Chapter 5

Materials and Methods: Research Design
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The present study focuses on the healthcare systems prevalent in higher professional educational institutions in India, based on the questionnaire circulated and responses obtained. This study is based on the feedback obtained from the students. The study proposes to showcase the healthcare systems operational at one of the higher educational institutions at Pune, which is the focal institution of the researcher.

Primary Data:
The primary data was obtained from an interview and an analysis of the responses obtained from students, to the modified questionnaire, administered personally by the researcher (Annexure ‘F’). These students had completed their education at other higher / professional educational institutions in the country and were currently studying at the focal university of the researcher. Their responses were corroborated for authenticity through additional sources e.g. website, official publications of the institution and in some cases through personal interaction with the authorities, by the researcher himself.

In order to obtain a global perspective and understanding of the healthcare systems prevalent in other higher professional educational institutions and to share with likeminded researchers / organizations involved in a similar research study, a blog (Annexure ‘A’) was created on the internet. The blog presented a basic introduction of the research study undertaken and invited/solicited sharing of views from the global community.

Requests for reviews and evaluations relevant to the study were sent to concerned organizations (Annexure ‘G’), such as: The Healthy Colleges Network, The American College Health Association (ACHA) - National College Health Assessment (NCHA), The Australia and New Zealand Student Services Association (ANZSSA), The Canadian Organization of University and College Health (COUCH), The Schools for Health in Europe Network, Healthy People, Healthy Campus 2010/ 2020. Email requests for information were also sent to professionals committed to health on campus (Annexure ‘H’).
An All-India Vice Chancellor’s Conference was organized by Bharati Vidyapeeth University (BVU), Pune in association with University Grants Commission (UGC) and Association of Indian Universities (AIU) from 12th-14th November 2010 at Pune. The theme of the conference was ‘Governance of Higher Education’. The 85th annual general meeting of the AIU was also held on the sidelines of this Conference.

The Conference brought together senior administrators in the higher education sector, from all over India, on a common platform to discuss, deliberate and try to evaluate a common consensus on various issues in the governance of higher education. Around 260 Vice-Chancellors / senior officials governing higher education institutions attended this conference. The recommendations emanating out of this conference were sent to the Human Resource Development Ministry, Government of India.

Realizing the significance of this conference in light of the present study, the researcher contacted the officials of the AIU and Bharati Vidyapeeth University and obtained their permission to circulate the questionnaire amongst the delegates. Questioning and interviews were done at the most convenient time of the respondents. Each delegate was explained the purpose and significance of the study and the reason why their cooperation was solicited. Participation was voluntary. The researcher impressed upon the officials, the academic/ research nature of the study. It was specifically pointed out to the delegates that the proposed study is not meant to be a policing mechanism, nor would the findings have any bearing / repercussions on the status of the higher professional institution they represented; financial, administrative or otherwise.

Accordingly, the same questionnaire (Annexure ‘F’) was circulated to all the delegates attending this conference. A total of 221 forms were circulated. Delegates were requested to fill in the questionnaire and submit the same, as per their convenience, either during the conference or subsequently via mail. Unfortunately, despite repeated pleas and reminders, both during and after the conference, the researcher managed to obtain only 21 responses.
Thus, the sources of primary data were:

a. Information obtained through the questionnaire responded to by the students; this was corroborated

b. Blog hosted on the Internet

c. Personal correspondence with organizations committed to students’ health / health on campus (Annexure ‘G’)

d. Personal correspondence with individuals committed to students’ health / health on campus (Annexure ‘H’)

e. Information obtained through the questionnaire responded to by the Vice Chancellors / Senior Administrators of higher educational institutions in India

Secondary Data:
As regards secondary data, published literature, relevant to the promotion of health and well-being of young people in Higher Educational Institutions (HEI) / universities was identified. Publications accessed include articles / reports focusing on a selection of health topics pertaining to health promotion / intervention with students. This was to identify “on campus” healthcare models and different strategies adopted for health promotion / intervention. Publications referred to include the official hand book of the Association of Indian Universities (AIU) (Association of Universities Handbook, AIU, published by AIU), Indian Journal of Community Medicine (Official publication of India Association of Preventive and Social Medicine), reports of the Union Ministry of Health & Family Welfare, including the various committees / task forces appointed, National Health Policies (1983 & 2002), Eleventh Five Year Plan report (Eleventh Five year plan 2007-2012, 2008), National Knowledge Commission (NKC) report, Government of India, The Journal of American College Health (www.acha.org/publication/JACH.cfm), College Health Advisor (www.collegehealthadvisor.com), the History and Practice of College Health (Turner Spencer H & Janet, 1938) and other relevant publications.
In addition, journals such as Health Education (www.hej.sagepub.com), Health Education Research (www.her.oxfordjournals.org), the International Electronic Journal of Health Education (http://www.aahepublications.iejhe/), the Journal of Further and Higher Education (www.tandf.co.uk/journals/titles/0309877X.asp), Spectrum reports, The American College Health Association (ACHA)- National College of Health Association (NCHA) reports(http://www.achancha.org and www.acha-ncha.org), Directory of Open Access Journals DOAJ (www.doaj.org), Elton B Stephens Company EBSCO publishing’s electronic databases (www.ebscohost.com), EMCare (www.emcare.com), Global Health (www.globalhealth.org), Google Scholar (www.scholar.google.co.in), Health and Wellness Research Centre(www.gale.cengage.com), Index Copernicus (www.indexcopernicus.com), Bibliographic database of Indian biomedical journals, IndMed (www.indmed.nic.in) and MedIND (www.medind.nic.in), citations for biomedical literature from MEDLINE, life science journals, and online books, PubMed (www.ncbi.nlm.nih.gov/pubmed), Software Industry Information Centre, SIIC databases (www.siic.org) etc. were individually searched for relevant articles.

Literature was identified through electronic literature searches using educational, social science, psychology, student health and health databases. Search terms used to identify potentially useful articles published included health, campus health, health initiatives, well-being, wellness, health promotion(ing), students, young people, college(s), university(ies), healthy colleges, health promoting universities, college health, health program(m)es etc.

Websites of various HEI & organizations / agencies / initiatives, both public and private, committed to promoting health on campus of educational institutions were also accessed. These included, Healthy Colleges Network, The American College Health Association (ACHA) - National College of Health Association (NCHA) (http://www.achancha.org and www.acha-ncha.org), The Australia and New Zealand Student Services Association (ANZSSA) (http://www.adcet.edu.au/Anzssa/View.aspx?id=4266), The Canadian Organization of University and College Health (COUCH): https://www.cacuss.ca/en/divisions/COUCH/information/introduction.htm, The
Schools for Health in Europe Network (www.schoolsforhealth.edu), Healthy People 2020 / Healthy Campus 2010 (Announcement of Establishment of the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020”, 2007) etc.

Research Design & Methodology:
A pilot study was undertaken from June 2007 to December 2007 to compare healthcare delivery systems operational at the focal university of the researcher with the ones operational at other Higher Professional Educational Institutions in India and globally by way of a questionnaire sent by post / via email (Annexure ‘B’).

Higher Educational Institutions in India were selected on the basis of rankings of the top 10 institutions of the country in the following disciplines: Arts, Commerce, Science, Law, Engineering and Medicine as mentioned in a survey carried out by India Today along with AC-NIELSEN-ORG-MARG and published in the June 2007 Issue of India Today (Appendix ‘H’). However questionnaire was not sent to medical colleges since they were to be excluded from this study as per exclusion criteria explained earlier.

International universities were selected on the basis of rankings amongst the top 100 Universities of the world (O’leary John, Quacquarelli Nunzio & Ince Martin, 2010), availability of data / accessibility of data and possible readiness to participate.

Keeping this as the benchmark of selection, the researcher sent the questionnaire (Annexure ‘B’) to the designated officials of these institutions and sought to get their replies for the purpose of comparative analysis and interpretation on the research project.

A prior phone call was made by the researcher to the university officials to allay all apprehensions and impress upon the officials, the academic/ research nature of the study. The researcher spoke to each institutional head, complimenting the inclusion of their institute amongst the top 10 in the country. It was impressed on the institutional head that he/she now had a reputation and ranking to defend and therefore should readily participate in the said study. It was specifically pointed out to the university
that the proposed study is not meant to be a policing mechanism, nor would the findings have any bearing / repercussions on the status of the higher professional institutions, financial, administrative or otherwise.

The response from both National and International institutions, through correspondence, to say the least, was disappointing with a near zero response of institutions responding, despite repeated pleas, both verbal as well as written. Certain institutions categorically denied participating in the said study (Annexure ‘D’).

Hence a modified approach was adopted. The modification consisted of obtaining the desired information through the questionnaire (Annexure ‘E’) administered to students (end beneficiary) representing higher professional educational institutions in India only. This study was undertaken from June 2008 to December 2008. Due to the limited response by officials of the HEI / universities, the researcher approached the student community representing some of these and other institutions within the country, since students being the end beneficiaries, are probably the most important stake holders. Further, as it would be difficult to tap the current students of these HEI / universities, immediate past students who had completed their professional studies / graduation / post-graduation in these institutions and had now enrolled at the focal university of the researcher were recruited as sources of primary data. There was no interaction/explanation of the questions by the research worker. The questionnaire to elicit the requisite information was the same that was sent to the officials of higher / professional educational institutions.

Responses, as given by the responders were collected and analyzed. Needless to say, this (non) interaction elicited many ambiguous / non-committal responses which had a limited research value.

Thus, approach in 2008 differed from approach in 2007 by way of:

a. Restricting the comparative study to Higher Professional Educational Institutions in India only.

b. Using the student rather than the officials to provide the necessary information which is used as primary data.
Based on the inconclusive results obtained and the experiences of the study so far, the researcher therefore undertook yet another modified approach from June 2009 – December 2009. The researcher personally administered the modified questionnaire (Annexure ‘F’) to the students on the first day of the induction programme. The researcher himself explained the purpose and significance of the study and the reasons why their cooperation was solicited. Participation was voluntary. The researcher ensured that the questioning and interviews was done at the most comfortable time of the respondents. This had distinct advantages over the previous methodology, as below:

1. The modified questionnaire (Appendix ‘F’) is a fall out of the questionnaire used in the pilot study (Appendix ‘B’). Hence it has been suitably modified / edited to include questions of relevance and pertinence only, deleting questions which elicited an equivocal/ambiguous response. This makes the revised questionnaire tailor made to the aims and objectives of the proposed study.

2. The questionnaire was directly administered by the researcher himself. The purpose of the study was explained in detail. All questions were explained and the responders were counseled as regards the expected response, without trying to influence/bias the response in any way. Further, the availability of the research worker himself ensured the requisite sanctity/seriousness to the entire exercise; as a result, of the cuff responses were minimized.

3. Since the responders were administered the said questionnaire during the induction program itself, the responses were based on “recent recall”.

4. This methodology facilitated a direct contact between the researcher and the responders (the most important stake holders to benchmark the utility / applicability of the proposed healthcare system)

5. Responses were collected, collated and analyzed immediately after the questionnaire was administered, there by nullifying the probability of tampering / manipulation of the data.
**Basis of selection of students:**

**a. Inclusion criteria:**
Students from higher professional educational institutions were selected on the basis of:
- Readiness to participate voluntarily.
- Representing higher professional educational institutions in India, providing diverse academic programmes other than medical (Refer below under exclusion criteria)
- Representing institutions across the country
- Availability of authentic information

**b. Exclusion criteria:**
Students representing educational institutions having on campus Medical College / allied facilities were excluded from the study since the responses of students from such educational institutions would be in the affirmative and this would hence vitiate the statistical analysis.

A total of 1200 filled forms were obtained. Incompletely filled, ambiguous responses, illegible forms etc. were discarded. Finally, 1071 forms were analyzed (Annexure ‘I’). Data was collected and analyzed by using inferential statistics. Statistical software such as Statistical Package for Social Sciences (SPSS), version 16.0 was used.