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# Assessment of Medical and Health Institutions Registered as Research Centres in Nepal

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## ABSTRACT

**Background:** There were several reports in the various mass media regarding misuse of the word "research" by various organization and it has been argued that putting the word "Research" in any agency's name made easier to get the various medical from abroad without paying or paying minimum or discounted government tax than others. The objectives of the study was to find out the status Medical and Health institutions designated as Research Centresin Nepal.

**Methods:** A cross sectional prospective study was carried in medical and health institutions of Nepal. Data regarding the registration of institutions/organizations having the word "research" in its name were collected from concerned registered organizations. Formative evaluation method was adopted in which information were added continuously, organized systematically and analysed periodically during the evaluation period.

**Results:** There were altogether 370 health related research centers registered in MoI and CDO at the district level till 31 December 2010. These research centers were located in 33 districts of Nepal. Among these there were 65 (82%) health facilities and 305 (18%) NGOs designated as research centers. The region wise the range of number of research centers among five regions was 4 to 283. The highest number of research centers level. The highest number of research centers was found in Kathmandu district. Out of 370 research centers, 85 research centers (72 from among health facility related research centers and 13 from among NGO related research centers) were selected randomly for evaluation purpose, which represented 23 percent of sample selection. The sample selection was not less than 20 percent in each category of research centers. One fifth research centers were found to conduct health related research progam. Among which majority (more than 50%) of NGO related research centers was found to conduct health research. There were few (14%) health facility related research centers that actually conducted health related research program.

The study also shows that majority 73 (86%) of the research centers didn't start the research yet.

**Conclusions:** Forty percent of the research centers in Nepal didn't know the actual reason for putting the word "research" into their signboard. A regulation has to be made to safeguard and maintain the integrity of research in Nepal.

**Keywords:** assessment, health, insitutions, medical registered, research centres, Nepal.

## INTRODUCTION

Nepal Health Research Council (NHRC) Act in 1991 has given more emphasis to regulate various kinds of health research activities in the country to maintain ethics in researches.[1] National Ethical Guideline for Health Research published in 2001 stressed some direction towards conducting health research with application of ethical principles, but most of the organizations/ individuals that are conducting health research in

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Nepal are not taking informed consent from the study participants, thus violating the rights and safety of such participants. Majority of organizations/individuals are not interested to submit their research proposal for ethical approval from any recognized review boards/ committees.[2] There were several reports in the various mass media regarding misuse of the word "research" by various organization and it has been argued that putting the word "Research" in any agency's name made easier to get the various things (equipments, medical supplies etc.) from abroad without paying or paying minimum or discounted government tax than others.[3]

The major objectives of the study were to find out the existing number, distribution of Medical and Health institutions (Hospitals, Polyclinics, NGOs etc.) designated as Research Centres till to assess these research centres in terms of its research related characteristics and to find out the reasons for putting the word "research" into their signboard.

## METHODS

A cross sectional prospective study was carried out form 15 July 2005 to 31 December 2010. Ethical approval was taken for Ethical Review Board at NHRC. Data regarding the registration of institutions/organizations having the word "research" in its name were collected from Ministry of Industry (MoI) as well as Chief District Office (CDO) at the district level. Formative evaluation method was adopted in which information were added continuously, organized systematically and analysed periodically during the evaluation period. All the research based program documents including progress reports, baseline study reports available during the study period were reviewed. Qualitative approach was used to examine the qualities of a specific research activities/programs carried out by the selected research centres.All the registered research centers were included in the sampling frame, from which 23 percent research centers were selected for the evaluation study by simple random sampling (SRS) method. For data collection trained manpower were used to ensure quality data and effective interview technique. Pretested semi-structured questionnaire were used for the research. After obtaining the information, researcher had transferred all the information to Nepal Health Research Council, Kathmandu for data processing. For data analysis Statistical package for social sciences version 11 (SPSS-18) were used.

## RESULTS

There were altogether 370 health related research centers registered in MoI and CDO at the district level till 31 December 2010.These research centers were located in 33 districts of Nepal. Among these there were 65 (82%) health facilities and 305 (18%) NGOs designated as research centers. The region wise the range of number of research centers among five regions was 4 to 283 (Figure 1). The highest number of research centers was found in Central Development Region (CDR) and lowest in Far-Western Development Region (FWDR). The distribution of health facility and NGOs related research centers by regions (Table 1).

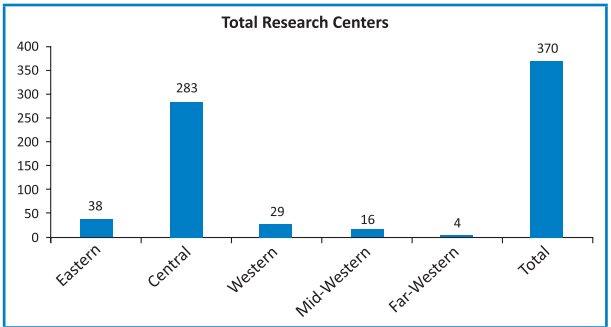


**Figure 1. Distribution of Total Research Centers in Five Development Regions of Nepal.**

**Table 1. Distribution of Total Research Centers in Five Development Regions of Nepal.**

| Regions | Health Facility related Research Center | | NGO related Research Center | | Total Research Center | |
|---|---|---|---|---|---|---|
| | n = 305 | % | n = 65 | % | N = 370 | % |
| Eastern | 37 | 12 | 1 | 1.5 | 38 | 10 |
| Central | 223 | 73 | 60 | 92 | 283 | 76 |
| Western | 29 | 10 | 3 | 5 | 32 | 9 |
| Mid-Western | 12 | 4 | 1 | 1.5 | 13 | 4 |
| Far-Western | 4 | 1 | 0 | 0 | 4 | 1 |
| Total | 305 | | 65 | | 370 | |

The range of number of research centers among 33 districts was one to 196. The highest number of research centers was found in Kathmandu district. Out of 370 research centers, 85 research centers (72 from among health facility related research centers and 13 from among NGO related research centers) were selected randomly for evaluation purpose, which represented 23 percent of sample selection. The sample selection was not less than 20 percent in each category of research centers (Table 1).

One fifth research centers were found to conduct health related research progam. Among which majority (more than 50%) of NGO related research centers was found to conduct health research. There were few (14%) health facility related research centers that actually conducted

health related research program. There were none of the research centers carried out any health related research program in the far-western region (Table 2).

Column percentage to indicate the distribution of involvement of research program characteristics by the type of research centres

It was quite interesting to observe that there were not much difference in the distribution of percentages of having pipelined research project by all four regions except far-western region where none of the research centers planned any research project (Table 3).The study also shows that majority 73 (86%) of the research centers didn't start the research yet (Table 4).

Column percentage to indicate the distribution of research centre's involvement in research program characteristics by development regions.

According to development region, only central region's research centers (6%) were taking ethical permission from an authentic review board or committees. None of other regions research centers were taking such permission. However, one among 16 and one among 11 research centers located in eastern and western regions repectively were found to obtaining informed consent while carrying out their research (Table 5).

**Table 2. Distribution of involvement of research program characteristics by the type of research centres.**

| Involvement in Research program Characteristics | | Health Facility related Research centers n=72 | | NGO related Research centers n=13 | | Total N=85 | |
|---|---|---|---|---|---|---|---|
| | | N | %a | N | %a | N | %a |
| Conduction of any health related Research Program till date | Yes | 10 | 14 | 7 | 54 | 17 | 20 |
| | No | 62 | 86 | 6 | 46 | 68 | 80 |
| Pipelined any research Project | Yes | 5 | 7 | 5 | 38 | 10 | 12 |
| | No | 55 | 76 | 6 | 46 | 61 | 72 |
| | Not sure | 12 | 17 | 2 | 15 | 14 | 16 |
| Ever communicate about any research project | Yes | 6 | 8 | 5 | 38 | 11 | 13 |
| | No | 66 | 92 | 8 | 62 | 74 | 87 |
| Having Research Committee | Yes | 6 | 8 | 5 | 38 | 11 | 13 |
| | No | 66 | 92 | 8 | 62 | 74 | 87 |
| involvement in any other research programs conducted by other organizatio | Yes | 2 | 3 | 4 | 31 | 6 | 7 |
| | No | 70 | 97 | 9 | 69 | 79 | 93 |

**Table 3. Distribution of research centre's involvement in research program characteristics by development regions.**

| Involvement in Research program Characteristics | | Eastern n=16 | | Central n=46 | | Western n=11 | | Mid western n=10 | | Far-Western n=2 | | Total N=85 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | n | %a | N | %a | n | %a | n | %a | n | % | N | % |
| Conduction of any health related Research Program till date? | Yes | 2 | 12.5 | 10 | 22 | 2 | 18 | 3 | 30 | 0 | 0 | 17 | 20 |
| | No | 14 | 87.5 | 36 | 78 | 9 | 82 | 7 | 70 | 2 | 100 | 68 | 80 |
| Pipeline any Research Project | Yes | 2 | 12.5 | 6 | 13 | 1 | 9 | 1 | 10 | 0 | 0 | 10 | 12 |
| | No | 14 | 87.5 | 30 | 65 | 6 | 54 | 9 | 90 | 2 | 100 | 61 | 72 |
| | Not sure | 0 | 0 | 10 | 22 | 4 | 36 | 0 | 0 | 0 | 0 | 14 | 16 |
| Ever Commun-icate about any research project? | Yes | 0 | 0 | 11 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 13 |
| | No | 16 | 100 | 35 | 76 | 11 | 100 | 10 | 100 | 2 | 100 | 74 | 87 |
| Have Research Committee? | Yes | 1 | 6 | 7 | 15 | 2 | 18 | 1 | 10 | 0 | 0 | 11 | 13 |
| | No | 15 | 94 | 39 | 85 | 9 | 82 | 9 | 90 | 2 | 100 | 74 | 87 |
| Involvement in any other research programs conducted by other organizations | Yes | 0 | 0 | 5 | 11 | 0 | 0 | 1 | 10 | 0 | 0 | 6 | 7 |
| | No | 16 | 100 | 41 | 89 | 11 | 100 | 9 | 90 | 2 | 100 | 79 | 93 |

Table 4. Distribution of following research process characteristics by the type of research centres.

| Following the research process characteristics | Health Facility related Research centers n=72 | | NGO related Research centers n=13 | | Total N=85 | |
|---|---|---|---|---|---|---|
| | N | %a | n | %a | N | %a |
| Registration of research Proposal | 2 | 3 | 2 | 15 | 4 | 5 |
| Submission of protocol according to the NHRC format/IRCs | 2 | 3 | 4 | 31 | 6 | 7 |
| Informed Consent | 5 | 7 | 4 | 31 | 9 | 11 |
| Permission letter of affiliated institute of researcher | 5 | 7 | 2 | 15 | 7 | 8 |
| Getting approval letter from IRCsor ERB of NHRC | 1 | 1 | 4 | 31 | 5 | 6 |
| Not started Yet | 65 | 90 | 8 | 62 | 73 | 86 |

a: Column percentage to indicate the distribution of following research process characteristics by the type of research centres

**Note:** IRCs: Institutional Review Committees, ERB: Ethical Review Boards

Table 5. Distribution of research centres that follow research process characteristics by development regions.

| Following the research process characteristics | Eastern n=16 | | Central n=46 | | Western n=11 | | Mid western n=10 | | Far-Western n=2 | | Total n=85 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | %a | n | %a | n | %a | n | %a | n | %a | N | %a |
| Registration of research proposal | - | - | 4 | 9 | - | - | - | - | - | - | 4 | 5 |
| Submission of protocol according to the NHRC format/IRCs | - | - | 6 | 13 | - | - | - | - | - | - | 6 | 7 |
| Informed Consent | 1 | 6 | 7 | 15 | 1 | 9 | - | - | - | - | 9 | 11 |
| Permission letter of affiliated institute of researcher | 1 | 6 | 5 | 11 | 1 | 9 | - | - | - | - | 7 | 8 |
| Getting approval letter from IRCs or ERB of NHRC | - | - | 5 | 11 | - | - | - | - | - | - | 5 | 6 |
| Not started Yet | 15 | 94 | 38 | 83 | 8 | 73 | 10 | 100 | 2 | 100 | 73 | 86 |

Column percentage to indicate the distribution of research centres that follow research process characteristics by development regions. IRCs: Institutional Review Committees, ERB: Ethical Review Boards

Table 6. Distribution of research centres' reasons for putting the word "Research" in the signboard by development regions.

| Reasons for putting the word "research" in the signboard | Health Facility related Research centers n=72 | | NGO related Research centers n=13 | | Total N=85 | |
|---|---|---|---|---|---|---|
| | n | %* | N | %* | N | %* |
| Just to conduct health research | 41 | 57 | 10 | 77 | 51 | 60 |
| Just to draw public attention | 6 | 8 | - | - | 6 | 7 |
| It is fancy and catchy word | 7 | 10 | - | - | 7 | 7 |
| Most organizations are writing so we are writing | 11 | 15 | - | - | 11 | 13 |
| It is easy to get donation | 6 | 8 | 1 | 8 | 7 | 8 |
| It is very easy to deduct government and related tax | 4 | 6 | - | - | 4 | 5 |
| Can impress health service through research | 6 | 8 | 1 | 8 | 7 | 5 |
| We are examining routing laboratory test that's what we understood research | 2 | 3 | 1 | 8 | 3 | 4 |
| Somebody suggested us to write | 11 | 15 | 1 | 8 | 12 | 14 |
| Without knowing properly | 13 | 18 | - | - | 13 | 15 |
| It is an academic Institution | 6 | 8 | 1 | 8 | 7 | 8 |

*Column percentage to indicate the distribution of reasons for putting the word "Research" in the signboard by the type of research centres, percent exceed >100 due to multiple responses

Table 7. Distribution of research centres' reasons for putting the word "Research" in the signboard by development regions.

| Reasons for putting the word "research"in the signboard | Eastern n=16 | | Central n=46 | | Western n=11 | | Mid western n=10 | | Far-Western n=2 | | Total n=85 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | %* | n | %* | n | %* | n | %* | n | %* | N | %* |
| Just to conduct health research | 9 | 56 | 30 | 65 | 5 | 45 | 7 | 70 | - | - | 51 | 60 |
| just to draw public attention | 1 | 6 | 3 | 7 | 1 | 9 | 1 | 10 | - | - | 6 | 7 |
| It is fancy and catchy word | 1 | 6 | 4 | 9 | 1 | 9 | 1 | 10 | - | - | 7 | 8 |
| Most org. are writing so we are writing | 5 | 31 | 4 | 9 | 1 | 9 | 1 | 10 | - | - | 11 | 13 |
| It is easy to get donation | - | - | 3 | 7 | 1 | 9 | 2 | 20 | 1 | 50 | 7 | 8 |
| It is very easy to deduct government and related tax | - | - | 2 | 4 | 1 | 9 | 1 | 10 | - | - | 4 | 5 |
| Can impress health service through research | 2 | 13 | 3 | 7 | 1 | 9 | 1 | 10 | - | - | 7 | 8 |
| We are examining routing laboratory test that's what we understood research | - | - | 1 | 2 | 1 | 9 | 1 | 10 | - | - | 3 | 4 |
| Somebody suggested us to write | 2 | 13 | 7 | 15 | - | - | 1 | 10 | 2 | 100 | 12 | 14 |
| Without knowing properly | 2 | 13 | 6 | 13 | 3 | 27 | 1 | 10 | 1 | 50 | 13 | 15 |
| It is an academic Institution | 3 | 19 | 3 | 7 | 1 | 9 | - | - | - | - | 7 | 8 |

*Column percentage to indicate distribution of research centres' reasons for putting the word "Research" in the signboard by development regions, percent exceed >100 due to multiple *responses*

While observing the distribution of research centres in five development regions, all of those parameters of obtaining the information regarding reasons for putting the word "research" in the signboard were found to be more or less similar in percentage distribution except in some specific parameter and far-western region (Table 6,7).

The reason for putting the word "Research" in the signboard by the type of research centres was found to be just to conduct research in 51 (60%) and Most organizations are writing so we are writing 11 (13%) (Table 6,7).

## DISCUSSION

Nepal Health Research Council (NHRC) gives more emphasis to regulate various kinds of health research activities in the country. This is basically to protect the rights and safety of human participants involved in the health research.[4] The MoHP is entrusted with the objective to oversee research in the country so it was decided to find/assess these centers. Various claims suggest over 70% of these organization having the word "Research" in their name are in fact not involved in research. All though such institutions/organizations are required to carry out at least two research per year in their respective field within two years of their establishment failing to which they are to be warned by MoHP and failing to further adhere to the warning would warrant removal of the word "research" from their name.

There were altogether 370 health related research centers registered in MoI and CDO at the district level till 31 December 2010. These research centers were located in 33 districts of Nepal. The names of these districts were Dhankuta, Jhapa, Morang, Saptari, Sunsari, Siraha (eastern region), Bara, Bhaktapur, Chitwan, Dhadhing, Dhanusha, Kathmandu, Kavrepalanchowk, Lalitpur, Makawanpur, Parsa, Rautahat, Sarlahi, Dolakha, Mahottari (central region), Tanahu, Myagdi, Gorkha, Kaski, Prabat, Palpa, Rupendehi (western region), Banke, Dang, Surkhet, Bardiya (mid-western region), Kanchanpur, Kailali (far western region). It means that 44 percent of districts in Nepal have health related research centers.

The range of number of research centers among 33 districts was one to 196. The highest number of research centers was found in Kathmandu district. There were eight districts such as Dhankuta, Saptari, Siraha (eastern region), Mahottari, Dolakha, Makwanpur, Sarlahi (central region), and Myagdi (western region) having only one research center and that too health facility related research center except in Mahottari where it was NGO related research. Excluding Kathmandu district, the range of number of research centers would be one to 29.

Considering this, there were only five districts (Jhapa, Morang, Dhanusha, Lalitpur, Parsa, and Kaski) that have more than 10 research centers.

Out of 370 research centers, 85 research centers (72 from among health facility related research centers and 13 from among NGO related research centers) were selected randomly for evaluation purpose, which represented 23 percent of sample selection. The sample selection was not less than 20 percent in each category of research centers. Twenty-one districts were visited in order to locate the selected research centers. Although we have found out from the register that there were two health facility related research centers in Rupendehi and Kailali districts but didn't find any research centers in these districts during our study period. So we confined our evaluation study only in 19 districts (4 in eastern, 8 in central, 2 western, 4 in mid-western and 1 in far-western).

One fifth research centers were found to conduct health related research progam. Among which majority (more than 50%) of NGO related research centers was found to conduct health research. There were few (14%) health facility related research centers that actually conducted health related research program. While observing by development regions, it was appeared that research centers located in mid-western region claimed that they had conducted more health related reseach program than any other research centers located in other regions. However, there were none of the research centers carried out any health related research program in the far-western region. One tenth research centers informed us that they might have some research projects in days to come. We have observed that very less (7%) health facility related research centers pipelined some research projects to be conducted in future while more than five times of this prcentage could be considered for the NGO related research centers. It indicates that NGO related research centers planned their research project more than health facility related research centers. It was quite interesting to observe that there were not much difference in the distribution of percentages of having pipelined research project by all four regions except far-western region where none of the research centers planned any research project.

Similarly, it was also found out that 13 percentage of research centers had started their communication about any research project and also had their research committees. We found that very few (8%) health facility related research centers started their communication about any research project and also had their research committees. While observing by development regions, only central region research centers were found to start their communication about any research project. Regarding research committee, very few percentage (6%) of research center from easter region, 15 percent from central region, 18 percent from western region, and 10 percent from mid-western region had their research committees, while none of the research centers located in far-western region had any research committees.

Less number of research centers (7%) were found to be involved in other organizations research programs. Such kind of involvement were found among those research centers located in central and mid-western regions, while rest other regions research centers were not found to be involved in other organizations research programs. Very less number of health facility related research centers (3%) were found to be involved in other organizations research program wheareas nearly one third of the NGO related research centers were involved into such processes.

Although it was said earlier that 20 percent of the research centers were found to conduct health related research progam, very less (5-7%) number of research centers were actually registered their research proposal to be submited to some review committees from where research permission could be obtained. However, one tenth of the research centers were taking the informed consent while conducting their research.It was also found that insignificant (6%) number of research centers were actually received the ethical approval letter from an authentic review board or committees. It was also indicated that majority (86%) of the research centers didn't start the research yet.

According to development region, only central region's research centers (6%) were taking ethical permission from an authentic review board or committees. None of other regions research centers were taking such permission. However, one among 16 and one among 11 research centers located in eastern and western regions repectively were found to obtaining informed consent while carrying out their research.

The field observation cum interaction, found that majority (60%) of the research centers were informing us that the reason for putting the word "research" into their signboard was actually to conduct the research, but rest of the research centers weren't able to reply into this direction. It was quite interesting to know that 15 percent(13/85) research centers had written the word "research" into their signboard without properly knowing it. They said that somebody suggested them to write such word into their signboard. There were some research centres (13%) that followed exactly what others in the same field were following. It means that the reason behind writing such word is also due to the influence of other organization working in similar settings.

One of the staff of research centre informed that some research centres are even unaware about what sort of research activities should they do by themselves. Another staff of research centre said they knew about the issues related to research activities only after some news related to health research appeared in the newspaper and broadcasted in the radio. Similarly, another staff of the research centre told that their lawyer suggested that putting the word research into their health facility names will make them easy to convert that facility into hospital in future. And other informed us that medical report made from the agency designated as research centre will be considered reliable and valid for those who are supposed to get authentic laboratory report for submission to foreign employment agencies.

Apart from these, some research centres (4%) said that routine examination of blood and urine samples was their research. It was also indicated that the main reason behind putting the word "Research" in their signboard was just to deduct the government and related tax (5%), make the word fancy and catchy for the public to draw their attention towards their centre (7%), and easy to get donation (8%).

We observed that health facility related research centres were found to be miss using such word more frequently than NGO related research centres as it was evident from the scenario that three fourth of such NGO centres indicated that they put such word just to conduct the research while one in two health facility related research centers indicated the same thing. It means that more number of NGO related research centers were actually conducting the research compared to health facility related research centers. However, all of the research centers offering academic courses were found to be involved in research and related activities and these were eight percent.

During field visit, we noticed that some research centres removed the word “research” from their signboard with white cement. When we asked with such centers, they were found to be very conscious while responding our quarries. It means, they knew that they were miss-using the word “research”.

There has not be much research in this subject, however sporadic report and finding[5-11] suggest that regulation of research are necessary to maintain the scientific integrity.

## CONCLUSIONS

The medical or health institution which has been registered as research centers were 370 in the country, whereas only 20% of them were conducting researches. Forty percent of the research centers in Nepal didn’t know the actual reason for putting the word “research” into their signboard. A regulation has to be made to safeguard and maintain the integrity of research in Nepal.

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