PLANNING THEORIES IN PRIMARY HEALTH CARE PLANNING

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ABSTRACT

Background: Primary care planning is part of national health plan. Literatures indicate that rationalism, incrementalism and mixed scanning planning theories were widely used in health planning. This paper aims to compare the three type of planning theories and its’ applications in Primary Health Care planning. Materials and Method: A scoping review was used in this study. Articles were identified using four databases namely Scopus, Google Scholar, PubMed and Science Direct. Three commonly used planning theories which include rational planning theory, incrementalism planning theory and mixed scanning theory and relevant countries Primary Health Care planning with the application of the theories were selected. Five countries from five articles were reviewed that were relevant and related to the above theories and its application in primary care. Only articles written in English within the last 15 years were included. Results: Rational planning is the most commonly practiced and the basis of all public planning. It enables list of alternatives or options and the best option is chosen based on the options that maximizes the optimum output. The example of rational planning can be seen in budgeting process. However, the challenges in rational planning are time consuming, only suitable in small organizations, and often it is difficult to evaluate all the alternatives or options. Incrementalism refers to a theory which improvise (based on past policies or programmes) in which, changes are applied over time to create a better programme or policy implementation. It is an alternative theory that accepts and improves the shortcomings of rational approach. The number of options are usually less than the other theories and it works best with limited resources and time thus sometimes is chosen in a crisis where rapid decision are needed. Mixed scanning is a hierarchical mode of decision making which combines higher order fundamental decision making with lower order incremental decisions; in which it aims to achieve for the higher order ones. The term scanning is used to refer to search, collection, processing and evaluation of information as well as the drawing of conclusions which are the elements in decisions making. This approach is described as the most effective decision-making tool with optimal financial involvement, moderate time consumption and large amount of flexibility allowing various levels of scanning which permits it to adapt to specific situation. Conclusions: Different planning theories might suit Primary Health Care planning in different settings, based on the resources availability, social acceptance and political influence.

Keywords: Planning theories, Primary health care planning.
1.0 INTRODUCTION

Health planning is defined as the orderly process of defining community health problems, identifying unmet needs and surveying the resources to meet them, establishing priority goals that are realistic, feasible and projecting administrative action to accomplish the purpose of the proposed programme (WHO, 2017). With increasing demand for medical and health care services, proper health care planning is essential. Theories are at the heart of practice, planning, and research thus it’s the pillar of health planning theories. All planning involving health care involve theories, and the application of the theories is equally important. Theories are integral to healthcare practice, promotion and research. Theories influence, outline and determine how evidence is collected, analysed, understood, and used, thus it is vital to analyse and understand them. Primary Health Care is the health care provided in the community for people making an initial approach to a medical practitioner or clinic for advice or treatment. The ultimate goal of Primary Health Care is better health for all (WHO, 2017). Primary Health Care, which is the first level of contact of individuals and the community with the health system, constitutes the first element of a continuing health care process. It is an essential element in the health care system where it acts as the front liner providing multiple services ranging from promotive, curative, as well as rehabilitative activities through active participation by the community. Vuori et al (1986) stated that, the concept of Primary Health Care may be viewed in four different ways. The first method is to view Primary Health Care as a set of activities among which are health education, identifying and controlling prevailing health problems, food supply and proper nutrition, provision of safe water and basic sanitation, maternal and child health care, prevention and control of endemic disease, appropriate treatment of common diseases and injuries and provision of essential drugs. Secondly, Primary Health Care can be seen as a level of care which is a part of health care system which people have first contact to. Thirdly, it can be seen as a strategy for organizing health services whereby services provided at primary care level needs to be accessible, relevant to the needs of population, based on community participation and functionally integrated between all sectors in the community. Finally, it acts on the philosophy that permeates the entire healthcare system, as a well-governed Primary Health Care system is characterized by the implementation of social justice and equality, self-responsibility and acceptance of the broad definition of health. Worldwide the Primary Care-Centred services moving toward emphasizing the important role of Primary Health Care in the entire health care system. Among the main point concluded by Starfield (1992) who did a review on primary care of 11 Western countries was higher primary care co-ordination is likely to produce better health for a population at a lower cost. This statement highlighted the substantial need for good planning practice particularly in Primary Health Care system to bring out maximum benefit to the population as a whole.

Planning in any health care organisations including Primary Health Care is the systematic and organized process whereby an organization indicates the way it plans to progress from its’ current situation to the desired future situation. It is the set of decision-making criteria and the decisions taken and implemented by an organisation to definitively guide its’ activities and structure (Rodríguez Perera & Peiró, 2012). Planning is an essential element in health care organisation due to several main factors which include an increase in the number of informed, knowledge-equipped clients, limited resources for production hence increasing obligation to allocate resources on rational basis, a shift of focus to customer or patients-based rather than service-based as well as a surge in the number of populations that comes together with an escalation in the needs and demands for healthcare services.
A theory is defined as a set of analytical principles or statements designed to structure our observation, understanding and explanation of the world (Nilsen, 2015). A “good theory” provides a clear explanation of how and why specific relationships lead to specific events. Among major aims of applying theories in science particularly in healthcare field are to describe and guide the process of translating research into practice, to understand what influences implementation outcomes and to evaluate implementation activities. One of the categories of theories related to planning procedure is implementation theory whereby it analyses issues related to the how and why of implementation, thus improving the relevance and appropriateness of such decision to fit into the circumstances at hand.

Appropriate approach used in Primary Health Care planning ensure that the planning are done systematically and will reaching out to the targeted groups, cost-effective, relevant and can adapt to any changes during implementation. A health planner responsibility is to ensure that good planning are made out of relevant and suitable theories to ensure a better health care service delivery to everyone. This manuscript aims to review the three types of planning theories namely rational theory, incremental theory and mix-scanning theory, and its’ applications in Primary Health Care planning.

2.0 MATERIALS AND METHODS

2.1 Methodology

A scoping review was the method of choice for this article. Three commonly used planning theories were selected which consist of rational planning theory, incrementalism planning theory and mixed scanning theory. Relevant and related countries which applied the above theories with their Primary Health Care planning were selected. Relevant article search was conducted via four major database which were Scopus, Science Direct, Google Scholar and PubMed. Aspects of country Primary Health Care planning included resource planning which also included physical health facilities structures and human resource management. Only articles written in English, original articles, articles related to Primary Health Care planning and planning theories which were published within the last 15 years were included in this paper.
Figure 1: Prisma Diagram of Selection Process of Articles Reviewed for ‘Analysis of Planning Theories in Primary Health Care Planning’
3.0 RESULT AND DISCUSSION

The result and discussion will start with the concept of Health Planning Theory Cycle followed by three main Health Planning Theories. The examples of the countries that applied the Health Planning Theories are also included in this section.

3.1 Health Planning Theory Cycle

Planning is a collective effort on the part of some group or organization to modify the behaviour and conditions of other people. Hence, no matter how objective or wise planners maybe, they are engaged in deciding what is ‘beneficial’ for other people and taking steps to attain that benefit (Kaufman, 1968).

Figure 2 above explains the steps of Health Planning Cycle as described by Johnson in 2008. Health planning theories describe the principles of the theories while health planning cycle further elaborates in detail in term of step by step processes. Health planning follow similar basic steps with any other planning process flows (Ardal et al., 2006). The steps include health situation analysis; setting up objectives and goals; assessment on the resources; setting up priorities; formulate plan; plan become programme and implementation; monitoring of the programme and evaluation of the programme.

The first step in this cycle is health situation analysis. This usually involves information gathering to certain extent in determining the health status or illness profile of the population.
of interest (Ardal et al., 2006). The aspects include population profile (for example age and sex), population morbidity and mortality review, disease epidemiology and geographical distribution, healthcare facilities and technical manpower resources, healthcare status of training and level of awareness regarding the diseases (Johnson, 2008).

Second step is setting up goal and objective. It is also known as setting the direction of a plan. Despite of goal and objective, this step is also involved in establishing standards and criteria for comparative purposes between plans and alternative (Johnson, 2008). The next step involves assessment of the resources. Assessing the current resources determine the feasibility and practicality of proposing alternatives. Proposed alternatives should be within the boundaries of available resources. Final alternatives will be greatly affected by the resources such as material availability, capital and human resources (Chatora & Tumusiime, 2004).

Setting up priorities is the next stage in the health planning cycle. As planning can be from multiple alternatives, choosing the right one will be greatly affected by resources factor. Therefore, setting up priorities is crucial particularly in a situation where limited resources is a major issue. Hence, alternative with highest priority should be discussed in order to properly allocate available resources (Johnson, 2008). The next step is formulating plan. In order to achieve goal and objective as stated earlier, formulating systemic written plan is an important and crucial step. The plan should include the detail specification of the plan at macro and micro level. All the steps in formulated plan must consider components of resources’ requirements as well as the expected outcome of the planned steps (Chatora & Tumusiime, 2004).

The sixth step in health planning cycle is programme and plan implementation. Plan formulated earlier in steps will be converted to program in order to implement such alternatives. Once it is approved, it has to be properly implemented. Good implementation is greatly affected by proper administrative support (Chatora & Tumusiime, 2004). The last two steps involved monitoring and evaluation of the programme. Monitoring refers to daily functions assessment of the programme. Evaluation is assessment as a whole or looking particularly at the final outcome of such programmes (Johnson, 2008).

### 3.2 Experience of Planning Theories in Primary Care Planning

Application of planning theories into Primary Health Care planning is crucial not just on the consumption or large capital, but the long term recurrent cost implication on the burden of Ministry of Health. Planning Theories is crucial in providing the needed frame of reference with the aim to provide the organisation with systemic guidance. It also provides “system of knowledge organization” to clearly draw the boundaries and parameters for each distinct subject (Baha & Abukhater, 2009).

The importance of health planning is proper future perspective by providing fundamental concept which is developed by previous practices. Poor planning of Primary Health Care may cost economic impact particularly in developing country with constrain and limited resources (Musgrove et al., 2000). Without planning theories, implementation of good Primary Health Care would be chaos, misguided, influenced, political interference or even myopic self-interest. The three main planning theories will be explained, followed by the application of the planning theories in the health planning cycle and last but not least, the application of the theories at selected countries.
3.3 Rational Planning Theory

Rational planning theory is one of many planning theories in the literature. It is a theory which translated into Rational Planning Model which is used in planning phase of certain activities. For the purpose of this article, planning for Primary Health Care is the selected area of choice. Rational planning model or theory includes comprehensive, systemic and long-range view as well as analytical approach in the planning process. The rational planning theory/model is a process of realising and identifying problems, followed by establishing, determining and evaluating possible alternatives, choosing the best alternative, implement and finally monitor and evaluate the outcome based on the chosen alternative (Nurhaliza et al., 2017). It is commonly used in economics and political sciences. However, education and research field share the usage of similar theories in their planning process due its’ simplicity and apparent logic.

History of rational planning theories and model started off with Banfield, who first defined the model of rational planning in 1955. He outlined five principals in rational planning theories such as ends of reduction and elaboration, designs and courses of actions, comparative evaluation of consequences, choice among alternatives and implementation of the chosen alternatives (Kaufman et al., 1968). The disadvantages of rational planning theory include group-based decision-making process, assessment accuracy would be the sole factor for alternatives solutions, planner define the problem to be solved instead of goal need to be achieved and it is time consuming (Nurhaliza et al., 2017). The advantage of rational planning theory is the comprehensive approach of generating all possible alternative solutions as well as it generates objective assessment criteria during the process. It assumes accurate and complete knowledge of all the alternatives solutions, preferences, goals and consequences of such alternatives. It also uses the assumption of non-political involvement, rational and reasonable surrounding factors. The ten major steps in rational planning model includes, firstly data collection, followed by analysis of data, forecasting of the future context, establishing goals, designing alternatives, testing the alternatives, evaluation of alternatives, selection of the best alternatives, implementation and it ends with monitoring (Nurhaliza et al., 2017).

With reference to Health Planning Cycle, in Rational Planning Theory, the future context identification is vital before establishment of goals and objectives. However, setting priorities is not seen in the planning cycle as rational planning theory focus more on designing the alternatives, testing alternatives, evaluating alternatives and selecting alternatives prior to the implementation process. The disadvantage in rational planning theory includes the decision-making process is group based-decision and it is time consuming as it involves 10 steps compared to incremental and mixed scanning theories. Rational Planning Theory implementation was evidenced and being applied in the setting of Primary Health Care in France and Kenya.

3.3.1 France

France was selected as the best country with health system as reported by World Health Organization in World Health Report 2000 (Musgrove et al., 2000). France primary care consists of roughly 221,000 General Practitioners (GPs) and 119,000 specialists (with a ratio of 3.4 per 1,000 populations). 67% of GPs and 51% of specialists are fully or partly self-employed (Chevreul et al., 2015).
3.3.1.1 Justification of using Rational Planning Theory

The steps and processes undertaken in the health facilities planning in primary care setting in France can be explained using the rational planning theory. The situation applied the steps in rational planning theory which is problem identification which is known as medical desert. Analysis on the advantages and disadvantages, weakness and strength of each alternative proposed were done followed by the implementation. Following the steps, it included choosing the best alternative based on the assessment of the health authorities. Subsequently was the implementation, monitoring and evaluation of such policy following the selected alternative.

3.3.1.2 Medical Desert

Regarding health planning in primary care facilities, France has encountered one of many challenges in their planning. Specifically, problem identified pertaining to healthcare workers distribution due to geographical disparities in France. Certain areas in France particularly rural communities and suburbs were isolated and undeserved (Chevreul et al., 2015). In 2013, France ranks 14th among OECD countries with average density of 330 doctors per 100 000 inhabitants (OECD, 2013). This problem is known as ‘medical desert’ due to the challenges faced in human resource management in distributing healthcare workers to certain areas in France (Chevreul et al., 2015).

3.3.1.3 Recruitment of foreign professional healthcare workers

Alternatives were brought up by the health authorities in dealing with this problem. The first alternative was recruitment of foreign professional healthcare workers mainly from Belgium, Algeria, Germany, Morocco and Romania. In 2013, only 25% of foreign-trained doctors accounted were registered with the French Medical Council. However, these doctors did not necessarily practise in the areas or within the specialties where the greatest needs exist (Chevreul et al., 2015).

3.3.1.4 Financial incentive

Other alternative provided by the health authorities was financial incentives to the doctors (Chevreul et al., 2015). The financial incentives alternative was offered since 1990 to the doctors in addressing issues of geographical disparities in France. It was offered as voluntary basis in order to attract the doctors to work in underserved areas. Similar alternative was offered particularly among nurses but it was negative financial incentive instead of positive financial incentives offered by doctors earlier on (Chevreul et al., 2015).

3.3.1.5 Improving workplace quality of life

Although financial incentives seem to be the solution for the unequal doctors distribution on geographical disparities, further analysis showed the disadvantages of such alternatives. The main disadvantage is the surrounding factor in the undeserved area. Doctors posted in such areas were facing difficulties with limited options for their children schooling, job opportunities for their spouse and other daily requirement issues and difficulties (Chevreul et al., 2015).
Therefore, local health authorities came out with other alternatives aside from the financial incentives to the doctors. Tackling the issue of medical desert by restructuring the surrounding factors and improving workplace quality of life of doctors, might attract the doctors to come to work in the underserved and suburbs area. The proposed alternative includes providing practice structure and facilities for the doctors in order to reduce the cost of startup cost in establishing their practices; offering group practices in eliminating the issue of finding replacement cover when the doctors are on holiday; offering fixed salary for the doctors instead of pay per service method and providing the doctor liability risk (Chevreul et al., 2015).

3.3.1.6 Task transfer and new health law

Another alternative proposed by the health authorities was task transfer between healthcare professionals via appropriate training and education. For example, work delegation or job redistribution from ophthalmologist to vision therapist. This alternative will be able to reduce the need of some categories of professionals and thus ameliorate accessibility problems in the area. However, this alternative was opposed due to fees related issues and concomitant shortage of staff in the deserted area (Chevreul et al., 2015). Final alternative was proposed and selected currently is the proposed new health law which includes introduction to interim medical personnel, corps of substitute professionals and new modes of cooperation between health professionals (Chevreul et al., 2015).

3.3.2 Kenya

The Kenyan government has for many years been undergoing major health systems reforms aimed at improving resource priority setting, planning and budgeting, including the involvement of communities and sub-national level units in planning, budgeting and decision making (Tsofa et al., 2014). Other challenges include weak stewardship by senior MOH officials, institutional separation between planning and budgeting processes, a rapidly changing planning and budgeting environment, lack of reliable data to inform target setting and poor participation by key stakeholders in the process including a top-down approach to target setting (Tsofa et al., 2014).

The planning process in Kenya reflected the application of Rational Model Theory. This is because they used the basic steps of Rational Planning Theory such as, planning for year X with AOP (Annual Operational Planning) conducted by planning units-health facilities, districts, departments, divisions consolidated at national level and AOP then submitted to treasury. Then, the MOH revises the AOP based on available resources or alternatives. After that, the government budget was approved at cabinet level and presented. Next, AOP launched implementation would begin for that particular year planned and followed by review of performances, and the Treasury would release budget outlook paper. Finally, government sector working groups on resources bidding process had done (Tsofa et al., 2015). Tsofa et al stated in his article that in Kenya’s MOH yearly AOP priority setting targets are guided by the sectors’ strategic objectives, the preceding year’s sector performance and available resources, for that particular year. The AOP review is based on the priority settings for the coming year. The MOH use identified priorities based on the AOP review summit to bid for resources and prepare AOP planning tools, guidelines and alternatives (Tsofa et al.,2015).
Among the biggest challenges faced include mismatch between AOPs and budgeting processes in the health sector (Tsofa et al., 2015). Thus, it can be assumed that the MOH in Kenya revised AOP based on all available resources or alternatives in the planning.

### 3.4 Incremental Planning Theory

The second theory that has been used extensively in health planning is the Incremental Theory. Incremental theory is an alternative theory that accepts and improves the shortcomings of rational approach (Barclay M. Hudson, 1979). It works and is best in a limited period of time with limited data, information and resources. The number of options is usually less than rational theory of planning and sometimes can be influenced by political parties. In the incremental planning theory, there is a partisan mutual adjustment, where planning is sometimes a result of understanding in between stakeholders. Social value may play a vital role in decision-making in incrementalism. Prescriptive model is sometimes used, in a situation where decisions are made when there is a consensus decision on how things should be, usually of quick change, and this might be in response to rapidly changing variable. Incrementalism is sometimes chosen as in a crisis where rapid decision is needed (Quinn, 1976). In this situation, goals, value and alternatives are often considered together.

As with other planning theories, the incrementalism also comes with some shortcomings. Incrementalism can only cover partial health planning thus is not comprehensive. It has more concern and focus more with increments, but not major review so it does not look at a crisis or problem as a whole or holistically. Incrementalism is more concern with means and ways to solve the current problems so it might not curb long term problems or issues. Incrementalism only consider policies based on the past and the current practises (Anderson & Harbridge, 2010). As data are usually scarce, so analysis is usually based on value. It has a low understanding of the whole situation, for example in the outbreak and epidemic management.

With reference to Health Planning Cycle, in **Incremental Planning Theory**, not all aspects of Health Planning Cycle are fulfilled. For example, in Incremental Planning Theory, there is analysis of a situation, but it does not look at the whole situation holistically. Objectives and goals are set but only for temporary phase of time and is not catered for long term. Assessment of resources is a vital part of Incremental Planning Theory as it works best in a limited period of time with limited data, information and resources. Priorities are also set and things of highest priorities will be tackled and rectified first. Formulation of plan (even though short term) and programming and implementation are essential in Incremental Planning Theory. However, monitoring and evaluation may or may not be of utmost priority in this theory as it only looks at the current and past practise and problems. If any issues arise from there, the planning will only cater the need at the moment. Incremental Planning Theory was applied in Thailand and United Kingdom when dealing with some of their Primary Health Care issues.

#### 3.4.1 Thailand

Incremental Planning Theory can be seen in Thailand specifically in the community involvement in their Primary Health Care. Primary Health Care (PHC) was initiated by WHO in Thailand in 1969. In 1979, PHC was accepted as the National Health Care Policy. To cater for citizens living in villages in rural areas, few schemes were introduced.
3.4.1.1 Village Volunteer Scheme (VVS)

PHC was initially implemented by launching a Village Volunteer Programme, which was adapted from Saraphi Project. It was socially and culturally acceptable. Volunteers from village were valuable and cost-effective. There were 2 types of volunteers, namely Village Health Communicators and Village Health Volunteers. Their roles were slightly different, for example for Village Health Communicators they were responsible for 8-15 households, they collaborated with Health Care Workers and had to undergo training (Nit Tasniyom, 1997). Other programmes that started simultaneously were Drug Revolving Fund Programme, where the Village Health Communicators were given 1000 baht worth of drugs to store and distributed among the households as needed.

However, a study by Hongvivatana (1988) showed that only 24% of volunteers were active with a high attrition rate of 42%. They concluded 2 issues to be tackled, that were the structural roles of the volunteers are less effective and a flexible bottom-up approach is needed. Another issue that need to be rectified was community participation required Health Care Workers with communication and development skills.

Based on these issues, using Incremental Planning Theory, they improvised the current scheme and make amendments to it. Improvements were made to increase community participation with Self- Managed PHC Village Programme, with the objectives to create community self-reliance in resource, mobilisation, organisation, management and social development. They also focused more on the training of the village volunteers to increase their knowledge and provide better services to the community.

Another programme that was initiated based on Incremental Planning Theory was the Lampang Project (Primary Health Care in Action WHO, 2008). This project was aimed to develop, improve and extend health care system in Thailand. This was to be achieved by improving general health of target population served by low-cost health delivery system. It focused on Maternal Child Health, Family health, nutrition, with appropriate care to rural patients by establishing community advisory group and by collaborating with private sectors, physicians, communicators and volunteers.

3.4.2 United Kingdom

Primary Health Care (PHC) in United Kingdom has been centrally funded and managed since 1948 with the establishment of National Health Service (NHS). The NHS provides both primary and specialist health care which is largely free at the point of delivery. The registrations of patients are universal with a single practice of the patient's choice, and all primary medical care is provided by General Practitioners (GPs). There is a strict divide between primary and specialist care: specialists work largely in hospitals, where they provide inpatient care for all and see new and follow-up patients in clinics, whereby GPs act as gatekeepers to specialists with some small exceptions, including attendance at the emergency department and sexual health service (Roland, Guthrie, BChir & Thome, 2012). One of the services provided at GP setting is smoking cessation clinics which are one of the major health problem in United Kingdom’s health setting.

Public Health England aims for a generation of free tobacco by 2025. Even though the smoking rates is decreasing, 20% adults are smoking and there are around 90,000 adolescent smokers. To improve this condition government had undertaken several efforts. Incremental
Planning Theory approach in planning was used to add on more strategies in combatting tobacco smoking, namely by making tobacco less affordable, preventing the tobacco promotion, effective regulation of tobacco products, improving the awareness of the harm and reducing the exposure to second hand smoke.

The National Health Service (NHS) smoking cessation services in England provide interventions to affect smoking cessation across the population (Bell K, 2006). A review was done to examine the effectiveness of the NHS intensive smoking cessation programmes. During the implementation of the programmes, some of the challenges faces were resistance from the community, involving some specific ethnic groups. There are few factors that determine the effectiveness such as quality of NHS services, mode of delivery, the setting of the services, external factors, and the special characteristics of sub-groups. Based on these factors, better and more specific smoking cessation programmes and modules were introduced targeting specific group and in specialised settings were planned to improve the success rate of smoking cessation.

3.5 Mixed Scanning Theory

Mixed scanning is a hierarchical mode of decision making which combines higher order fundamental decision making with lower order incremental decisions; in which it works out and prepare for the higher order ones (Etzioni, 1967). The term scanning is used to refer to search, collection, processing and evaluation of information as well as to the drawing of conclusions which are the elements in decisions making. Mixed scanning contains rule for allocation of resources among levels of decision making and for evaluation purposes where changes in proportion of scanning will follow any changes in the situation faced. Mixed scanning strategy is illustrated as scanning by satellites with two lenses which are wide and zoom lenses. The wide lenses act to provide clues as to places to zoom in which allow a directed and detailed view as opposed to focusing the view at all formations which deems a prohibitive task. In any decision making, mixed scanning allows for choosing a major strategy and a sub-strategy which then is followed by detailed examination of some options within that sub-strategy.

With reference to Health Planning Cycle, in Mixed Scanning Theory, the steps involved in mixed scanning method is firstly the introduction of scanning process, in which the purpose are to conduct continuous review of what issues had been happening, to identify and to anticipate major issues for possible detailed attention and to provide an overview of future direction for the development of health services. Secondly is the selection procedure, which is to sort out the fundamental issues identified by the review process in which it would be subject to detailed study and planning. Thirdly is the detailed planning of the relatively small subset of issues selected for incrementalism.

The United States Public Administration Review (1967) suggested that this approach as the most effective decision-making tool as it is less demanding than Rationalism Theory which requires full search of all options and more strategic and innovative than the Incrementalism Theory. Another advantage of mixed scanning theory is that it takes into consideration the position of the actors and their capacity to adapt to changing circumstances. In contrary to rationalist approach which requires maximum time and funds before action, mixed scanning method involves relatively fewer funds and moderate time consumption.
Mixed scanning theory provides both a realistic description of the strategy used by actors and the strategy for effective actors to follow. For example, in health planning cycle, the phase of analysing current health situation would include a general overview as well as a focused explanation of the current situation in that particular area. It would adopt two-angled camera approach with a broad-angle camera to cover all elements but not in great detailed, with a second camera which would zoom in to reveal a more in-depth examination. Once the details of current situation are obtained, the health planning objectives and goals are outlined aimed to overcome or improve the current health situation being faced. The decision on allocation of resources is included as part of the strategy with the actual amount of resources allocated would depend on total amount available and on experimentation with various interlevel combinations. Mixed scanning strategy believes in timely and effective decision making whereby allocation of resources is best changed over time to suit the needs at that particular point.

In the implementation of program, mixed scanning strategy promotes an on-going monitoring of each action taken where the actor may decide to drop the course of an action if the action is deemed to bring no improvements or even worsen the situation. This adaptation of continuous monitoring is essential in health planning cycle as healthcare system usually is involved with rapidly changing environment that influences the healthcare demands and needs. Mixed scanning strategy acknowledges that the extent to which one decision is stressed against the other is affected by the relationship between higher and lower organizational ranks. Those at higher ranks, especially the experts are more likely to focus on details and sometimes avoid facing the overall picture from the administration as well as the public. Hence, in the evaluation stage, a mixed scanning strategy adopts a flexible method allowing various levels of scanning which permits it to adapt to specific situation. Examples of the application of Mixed Scanning Theory can be seen in Primary Health Care setting in South Africa and Egypt.

3.5.1 South Africa

South Africa, as a middle-income country in the African continent, still has an inadequate Primary Health Care system which has roots in the colonial period and implementation of apartheid system (Maillacheruvu & McDuff, 2014). The studied paper described the general approach adopted in planning of Primary Health Care facilities in Soweto, one of the districts situated in Johannesburg. It highlighted main issues in the planning process which was mainly the limitation of resources and data, how they approached it and the merits and limitations of the approach taken.

3.5.1.1 Justification of using mixed scanning theories

The application of mixed scanning theories is reflected in primary health care planning process in Soweto, South Africa for several reasons. Firstly, they applied the concept of dual-angled lenses in viewing the problems at the first stage of planning process. The main objective was to develop a 10-year plan for primary health care facilities in the area and they identified three major issues that needed further attention and set up strategies in overcoming each problem individually. Due to their local constraint, resources were allocated based on the existing capacity even where this meant less than ideal situation. The concept of flexibility and continuous monitoring were also implemented in the planning process whereby in
circumstances that resources were deemed to be scarce, clinics could be scaled down relative to one another or if other community needs were to receive higher priority.

3.5.1.2 Identification of major issues and sub-major issues with detailed options within that sub-major issues

Firstly, the expected burden on clinic services was highlighted with an expected increase in the size of Soweto’s population by 3% per annum and the escalation in the pattern of utilization of public healthcare services. Secondly was the locational criteria to maximize access to primary care facilities, with maximum distance from a health care facility and the size of catchment population play huge roles in determining the quality of healthcare services provided to the population. Thirdly was the type of services provided by different sizes of primary health facilities which involved defining what constitutes a basic package of primary care services and what types of facility were involved in its delivery.

Once the main issues or areas have been identified, an array of strategies were outlined accordingly with the goals to provide a comprehensive, equitable, and accessible primary health facilities with priority given to community who were in need the most. For example, to cater with the anticipated problems of increasing number of population utilizing primary health facilities, a definition on catchment areas and population was set. In the instances the population inside the catchment areas of existing facilities is smaller than 80 000, it was assumed that the existing clinic would suffice but if the population was larger than 80 000, the option of building another clinic or health centre was further investigated.

Another example was the step taken to estimate the size of health facilities needed in which they were relatively defined as “small clinics” or “health centres”. The calculation method was done based on a formula developed by South African Council for Scientific and Industrial Research (CSIR). The formula calculated the number of 'functional unit' required to serve a population of a given size in which a functional unit (FU) was defined as a consultation room or treatment area used for the provision of core services. The elements that were included in the calculation method were size of catchment population, number of visits per person per year, number of consultation days per year and number of patients seen per treatment room.

3.5.1.3 Allocation of resources based on existing capacity

Among the key elements applied in the planning process was allocation of resources based on existing capacity. This concept was illustrated with the optimal use of 24 existing primary health facilities in Soweto whereby 19 out of 24 facilities which have the potential to become functional, comprehensive health centres were retained for upgrading. Even where this meant a less than ideal situation, existing resources were utilized wherever possible. For example, staffs from two different blocks of health facilities buildings who provided preventive and curative services respectively for an area were recommended to integrate and continued to operate at least in the short term, from the two different sites.

3.5.2 Egypt

In Egypt, service providers for mental health fall into three main sectors: public, private and not-for-profit non-governmental organizations (NGOs). Public sector is managed essentially
by Ministry of Health which covers the most of service provision in the country. “The Health Sector Reform Program” which was initiated by the Ministry of Health in 2002 aimed to integrate mental health program into the existing primary health care system. The reformation program adopts the concept of mixed scanning by which planning effort was directed towards tackling strategic issues critical to the future of organisation and decision making was done based on analysis of most relevant information and possible major options.

The policy objectives of the programmed were: firstly, to conduct detailed situation appraisal of mental health within Egypt; secondly to use that information to develop appropriate and integrated mental health policy and plans; thirdly to develop mechanisms for sustainable implementation of policy across the country, using locally available resources and integrated into local systems; and fourthly to monitor and evaluate progress and implementation. Application of mixed scanning was evidenced in the implementation of continuous review and the integration of mental health with the Primary Health Care (Muijen et al., 2010).

4.0 CONCLUSION

Different planning theories might suit Primary Health Care (PHC) planning in different settings, based on the resources availability, social acceptance and political influence. As there is no one planning theory that fits all, every situation in Primary Health Care is unique and decisions involving planning must be decided after evaluating all available options thus following the principles of planning theory that best suits the situation. Public Health Physician should be creative, flexible and knowledgeable to be able to decide on the best decision in any given situation. Monitoring and evaluation is also an important aspect in the implementation of the theory as any strength and weakness can be identified at an early stage and proper improvement and amendments can be planned promptly.

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DECLARATION

Authors declare that there is no conflict of interest.
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