Philosophical Foundations of Research and the Case of the Epistemic Well in a Least Developed Nation

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Abstract
Inspired by an ancient tale of kupamanduka (Well Frog) that never ventures out of the well and lives to think the well as the world, and see nothing beyond it. This article conceptualises the 'Epistemic Well' and the native epistemic community that dwells in it remains within the confines of the epistemic well. Philosophical foundations are the core of each individual researcher and all research questions, hypothesis, methodologies, recommendations are shaped by it. Particular modes of governance instil particular modes of philosophies. Under neoliberalism the prevailing philosophical foundations have been identified as, detached, decontextualized, depoliticized, dehistoricized, dissocialized, deproblematized, reductionist/individualist, instrumentalization, separation, marketisation, positivist and objectivist. The combination of these attributes builds the epistemic well. The epistemic well of research is not absolute and is not meant to provide quantification data. The epistemic well is a reflexive tool that can be used to evaluate a research especially for a nation like Nepal. The research funds or the benefits that ensues a researcher are important criteria for research. When thinking of a research topic, the primary determining factor becomes the amount of fund available the gaze of a native researcher can overlook various conditions and processes. The epistemic community that is formed by these researchers maintain and sustain particular epistemes. The NCD's were selected primarily to stick to a cohort but this does not limit the scope and purpose of the epistemic well.

Keywords: Philosophical, Research, Neoliberal, Nepal

Introduction

The rationales, objectives, methodologies/methods, results and recommendations are predominant and evident aspects of most research. Following these are the philosophical foundations which remain usually invisible and which also build up the visible components of most research. Philosophical understandings about nature of reality are crucial to understanding from an overall perspective from which studies are designed and carried out [1]. Methodology and methods are determined by researcher's world view and bia, reflexivity and researcher positionality, ontological & epistemological positions and axiological positions [2-6].

A basic component of deciding on methodology is the philosophical foundation one possesses regarding beliefs, values, ontology, epistemology and relationality. Over the years a range of philosophical perspectives have emerged such as methodological individualism, empiricism, positivism, Cartesian's, reductionism, methodological holism, political economy, Marxism, pragmatism, existentialism, constructionism and in contemporary era philosophy, postmodernism, post-colonialism, post-positivism, post-foundationalism, postneoliberalism, post-structuralism. These different philosophies sometimes contradicting and sometimes over-lapping have been providing the foundations of research in varied areas.

The scope of this article is not to discuss about these varied philosophies and its strengths and weakness and neither is the scope to discuss which philosophical perspective is better. The attempt here is to explore the philosophical foundations and the assumptions that inform researchers (epistemic community of researchers) under neoliberalism. Research is an outcome of prevailing epistemes. Epistemes are 'manners of justifying, explaining, solving problems, conducting enquiries, and designing and validating various kinds of products or outcomes' [7]. Dominating epistemes or world views are articulated in part through institutions, such as healthcare settings, education systems and through specific scientific disciplines such as public health, nursing, psychiatry, endocrinology, engineering etc. [8]. Epistemes are established and sustained through processes of epistemification by epistemic communities. "Epistemic communities are recognized by four central elements—shared causal ideas, shared principled beliefs, shared notions of validity, and a common policy enterprise" [9]. "An "epistemic community is politically neutral, and has been de-

scribed as a community who apply their standards of credibility, and epistemic values, to the practice of theory choice and knowledge production" [10]. It has also been described as "a professional group that believes in the same cause-and-effect relationships, truth tests to assess them, and shares common values" [11].

Based on available literature on epistemic communities and the features that characterise an epistemic community as mentioned in the above paragraph the National Health Research Council (NHRC) can be identified as an epistemic community. The Second National Summit of Health and Population Scientists in Nepal which was held from April 11-12, 2016, with the theme, "Health and Population Research for Achieving Sustainable Development Goals in Nepal" provides the background and the data needed for the study. One hundred and sixty five papers were presented. The research papers were classified into nine different themes. The summit was attended by a rich diversity of participants from academia, research institutes, government, I/NGOs and external development partners [12]. This diversity of views available in an event present an excellent opportunity to build the objective of this article which is to explore the philosophical foundations and the assumptions that guide researches done on health issues by a native epistemic community of researchers in an era of neoliberalism.

Rationale

The indiscriminate and uncritical use of questionnaire surveys to gather information was raised more than three decades ago in 1979 in the first edition of the book, 'Use and misuse of social science research in Nepal' [13]. More recently others have also expressed the fact that the overwhelming majority of articles reported on quantitative and calls for making health a public health agenda have also been made [14, 15]. Others have discussed issues that reflect a particular political economy of research - where funding comes from, who defines the research agenda, the costs of review, developing Nepal's research capacity, through to the politics of publication of research findings - and includes questions relevant to emerging regulatory and ethical frameworks [16]. The public health education has also been characterised as having its stress on managerial, administrative and project specific and lacking academically the public health graduates are trained to work as public health practitioners in districts [17]. Studies of philosophical nature in dealing with ontological and epistemological issues on Nepal have been few and those that do deal with caste, religion, semantics and forestry [13, 18-20]. Working with an epistemic community to generate a range of options for further analysis may itself yield important insights into policy, as well as into how the epistemic community operates, perceives the problem(s) and proposed solutions. The rationale of the study to explore the philosophical foundations of research arose due to three primary reasons.

The first reason is due to the historical processes that has conditioned contemporary Nepal. The second reason is due to the influence of neoliberal values and the third reason is due to the empirical experiences of the author. A very brief history of Nepal is discussed since; a historicized understanding of the present condition has been deemed an important approach [21]. Nepal though never colonized has been substantially affected by colonialism in ways which are different from other past colonial nations. The Rana period from 1848 to 1950 pushed Nepal towards isolation by deliberately keeping the population away from the modern ideas of development such as education. Literacy rate in 1950 was approximately two percent [22].

More than one hundred years ago in 1887 when various inventions, discoveries were taking place around the world, Richard Temple had declared Nepal to be 'closed to the eyes of science' [23]. The year 1956 marks the end of oligarchy, the beginning of an egalitarian political system, introduction of universal access to education, introduction of the General Health Plan, becoming an aid-recipient country and the launch of the First Five- year Plan (1956–1961) [24-26]. The late advent of modern liberal democratic ideas, the poor living conditions, and the implementation of the banking model of education with its emphasis on accumulation of knowledge demobilized the people within the existing establishment of power by conditioning them to accept the cultural, social, political status quo of the dominant culture which also led to increased dependency on others for its development [27-29].

Nepal began neoliberalising from the late eighties onwards. In the early 1990's Nepal was subjected to structural adjustment policies (SAP) in line with neo-liberal principles [30]. As a process, neoliberalization is variegated, unfinished, and contingent [31]. It is a slippery concept to theorize, let alone study empirically [32]. Most scholars tend to agree that neoliberalism is "broadly defined as the extension of competitive markets into all areas of life, including the economy, politics, and society" [33]. Key to this process is "an attempt to instil a series of values and social practices in subjects and by virtue of being embedded in practices of governance at the local level often leads to a sense of neoliberalism being everywhere" [34, 35].

Depending upon the social, economic and political conditions of a nation, the adoption of free-market and neoliberalism can have varied affects and consequences. Neoliberal values and principles like, survivor of the fittest philosophy has taken hold in all sectors including academic, research and education. In academics and research the 'publish or perish' philosophy prevails as a result of which hundreds of researches are being done every year in Nepal. Reification of research has led to research being done for fulfilling objectives leading to personal gain. Research is done to know about a particular condition that we do not know much about by using methods that are scientifically based. But how do we know what needs research? And what are the reasons for doing a research? Even before identifying the research topic, subject or object they are cognitive processes that influences us to decide on a particular research topic, research questions and the research hypothesis.
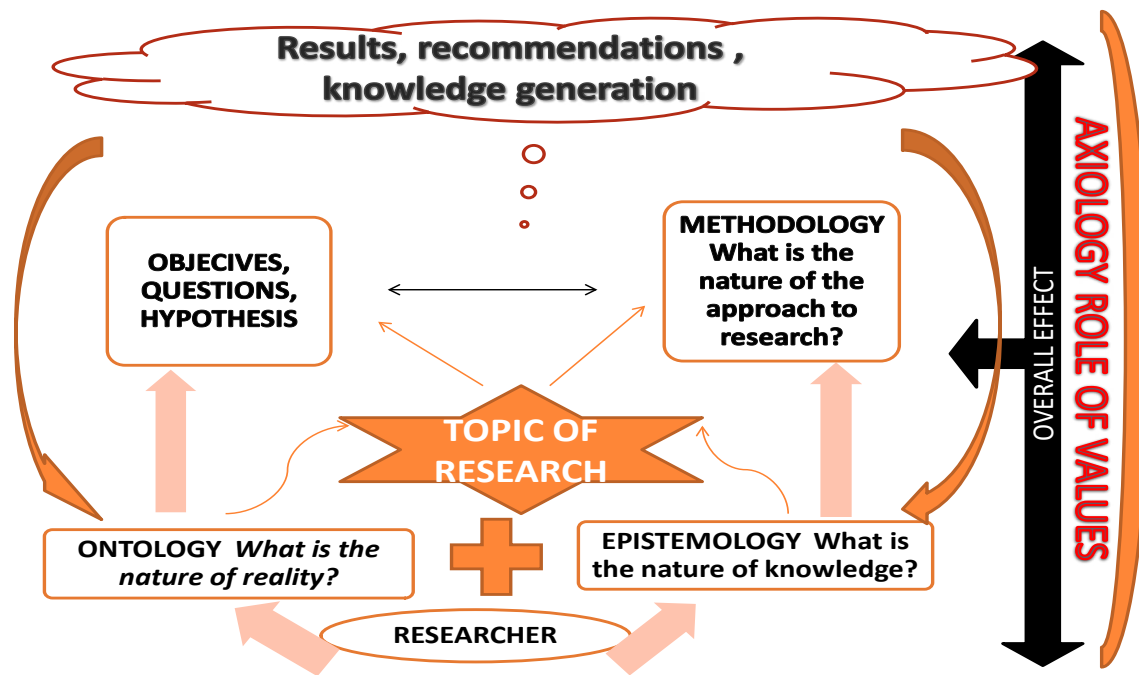
Figure 1: Research Process

In figure 1 the research process shows, the researcher at one end of the process and the results, recommendations and the knowledge generation that the research provides at the other end. In between these two, lay the other determining factors that affect the research output. The researcher is at the bottom as shown in the figure 1. Varied range of classifications have been done on the different factors that affect and guide our research at different stages such as, ontology(metaphysics), axiology, epistemology in totality our philosophy or paradigm. Though ontology and epistemology have been shown separately, claims have been made that these cannot be considered separable as axiology, epistemology and ontology co-evolve [36]. Theoretically the research process flows within the framework of research process as shown in figure 1. The sections highlighted in bold are the most visible outcomes of research. The philosophical aspects of research are usually invisible (ontological epistemological and axiological conditions). The focus of this article is on factors that guide us to choose a particular methodology and through which results are generated, findings are made and recommendations done.

Since the neoliberal environment condition our ideas, it is imperative that neoliberalism and its ideology, its assumptions and its processes be briefly discussed. The central presuppositions of neoliberalism include the rational self-interested individual, free market economics, a commitment to laissez-faire and a commitment to free trade [37]. Neoliberalism has shaped our cognition and it espouses neoliberal ideologies that emphasize individual-level decision making about economics and healthcare [38]. Neoliberal

view and practise has directly implicated in shaping the way health is promoted and thoughts are shaped [39, 40]. The neoliberal ontological project supposes homo economicus as principal model for individual behaviour which occurs from subject's economic rationality functioning in a world of perfect information and inert notions of equilibrium [41]. Neoliberalism touches all aspects of life including research.

Neoliberalism and its 'regime of truth' values characteristic features like individualisation, marketisation, financialisation, commoditisation, commodification, commercialisation, privatisation, accumulation, dispossession, adaptation, freedom, competition, monetisation, disimagination, melioration and de-democratization [42-54]. Humans being rational, independent, entrepreneurial, profit seeking and opportunity maximising humans will thrive competitively in a free market where the "invisible hands of the market" will take care of it all. It has been seen as a "hard-wired reality", a doctrine, an ideology which sees institutions adapting to variegated strands of capitalism [55].

Under neo-liberal influence research is predominantly positivist by nature and the recommendations, findings; interventions are predominantly individualist in nature [46, 56]. This knowledge of interventions stems from the ontological and epistemological assumptions one has and under neoliberalism it has been predominantly guided by, "a positivist ontology which suggests that all things exist in some sort of objective universe and this includes human beings" [57]. A positivist ontological approach, "pre-

sumes the existence of a ''real,'' apprehendable reality driven by immutable natural laws and mechanisms and that researchers are capable of studying objects without influencing them or being influenced by them" [58]. "Positivism relies on a reductionist view in its search for universal mechanistic rules that are not contextually bounded and seeks to verify hypotheses" [58]. Positivists view the individual as an essentially biophysiological and neurophysiological system, a reductionist view [59]. An offshoot of the positivist school of thought is methodological individualism (MI) which, "emphasises; homo economicus, based on assumptions of individuality, rationality, self-interest; and the doctrine of spontaneous order" [60]. Methodological individualism has been the "central monistic-ideological stand of existing economic theory, from which individual economic policies fastidiously acquire neoliberal basis" [61].

The combination of methodological individualism and positivism has been incorporated in epidemiology, the discipline most actively involved in the study of health problems [62]. Claims against mainstream/traditional epidemiology being "too dull to analyse the complexities of today's health problems was made in 1994". The Leeds declaration "emphasized the need to refocus upstream and to use research methods that are appropriate to the level at which intervention will take place" [63]. Citing the Leeds declaration in 1994, "the Lancet editors concluded that common epidemiological research has always been based on simplistic notions of causality" [64]. "The Research Unit in Health and Behavioural Chance at Edinburgh University construed that mainstream epidemiology has little to offer in modernising public health, that its positivistic orientation highlights a key flaw in its recognition of the social dynamics of health and disease, therefore weakening its potential to achieve transformation in public health" [65].

Most theoretical debates about the pros and cons of public health approaches are confined to the methodological scientific level. "Philosophical foundations such as fundamental ontological notions are seldom part of public health debates, but these are always inherent and lie behind the opinions and interpretation of diverse standpoints or traditions" [65]. "In empiricist science, dominant in contemporary epidemiology, exposure and risk assessment, the principal accepted philosophical approach is that of the positivist paradigm —unbiased examination; the separation of 'facts' from "values"; and the stress on verification to build up universal laws" [66].

The combined empirical experiences of the authors gained in day to day academic activities such as classroom interactions, seminars and research activities have also considerably prompted us to explore research philosophy in the field of health. Experiences such as when teaching public health and community medicine at the post-graduate level in the first semester when asked what causes an individual to have ischemic heart disease or any other diseases that have been historically linked to social, economic and environmental conditions? The answers received comply with the dominant paradigm of proliferating blame the victim 'life-style' theories which emphasize individual's responsibility to choose so called healthy life-styles and to cope better with stress, illiteracy, ignorance, superstition and other individual attributes. The principal causes of ill-health are situated at the micro level. The lack of historically informed analysis is absent and this lacuna manifests itself when doing health research.

Methodological Approach
Inspired by an ancient folklore originating in China and India (kupamanduka – in Sanskrit it means, 'well frog') about a 'frog in the well', this article attempts to conceptualise an epistemic well [67, 68]. The frog from the well does have a 'world view' but it is a world view confined to the stale water of the well and the frog knows nothing else outside the well. Similarly, the inhabitants (in this case an epistemic community) of an epistemic well also have a world view but this world view too is limited. The inhabitants of the well are conditioned by seeing only what can be seen from within the depths of the well. The concept of epistemic well has been influenced by concepts such as epistemic obstacles, epistemic violence, epistemic dependence, epistemic racism, epistemic pollution, epistemic dominance, epistemic ignorance and epistemic injustice [69-76].

The methodological approach to explore the philosophical foundations of health research and to conceptualise the epistemic well largely rests on critical reflexivity and an auto-ethnographic approach. The first step in the methodological process was to identify the characteristics that have been associated with health research under neoliberalism. Neoliberalism touches all aspects of life and research is no exception. Under neoliberalism, the dominant philosophy in general has been characterized as detached, decontextualized, depoliticized, dehistoricized, dissocialized/desocialized, deproblematized, reductionist/individualist, instrumentalization, separation, marketisation, positivist and objectivist [77-88]. These dozen features identified in the study can be said to make an imaginary well, which the authors try to conceptualise as epistemic well of research (see figure 2).
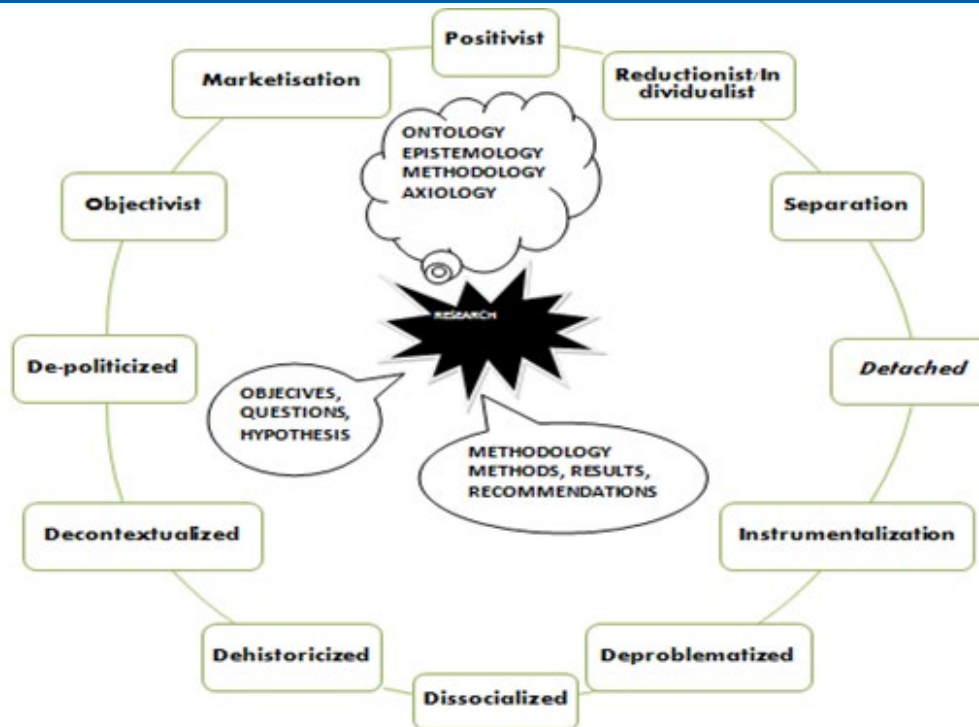
Figure 2: Epistemic Well

The epistemic well a product of neoliberalism can exist in any discipline. The dozen features of the epistemic well when viewing health does not question the social, economic and political structures; it takes them as given and deals with health issues from within these pre-existing structures. The epistemic well is not absolute in nature and not all researches will display all the twelve characteristics of the epistemic well. Some of the characteristics of the epistemic well like positivism as a trait of a research may not mean that a research is influenced by the epistemic well. The epistemic community that dwells in the epistemic well produces the researches. The epistemic well exists but due to its invisibility and the processes through which it exists, makes discerning researches influenced by the epistemic well a reflexive exercise. The researches that are affected by the epistemic well can produce results and recommendations that may serve no purpose, other than some instrumentalist purpose benefitting the self. The epistemic well of research is not absolute and is not meant to provide quantification data. The epistemic well is a reflexive tool that can be used to evaluate a research especially for a nation like Nepal. The research funds or the benefits that ensues a researcher are important criteria for research. When thinking of a research topic, the primary determining factor becomes the amount of fund available, the gaze of a native researcher can overlook various conditions and processes.

From the depths of the epistemic well when researches are done, health issues are assumed to be self-evident problems [89]. The process of naturalisation of socially produced risk, (re)production and normalisation of social divisions, neutralization of negative

health impacts shapes researches influenced by neoliberalism [19, 90, 91]. "Wayne Brekhus referred to this as the process of 'unmarking' problems so that what was marked as clear and evident becomes virtually unnoticed and, by virtue of that, 'unremarkable'" [92]. "The prevailing dominant discourse in the health profession is biomedical, micro level, individualized and depoliticized and this tradition treats health as the absence of illness or disease in individuals and pursues to improve quantifiable aspects of their lives through the lessening of risk factors via indicators of morbidity and mortality" [69]. Those espousing this world view typically accept that work against disease is empirically desirable hence necessitating no additional rationalization: the epidemiology (the evidence) is normally believed to "speak for itself" [93, 94].

In order to explore the philosophical foundations that guide the philosophical foundations of health research of native researches an analysis of the health researches on noncommunicable diseases presented during the NHRC conference in 2016 was conducted. The book of abstracts for the year 2016 was available from the NHRC website for public use. In total twenty-two researches were presented under the theme of NCD in the conference. Amongst these two were excluded one was on a clinical study of Maxillary Anterior Teeth and the other was on gender-based study of pattern reversal visual evoked potential.

Based on pragmatism we hold that the most important determinant of the research philosophy adopted are the research questions which also guide the other aspects of the research [95]. The final

and visible product of any research are the findings, results and recommendations which are shaped by the methodologies and methods adopted, but behind these lie the usually invisible part which are the 'ontological nature of social reality', the epistemological nature and understanding of knowledge and the axiological position of the researcher [96]. A research question or a hypothesis, (hypothesis serves as an extension of the research question) can be looked at from different angles and using different methods to provide different types of answers [58]. Research methods are linked through methodology and epistemology, to an ontological position [97]. It is impossible to engage in any form of research without committing (often implicitly) to ontological and epistemological positions. Researchers' differing ontological and epistemological positions often lead to different research approaches towards the same phenomenon [98-99].

The selected twenty researches were analysed of their a) research objectives, aims or goals b) methodology and methods used and c) conclusions, discussions and recommendations made (see figure 3). Each research was approached with the following questions. What are the stated objectives, justification, rational, aim or purpose of the research?
- What or who are the subjects of study of the research?
- What are the methodologies and methods followed in the research?
- What type of data does the methodology aim to generate?
- What are the findings of the research?
- What are the recommendations of the research?

After obtaining the answers to the above-mentioned questions these components were then subjected to questions philosophical in nature. These questions were framed by keeping in mind the different stages of research. Since assumptions are inherently present in any research here too the primary question asked was, what are the assumptions in the research?
1. "What are the ontological assumptions? What is the nature and constitution of objects in the external world? What is the form and nature of reality and, therefore, what is there that can be known about it"? [100].
2. "What are the epistemological assumptions? How can we as researchers gain knowledge about the external world? What is the nature of the relationship between the knower or would-be knower and what can be known"? [100].
3. "What are the methodological assumptions? How research should or ought to proceed given the nature of the issue it seeks to address? How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known"? [100].
4. What are the axiological assumptions? How has ethics been maintained and what are the values of the research? "Whether research should be "neutral" or valued-oriented and pragmatic/utilitarian, about the utility and application of the produced knowledge"? [100, 101].

The characteristics of the epistemic well can affect a research at different levels. The research could be giving us the true nature of the problem in quantitative measure but the understanding of the problems could be decontextualized, deproblematized and detached. For example, if a research was done to study the breast-feeding practices of mothers with children up to six months in an industrial/manufacturing region. I do house hold visits and collect data on breast feeding practices and I conclude that breast feeding is low since mothers are ignorant and need to be motivated through health literacy and health promotion programs. Also, I suggest proper counselling to the mothers about the importance of breast feeding. My methods of data collection were semi-structured questionnaire and interviews. I visit the houses on a Saturday since it is a holiday and hence informant would be at home. Based on the recommendations of the study an intensive promotional program was developed and mothers were given health literacy awareness, awareness programs in local radio and posters and pictures in schools to increase awareness among the children who in turn would diffuse the message in the family. Now another researcher comes to the same study site and studies the same issues on breast feeding among the same sample population. The researcher goes to the site and does an ethnographic study and comes up with the conclusion that women giving birth only get 40 days of leave with salary from the factories. After forty days the mothers have to work 9 hours shift and if they start taking leave after the allotted 40 days of leave their daily wage or salary will be subtracted. Moreover, if she does not join the work after a maximum of two months their job contract will be terminated and she will be replaced. The researcher finds that mothers know the importance of breast feeding for the first six months but she is faced with a choice, the choice of losing a job in a region with high unemployment. The researcher sees the solution in having a collaborative effort at solving the problem by bringing in the factory management, local and national government, the mothers and health workers.

Methodological framework

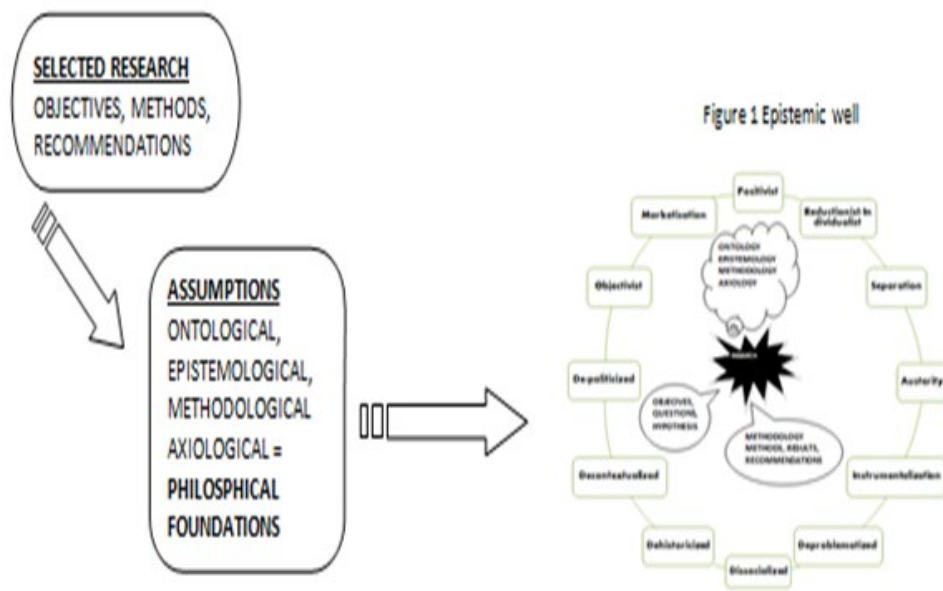| Non communicab	Maternal Neonatal	Sexual reproductive	Environmental Occupational	Food Nutrition	Emerging Reemerging Diseases	Health Systems	Universal Health Coverage	Biomedical Research
STEP 1	Non communicable Diseases							
STEP 2	a) Research objectives b) Methodology methods c) Conclusions discussions recommendations		What are the stated objectives, justification, rational, aim or purpose? What or who are the studied subjects? What are the methodologies and methods followed? What type of data does the methodology aim to generate? What are the findings? What are the recommendations?					
STEP 3	What are the ontological assumptions, epistemological assumptions, methodological assumptions, in the research? Does the research portray characters reminiscent of neoliberal research?							

Second National Summit of Health and Population Scientists in Nepal — Total number of researches 165

Figure 3: Methodological Process and Framework

In figure 3 the methodological process has been shown. The epistemic well informs the researcher as a result of which the research methods, findings and recommendations display certain assumptions on which the research is built. These assumptions of different nature that exist at different levels when taken together can be identified as the philosophical foundations of the researcher. The philosophical foundations of a researcher when shaped by components of the epistemic well can produce research that is detached from the reality it studies. For instance, how useful is a research if a researcher conducts a research on effects of teaching hand washing practices among school going children, how valid will the research objectives, research questions and the findings be if the researcher were to discover that the school has no regular and constant water supply.

Findings
The findings of the study are discussed in table one. The first column mentions about the research title, objectives and rationales for the selected research presentations. The second column mentions about the research methodologies, methods, recommendations and conclusions of the selected researches. The third column contains arguments made by the author about the selected researches. The

author seeks to identify the assumptions inherent in the researches and also seeks to discern the traits of the epistemic well displayed by the researches. The comments have been informed by literature review and the ontological understanding possessed by the authors. Being a native the authors attempt to look at the researches not by detaching one's self but by incorporating the real lived empirical experiences of the authors.

Table 1: Table on Non-Communicable Diseases Researches and their Assumptions

Objectives, aims, goals	Methodology and methods Recommendations and conclusions	Assumptions inherent in the research and characteristic features of epistemic well displayed
1. Mothers knowledge, attitude, behaviour regarding diet physical activity of pre-school children	Cross-sectional study, interviewed all mothers having children aged 2 to 7 years, knowledge, attitude and behaviour responses. Poor correlation of mothers" knowledge and attitude with children's behaviour regarding diet and physical activity. Barriers, facilitators that affect mothers" practices towards their children be explored and addressed.	Historically from the 1916 onwards the understanding that ignorance of the mother was the primary cause for poor health conditions of the children was accepted as a truism [33]. This understanding has continued strongly and under a neoliberal system when commodification is the norm, "women are often assumed to have no specific health needs outside of their mothering roles, an assumption borne out by most of the existing health programmes that target women only during their reproductive years" [102]. The vicious cycle of ill health, ignorance, and poverty starts in the womb [103]. The mother's apparent lack of interest can be appreciated when one realizes that parents in highly impoverished families have varied and tremendous burdens to bear" [104]. The ontological assumption that ignorance of mother's knowledge attitude is barrier regarding children's eating behaviour. The epistemological assumption that barriers can be studied epidemiologically and facilitating factors can be explored at the individual level. Methodological assumption that the process of study and data collection at the individual level will provide a true picture. Atomistic nature dealing at the individual behavioural level. "Cross-sectional studies do not resolve problems relating to health care systems or the results of quantitative research methods are often not implemented in clinical practice, particularly using cross sectional studies in examining attitudes, beliefs, and values and quasi- experimental designs" [105].

| 2. Prevalence of depression, identify factors associated with depression among inmates | Cross-sectional study, depression assessed using centre for epidemiologic studies depression scale CESD). High rate of depression, need medical/psychiatric care. | The epistemological and "ontological problems in defining the concept mental disorder and in delineating clinical entities are conspicuous, and many clinicians and psychotherapists find the categories and diagnostic criteria of both the DSM and the WHO's ICD-10 in many ways inconvenient or trivial when applied to individual cases in clinical practice" [106]. "The general way in which the questions are asked raises the suspicion that even people who would not fall into the category of "depression" if diagnosed by a professional psychiatrist might be pushed to believe that they are depressed and in need of medicines" [107]. The murky relationship between the universalistic biomedical perspective of psychiatric problems and a locally informed one Has been discussed by Harper. Much psychiatric research in Nepal is a direct outgrowth of the former, wherein statistics that suggest how prevalent conditions like "depression," etc. are generated. Such research not only contributes to the Westernization of psychiatric problems, but in Nepal also perpetuates structural inequality by the very categories used in statistical studies [108]. The "pharmaceutical industry is increasingly employing strategies of direct- to-consumer marketing, aiming to create a popular recognition of depressive symptoms, to "grow the market", and to foster a demand for specific medications" [107]. The increasing trend of the use of pharmaceutical products for various mental conditions has termed this era as "the antidepressant era" [109]. Assumptions that a questionnaire will give the correct answers. Prisoners will give the correct answers irrespective of their present mood condition. "Subjectifying nature" of the questionnaire has been criticized on many counts. "Interest in depression in the field of international health was intertwined with the emergence of a new generation of antidepressant drugs, the serotonin reuptake inhibitors (SSRI)" [107]. The pharmaceuticalization, medicalization and bio-medicalization, of everyday life conditions including mental health have been addressed [110, 111]. |

| 3. Determinants of health related quality of life in COPD chronic obstructive pulmonary disease | Hospital based survey Older age, financial difficulties, smoking status, increasing dyspnea score, number of exacerbations, self-perceived declining health status, and perceived impact on working capacity. | The "concepts of perceived health status, quality of life and health-related quality of life can be complex to analyse as they might be mediated by several interrelated variables, including self-related constructs (e.g. self-efficacy, self-esteem, perceived control over life) and subjective evaluations could be influenced, in theory, by cognitive mechanisms (e.g. expectations of life, level of optimism or pessimism, social and cultural values, aspirations, standards for social comparisons of one's circumstances in life)" [112]. Without taking into consideration "political unrest, environmental disaster, declining economic performance, the introduction of structural adjustment programmes, un-responsive governance, and weak public-health infrastructure changing population dynamics, the advent of HIV/AIDS, and the onset of globalisation". The HRQL is limited. "A universal questionnaire to elicit the relevant information for a number of conditions would need to be of enormous length" [112]. Assumes checklists and "HRQL (health related quality of life) instruments are enough to gather information. Controversy around validity of these measures; investigators concerned with the question of whether these systems are measuring what they intend to measure. Given an absence of a benchmark of health, determining criterion validity—comparing the results achieved to an accepted gold standard—is impossible" [113]. "HRQL measures placed a greater emphasis on issues such as measure responsiveness, sensitivity and reliability, paying less attention to generating overall models of disease distribution, severity, and mortality" [113]. |
| 4. Perceptions and beliefs of people living with type 2 diabetes | In-depth interview, individual interview with policy level people. Unhealthy life style is the main cause of diabetes, awareness program should be initiated, should be kept in the school level curriculum also. | The awareness program that it talks about is with an ontological understanding of the reality guided by the individualist, reductionist and de-politicized philosophy. Without taking into account the structure of neoliberalism and by naturalising the commodification and marketisation the school level curriculum based awareness program will focus on individual habits, morals and life-style. Assumption at an ontological level of the reality and the epistemological assumptions about the knowledge generated. Atomistic, individualistic and reductionist in nature. The lifestyle one acquires must be based on rational choices and if one gets diabetes it is because of the individual who makes wrong decisions. Public health influenced by the biomedical model has a tendency of victim blaming, which locates the cause and cure of disease as exclusively within the individual [114]. |

5. Factors associated with physical activities, experiences of elderly regarding functional activities	Cross sectional survey, individual interviews using structured pretested interview guideline, hermeneutical phenomenological approach, Gibson's qualitative analysis method. Functional limitation in basic and intermediate activities. National policy needs to consider the factors for enhancing functional activities, also promote role of the family members for elderly care.	Assumptions that government has full control and power along with willingness. The policies it implements such as removal of subsidies, cutbacks in social expenditures and austerity measures indicate a contradictory approach to welfarism. Ontological assumptions regarding functional activities. For example, a has to share a common toilet whereas B has a private bathroom and hence their functional needs are different. Epistemological assumptions seen when physical activities and functional activities are considered as knowledge that is desirable and needed.
6. Find the health literacy and knowledge of disease among the patients with chronic disease.	Cross sectional study was conducted, interviewed face to face, translated, pretested, validated European health literacy survey (HLS-EU-ASIA-Q)2 questionnaire. Respondents with sufficient health literacy knew significantly more about the disease than those with inadequate health literacy. Health literacy is independently associated with disease knowledge.	Health literacy or mass education strategies is an individualistic approach which views the "responsibility for reducing exposure to risk factors in individuals, and is emblematic of a medicalized framing of health problems" [111]. Assumptions that increased knowledge and health literacy will translate to better practise. The "upstream social determinants of health such as marketing of unhealthy foods to children and later drift downstream by relying on strategies to directly change the behaviour of individuals has been described as a lifestyle drift" promoted by the policy makers as reductionist in nature" [111]. The neoliberal philosophy where the invisible hands of the market will suffice to create a developed nation seems rather tempting but these activities have a lasting effect especially as NCD'S are often interconnected and require long term solutions [115].
7. Reliability and factor structure of perceived stress scale-14 (PSS-14) among Nepalese adolescents.	Cross-sectional and school-based survey was conducted in Myagdi district in Nepal in 2015. Reliable tool with caution to measure stress.	Assumptions that PSS-scale and questionnaires can be used for stress amongst adolescents. "Questionnaires are supposed to eliminate observer biases, to provide a routine method of investigation and analysis which presents the same stimuli to all respondents. Rather, at every stage, a host of assumptions and interpretations are made by everyone employed on a project, which are commonly unacknowledged and uninvestigated in the presentation of results" [116].
8. Prevalence of depression among survivors of female trafficking in shelter homes of Kathmandu valley	Clinical diagnosis according to ICD-10 classification of mental and behavioural disorders-diagnostic criteria. Hamilton rating scale for depression (HAM-D) was used to assess the severity of depression (mild, moderate and severe). Evidence on trafficked people's experiences of violence and of depression and other mental health problems is extremely limited. Requires a coordinated response by health care providers and other support services.	The thousand-fold increase in the prevalence of depression and it becoming a public health problem happened largely due to the development of psychiatric epidemiology since 1950" s [106]. The sale of psychotropic drugs is big business [117]. The current depression paradigm is the tendency to think of depression as well as other mood disorders as objects instead of as an experience with a specific context. Movement toward thing-like status makes mania and depression seems possible to identify, manipulate, and optimize through the technology of psychotropic drugs and through taxonomic apparatuses [106].

9. The prevalence of depression and their correlates and association of physical activity with physical activity among higher secondary students	Descriptive cross-sectional study was designed global physical activity questionnaire (GPAQ) for physical activity and beck depression inventory IBDI-IA) for depression along with some socio-demographic variables. Global physical activity questionnaire (GPAQ) for physical activity and beck depression inventory IBDI-IA) for depression along with some socio-demographic variables.	"Questionnaires in effect filter the social processes under study through a pre-defined "grid" of categories assumed to represent the range of possible alternative responses appropriate to the area of research. Fixed choice (yes/no) questions represent the extreme in this respect, but scaling techniques may be no less inappropriate. It is meaningless to produce measurements or qualifications of phenomena whose dynamics are not yet understood" [116]. Most studies of area effects on health are cross sectional; that is; measures of the place and of the residents' health are collected at roughly the same time. When one starts to think about socially and biologically plausible causal pathways by which place might influence health these cross-sectional designs often appear inappropriate [118]. In the attempts to make psychiatry more scientific the triumph of the styles of reasoning familiar from epidemiology and social medicine–statistical induction, probability calculus and risk estimation– has been much more crucial than the rise of psychopharmacology and neuropsychiatry. "It is nowadays almost impossible to present claims about mental health facts without supporting them by statistical analysis of data from epidemiological questionnaires or randomised clinical trials" [106].
10. To assess the utilization of health care services among the elderly	Quantitative descriptive-cross sectional study, using an interviewer administered semi-structured questionnaire Monthly family income, chronic disease, elderly on medication and self rated health are strongly associated with utilization of health care services by elderly people and suggests further interventions to improve the health care service utilization by elderly people.	This suggestion is based upon the idea that "individuals should have the opportunity to live to the same age as others—that there is a prima facie right to a minimum number of life-years". The limitations of conventional health care systems are obvious. The narrowly technological approach to health care serves to block the integrated utilization of health economic and other resources. In fact, highly professionalized and technological health services cannot be equitably distributed as it is neither possible nor desirable to have a hospital in every village. The task rather, is to attempt to change the composition of health services-away from hospitals and towards primary care-through their more equitable distribution and to make them part of overall economic and social development [119]. "Since access to such public provision is often heavily unequal across locations, and within communities, this gap constitutes a significant weakness, especially in the context of cross-sectional or inter-temporal comparative analysis. In many situations, even households that have the financial capacity might find it impossible to obtain adequate education and health services simply because those services are not available locally. The poverty-line approach implicitly assumes that money can buy health, education and other services at any time and in any place or that these are provided by the State" [120].

11. To explore the quitting attempts among adolescent smokers in Dharan municipality of eastern Nepal	Cross sectional study was conducted using pre-tested self-administered questionnaire adapted from global youth tobacco survey to assess current smokers and quitting attempts Relapse often occurs. Tobacco focused interventions to support abstinence are of potential value.	"Self-report surveys share certain limitations that are characteristic of the self-report method. The primary weaknesses of self-report surveys are a function of the adequacy of the sample and the accuracy of measurement. The issues bearing on the adequacy of a survey's sample are ensuring representative participation and receiving cooperation throughout the survey questionnaire. Measurement accuracy is an outcome of asking questions correctly and respondent candor and memory. Although it appears that respondents are generally truthful in reporting their experiences underreporting is a threat to validity for self-report studies [121]".
12. To find out the prevalence of hypertension along with other associated cardiovascular risk factors in a rural community of eastern Nepal	Cross sectional study, WHO step questionnaire used. Prevalence of hypertension in the rural setting was found to be as high as 38.6%. Effective intervention regarding prevention along with early diagnosis and treatment is necessary for control of increasing burden of hypertension.	The "focus on practitioner cultural competence is based on assumptions that: (a) mental health services and interventions can reduce health disparities; (b) that these interventions are more accessible, acceptable and effective when they are culturally adapted; and (c) that practitioners can acquire specific knowledge, attitudes and skills that will improve their delivery of effective culturally appropriate and responsive mental health services". There is modest evidence for each of these propositions. "Questionnaires rest on the assumption of a deficit model wherein laypeople are assumed to be lacking in scientific knowledge or literacy" [122]. "The issues of sampling, method of data collection (e.g. questionnaire, observation, and document analysis), and design of questions are all subsidiary to the matter of `What evidence do I need to collect?"
13. Factors affecting the medication taking behaviour of psychiatric patients: a preliminary study from central Nepal	Cross-sectional study semi-structured questionnaire. Medication missing behaviour is high in psychiatric disorders patients, significantly more in those with anxiety disorder and those who had never attended school, suggesting necessary intervention in these groups. To evaluate medication taking behaviour in future studies through more specific methods such as pill counting and biochemical analysis.	"Advantages claimed for questionnaires would rarely stand up to scrutiny. They are supposed to eliminate observer biases, to provide a routine method of investigation and analysis which presents the same stimuli to all respondents. Rather, at every stage, a host of assumptions and interpretations are made by everyone employed on a project, which are commonly unacknowledged and uninvestigated in the presentation of results" [116].
14. Effectiveness of an information booklet on knowledge regarding life style management among coronary heart disease patients in a cardiac centre, Kathmandu valley	Pre-experimental research design education intervention programme had significant role in increasing knowledge of life style management among CHD patients. It was effective and useful for their day to day life style management.	"Underlying all of these models is the assumption that individuals are goal-driven, strategists who weight choices according to their own ends (i.e. They are cost-benefit decision-makers)" [123]. Assumption that information leads to change in behaviour. "Public health intervention that adopts the biomedical model fails to address issues of wider social injustices that are responsible for health related vulnerability and risk" [124].

15. A case- control study on behavioural risk factors of client with ischemic heart disease of selected cardiac hospitals of Kathmandu district	Hospital based pair match case-control design Reduce the burden of complex IHD treatment minimizing exposure to the identified risk factors is essential.	Ontological assumption of strong "pre-existing reality" in experiments, require high extend of control over the environment by which investigator directly, precisely and systematically manipulates the reality [125]. This can only occur in laboratory conditions and a pure experimental design cannot manipulate behaviour in real life context'' [125].
16. Adherence to recommended management among hypertensive people in eastern Nepal	Cross-sectional study. Adherence was measured with Morisky medication adherence scale (MMAS–8) and patients" health beliefs were measured with the constructs of the health belief model. Adherence to antihypertensive medication seems to be inadequate. Therefore, only prescribing medication is not enough in managing hypertension.	"For Roland Kuhn, vital depression was a specific disease for which imipramine was a cure, whereas Nathan Kline, the other pioneer of antidepressant medication, thought that all kinds of depressive states had a biological origin and that medication was therefore suitable for depression in general. The current standard of depression treatment contains a preventive rationale implicitly promoting medication even in less severe depressions" [106]. Antidepressants have been also termed as "psychic energisers" and these block buster drugs have given rise to a new era, the antidepressant era [126, 109]. When it comes to medical markets, under neoliberalism it exhibits a "theoretical anomaly" since medicines have been traditionally and historically different than other consumer goods [127].
17. To assess the relationship between illness perception and depression among patients with diabetes	Analytical cross-sectional study, illness perception Questionnaire-revised (IPQ-R) and beck depression inventory-ii (BDI-II). High prevalence of depressive symptoms among diabetic patients in Kathmandu Nepal need comprehensive diabetes education program for changing poor illness perception, which ultimately helps to prevent development of depressive.	"Questionnaires rest on the assumption of a deficit model wherein laypeople are assumed to be lacking in scientific knowledge or literacy" [122]. "The issues of sampling, method of data collection (e.g. questionnaire, observation, and document analysis), and design of questions are all subsidiary to the matter of `What eviden11ce do I need to collect?" Questionnaire responses have a problematic relationship to actual behaviour; they are better treated as evidence of attitudes or what people think they ought to say rather than as evidence of what they do [116]. Questionnaires reflect the application of the biomedical model to public health, with questions that deal primarily with genetic predispositions and behavioural practices: family history of CVD, hypertension, and diabetes; patterns of smoking and alcohol consumption; physical activity levels (including work and leisure); dietary patterns and history of weight gain; and the presence of symptoms of CVD. Questionnaire must be designed to collect data that meet the statistical assumptions of the quantitative techniques to be used [128].

18. To determine the prevalence of CAD risk factors among a target female population in Nepal	Semi-structured interview schedule was followed for the data collection. Diabetes, drinking alcohol, LDL-C and generalized obesity were found as the significant predictors of cad need of appropriate control strategies and measures among women.	Yach and Beaglehole say that globalization has contributed to the rise in chronic diseases and blame major transnational corporations and the global communications media for the marketing of tobacco, alcohol, sugary and fatty foods in nearly all parts of the world [129]. "Emphasising such an imperative for behaviour choice, however, obscures the circumstances in which individuals make that choice or indeed have their choices constrained". The "pricing, availability, marketing and perceptions of costs and benefits strongly influence choice of unhealthy product consumption". "Dietary risk factors and physical inactivity are only partially determined by individual preferences and are more so "substantially influenced by the manufacturing and marketing practices of the food industry and by the built and social environments that permit or impede physical activity". Adopting the values of a medicalized approach immediacy, efficiency and control the use of "quick fix" or "magic bullet" strategies designed to influence individual choices rather than government policies or the activities of manufacturers is tempting in the short term, but will not have a lasting impact, especially as NCDs are often interconnected and require long-term solutions" [115]. Focus is on the upper, superficial, echelons of the process and is rarely of the process itself. It stands in contrast to the view dubbed "holistic" or "physiological" that stresses individuals and their adaptation - physical, psychological, social - to their environment [126].
19. To assess the stages, self- efficacy, motivation and decision making of smoking cessation among adolescents in selected schools of Pokhara	Cross-sectional descriptive design using quantitative approach, self–administered semi-structured questionnaire Smokers were not prepared to quit because they were less motivated, not wanting to change was found associated with lower self- efficacy.	"Public health workers are determined to focus on problems that interest them as researchers and not on the problems of concern to individuals" [130]. "Much of public health continues to treat behaviours such as diet, smoking, violence, drug use, and sex work as if they were voluntary decisions, without regard to social constraints, inducements, or pressures" [131].
20. To identify the prevalence and the risk factors associated with elder mistreatment in urban Nepal.	Descriptive cross-sectional study, information was collected using an interviewer administered Semi-structured questionnaire. Older adults in urban Nepal self-reported a higher rate of mistreatment. Awareness, intervention and prevention strategies targeting elder population and their family is required to address such mistreatment.	"Elders generally felt that improved health should "start at home", partnerships at the community and systems levels were often referred to as more likely solutions than individual and interpersonal ones" [132]. The part by part solution to identify risk factors for anything pathological has been the trend followed by researchers. Mistreatment occurs due to lack of awareness and prevention, intervention and awareness strategies are sought for solving the problem. Mistreatment for one could be not getting to see a favourite television program and for another could be not having money for medicines. More than lack of awareness, elder mistreatment is more about values.

Conclusion

The neo-liberal research, researcher, universities, organisations are all in sync with one another and this creates a culture of doing research projects one after another. The neo-liberal researcher is bound by practices set by councils, universities, committees and so on. Since the promotion criteria of a faculty depends mainly on the number of research publications in peer review journals, the number of research projects completed, number of conferences attended and so on, the pressure of doing research and publishing them is omnipresent. Hence for example "A" an assistant professor joins a university after finishing MD or PhD and in three years' time "A" can become an associate professor with an increase in pay and other facilities such as conference grants. But they are some basic conditions that "A" will have to fulfil in order to get promoted such as "A" needs three research publications in peer reviewed indexed journals, received one project grant and completion of one project or study. If "A" has fulfilled this in paper "A" gets promoted. This process continues till "A" becomes a professor. The other indispensible function that "A" does is teaches students a course in the university. And if "A" since as a physician "A" also caters to the patients. Now what is perplexing is the role of a teacher and a surgeon are not given any significant weight. "A" may be an excellent teacher and surgeon but without the minimum number of research publications "A" cannot be promoted. So, despite the busy schedule "A" has, starts doing a questionnaire survey among visiting OPD patients and generates the hypotheses that, "patients coming to the hospital in red colour cars are more prone to diabetes than patients coming in black colour cars". So "A" selects the sample population, collects the data, generates the data and publishes the data in a peer review journal. Now "A" has to do several researches in this case let us keep it to three for every stage of promotion and with three years' intervals. To be a professor, one begins as assistant professor then associate, additional and finally a professor.

The mantra of faculty promotion is influenced by the practise of, "publish or perish" where for every level of promotion one needs to fulfil the required number of publications. The pressure to climb up the hierarchy is desirable among all of us including academicians, researchers or any other profession. So, the combination of this desire to climb up and along with the criteria set by universities the onus falls on the individual to publish. Under this system the evaluation is not affected by the views of those who are at the receiving end such as the community. To clarify my point here I again bring in "A" who qualifies for promotion in three years' time but without the minimum number of publications i.e. three "A" will not be promoted. To publish is a time-consuming process and after teaching activities and clinical duties "A" has very less time. Also let me mention that "A" values the role of a teacher and spends time on preparing classes which the students appreciate since they learn a lot. The patients that visit "A" are also very satisfied. But soon "A" realises that it is research publications that counts and not the everyday dealings with students and patients. So "A" starts valuing research publications more and within a few years, the new students and the new patients that are affected by "A" have an opinion different than before. The students are not happy with the classes and neither is the patient that "A" deal's with. For "A" satisfying criteria's set by the university are more important, like number of articles published and number of projects completed. As these are decisive factors for promotion and since no or a minimal value is given to opinions of patients and students, these processes begin to be devalued. Citing bias as a factor if patients and students' evaluations are given credence, the notion that if there are given any weight it could become a bargaining tool. Publications are tangible products which can be seen and quantified whereas feelings are not.

Understanding the processes behind a phenomenon and identifying the causal factors and the actors are both important. The article is a call to the native epistemic communities to climb out of the epistemic well and to develop a critical understanding. If one were to walk on the road and slip on a banana skin and fall, and the recommendation and advice received were, 'get your eye checked', and 'see where you walk', how valid would be the suggestion?

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