between the two national responses was in the process characteristics and the dissimilarity was in the content characteristics.

There are 6 ways to segment qualitative studies - group theory, phenomenological, action, narrative, ethnographic and case study. All these types have their own pitfalls as well as upright sides. The qualitative study as a whole has the ability to scrutinize each step of health policy process in depth and aims to uncover underlying themes in report documents unlike the quantitative. In the case study used on national health research system (NHRS) in Zambia, the researchers used group discussion for situational analysis, field and comparative visits and expert witness in order to have deep understanding through multiple types of data of the



NHRS of Zambia (Chanda-kapata, Campbell, & Zarowsky, 2012). The approach of face to face interviews especially among policy makers, disclose essentials information pertaining to policy agenda, namely lobbying and negotiating. In other hand, most of the interviews are done among the policy elites such as policy makers, managers etc. The quality of information derived from such individuals or their perspectives in specific matters might be different from that of the researcher or the people who are in the ground. This can possibly deviate the results of the articles which is considered one of the main challenges. In the study done in Bangladesh the retention of health workers in rural the researchers used phenomenological method of qualitative study using a combination of conducting interviews, reading documents and roundtable discussion with key stakeholders mainly the higher policy makers but did not include the population working as health professionals (Rawal et al., 2015).

The analysis of health policy process among countries is able to be applied using case study application, due to its similarities even for different programs. There was ethical and human rights policy analysis done in 19 countries concerning obligatory routing HIV testing during pregnancy. These countries are selected based on their developmental status in terms of economy (King et al., 2013). Nevertheless, this case study may not replicate in other similar economical background countries due to different political issue, variability of population awareness, difference in the healthcare setup among other reasons.

## 4.0 Conclusion

It is concluded that the framework application is the most comprehensive approach in health policy analysis, encompassing every step of the policy analysis process as compared to theory and study design applications. However, in terms of implementation and practicality, study design approach is preferable though there are some limitations of qualitative study design in implementing the credible way of quantitative research as in randomized control trial, which results in predominant case study designs in reality. As for theory approach in health policy analysis, researchers usually end up with multiple theories application as single theory is inadequate to encounter the dynamic health issues of a country. Regardless of the various methodological approaches in health policy analysis, evidence based is the key approach that need to be enhanced in health policy analysis particularly in developing countries, pertaining to its different context and requirements.

## Declaration

Authors declare that this manuscript has never been published in any other journal.

## Authors contribution

Author 1: information gathering, preparation and editing of manuscript

Author 2: information gathering, preparation and editing of manuscript

Author 3: information gathering, preparation and editing of manuscript

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 Author 6: information gathering, preparation and editing of manuscript  
 Author 7: information gathering, preparation and editing of manuscript  
 Author 8: information gathering, preparation and editing of manuscript  
 Author 9: information gathering, preparation and editing of manuscript  
 Author 10: final review of manuscript and final editing

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