CHAPTER II
METHODOLOGY

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The purpose of the study is to examine the perceptions of practitioners (Academicians /Practicing Professionals/ Researchers) regarding existing scenario of education of Psychology, quality and deliverance of psychological practices and need of professional development of psychology professionals in India.

The four objectives of this chapter are,

1. To describe the research methodology of the study.
2. To explain the sample distribution (Quantitative + Qualitative)
3. To describe the procedure used in designing the instrument and collecting the data (Quantitative + Qualitative)
4. To provide an explanation of the statistical procedures used, to analyze the responses. (Quantitative + Qualitative)

2.1   INTRODUCTION

A descriptive research methodology was used for this study. A survey was administered to a selected sample from population identified by the researcher. A survey is a series of self-report measures administered either through an interview or a written questionnaire. Surveys are the most widely used method of collecting descriptive information about a group of people. In all descriptive research, the aim of the survey is to produce a ''snapshot' of opinions, attitudes or behaviors of a group of people at a given time (Stangor, 2011). With the advantage of getting worldwide information in short time, surveys are extensively used by businesspeople, advertisers and politicians to help them what people think, feel or do.

In the century of technology and globalization, surveys are sent to respondents through mail or email. One advantage of sending survey through mail or email is that the researcher does not have to be present while the survey is being completed and also, such a way, surveys can be sent to a much larger number of participants. There are several disadvantages also associated with this strategy. First, the researcher cannot be sure who actually complete the survey. Even if the intended respondent completes the survey, there is no guarantee that the respondent will answer the questions in the same order in they appeared (Smith and Davis, 2010).

Since questionnaires are less expensive and easier to administer than personal interview; they lend themselves to group administration; and they allow confidentiality to be assured, the researcher designed questionnaire survey instrument to assess the perceptions of practitioners regarding challenges of and professional development of psychology professionals in India.

In this chapter, a detailed plan and procedure of the study has been presented. This plan and procedure gives a clear picture of the research design that includes population and sample of the study, source of data, development of research tools, data collection procedure, and details of data analysis.

2.2   RESEARCH DESIGN

The present research study has employed a mixed methods research design to explore the perspectives of psychology professionals. Mixed methods research is defined as research in which the investigator collects and analyzes data, integrates the findings and draws inferences using both quantitative and qualitative approaches or methods in a single study or a program of inquiry (Tashakkori & Creswell, 2007). The purpose of using mixed methods research is that it provides more evidence for studying a research problem than either quantitative or qualitative research alone. Researchers are enabled to use all types of the tools of data collection available rather than being restricted to the types of data collection typically associated with quantitative research or qualitative research.

Creswell and Clark (2011) mentioned six types of mixed methods research design as follows; a) Convergent Parallel Design b) The Explanatory Sequential Design, c) The Exploratory Sequential Design, d) The Embedded Design, e) The Transformative Design and f) The Multiphase Design. From above mentioned different types of methods, which method need to be chosen depends on the different ways qualitative and quantitative strands relate to each other. A strand is a component of a study that encompasses the basic process of conducting data, analyzing data, and interpreting results based on that data (Teddie and Tashakkori, 2009).
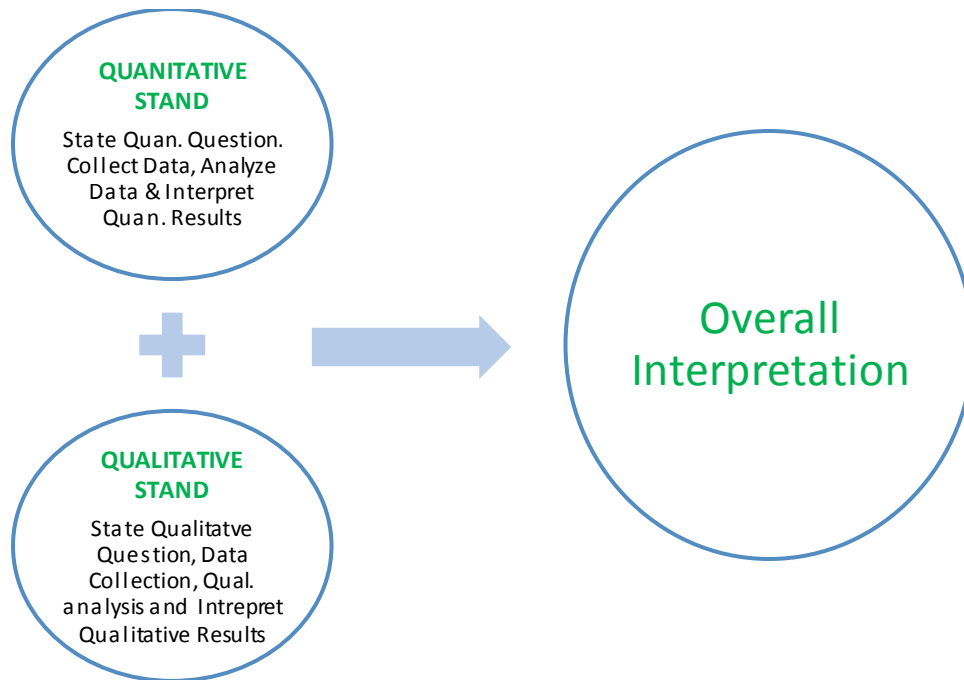
Figure 2.1 - Quantitative and Qualitative Strands in a Mixed Methods Study

Four key decisions are involved in choosing appropriate mixed methods design for the study. The decisions are 1. The level of interaction between the stands, 2) the relative priority of the strands, 3) the timing of the strands, and 4) the procedures for mixing methods the strands. Based on the objectives and data collection of the study, independent level of interaction was chosen in which both qualitative and quantitative strands will be mixed while drawing conclusions during the overall interpretation at the end of the study. Greater emphasis is placed on the quantitative methods while qualitative methods are used in secondary role. Timing refers to the temporal relationship between the quantitative and qualitative strands within a study. In this case, concurrent timing was chosen in which researcher implements both the quantitative and qualitative strands during a single phase of the study. Lastly, researcher needs to determine the approach for mixing quantitative and qualitative strands. Mixing is the explicit interrelating of the study's quantitative and qualitative strands and has been referred to as combining and integrating. In this study, based on the objectives and data collection, both quantitative and qualitative strands will be mixed during the final step of the research process after the researcher collected and analyzed both sets of data. It also will involve researcher drawing conclusion or inferences that reflect what was learned from the combination of results from the two stands of the study. Keeping in mind the key decisions of choosing research design, *Concurrent Parallel Design* was used for this study.

The purpose of the design is to obtain different but complementary data on the same topic, to best understand the research problem and to bring together the differing strengths and non-overlapping weaknesses of quantitative (large sample, generalization) and qualitative methods (small sample, in depth). This method is used when researchers wants to triangulate the methods by directly comparing and contrasting quantitative statistical results with qualitative finding for corroboration and validation purposes (Cresswell, 2011)

The procedure for implementing a convergent parallel design are outlined below in the procedural flowchart in figure 2.2. There are four major steps in the convergent design. First, the researcher collects both quantitative data and qualitative data about the objectives of the study. There are two types of data collection. First, in which data is collection goes concurrent but separate, which means one does not depend on the result of the other. Second, the researcher analyzes the two data sets separately and independently from each other using quantitative and qualitative analytic procedures. Once the two sets of initial results are in hand, the researcher reaches the point of interface and works to merge the results of two data sets in the third step, which includes directly comparing the separate results or transforming results to facilitate relating the two data types during additional analysis. In the final step, the data is interpreted to an extent the two data sets of results converge, diverge from each other, relate to each other or combine to create better understanding in response to the study's overall purpose.
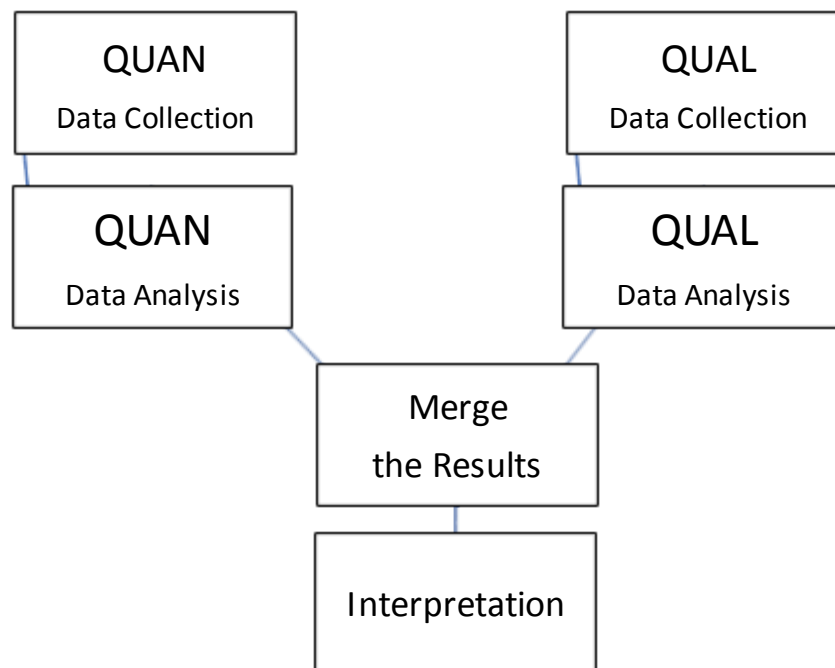
Figure 2.2 - Diagram of Basic Flow Chart in Implementing a Convergent Parallel Design

2.3   DESCRPITION OF POPULATION AND SAMPLE

1.3.1   POPULATION OF THE STUDY

The population of the study consisted of all psychology professionals of India. Psychology professionals includes academicians, practitioners and researchers. Academicians include people who were teaching psychology in colleges, institutes and universities. Practitioners include people who were practicing psychology in hospitals, schools, industries, NGOs and also those who owned a clinic. Researchers were those who are doing M.Phil. or Ph. D, who were working in research projects as research assistants or research associates and those who were working at academic or social or educational research centers.

2.3.2   SAMPLE OF THE STUDY FOR QUALITATIVE AND QUANTITATIVE DATA COLLECTION

For this study, psychology professionals were identified from psychology associations such as NAOP, IAAP, IACP and PCI, psychology groups on YahooGroups and Facebook Communities such as Psychologist' World, Psychologist' Club, CBT-REBT therapist and forums such as Mental Health Policy Group and Psychology Council of India (PCI). For the information of academicians, the researcher visited website of each university and collected the available information on faculties.

Because of the delimitations of accessing emails / internet regularly or being active on psychology forum on social media or non-updated contact information on psychological associations and forums, only three hundred thirty-three psychology professionals responded to the questionnaire out of 5000 questionnaires sent.

Details of participants for quantitative and qualitative analysis are described below:

Table 2.1 - Areas from Where Psychology Professionals Responded.

Occupation	Frequency	%
Academician	91	27.3 %
Practitioner	188	56.5 %

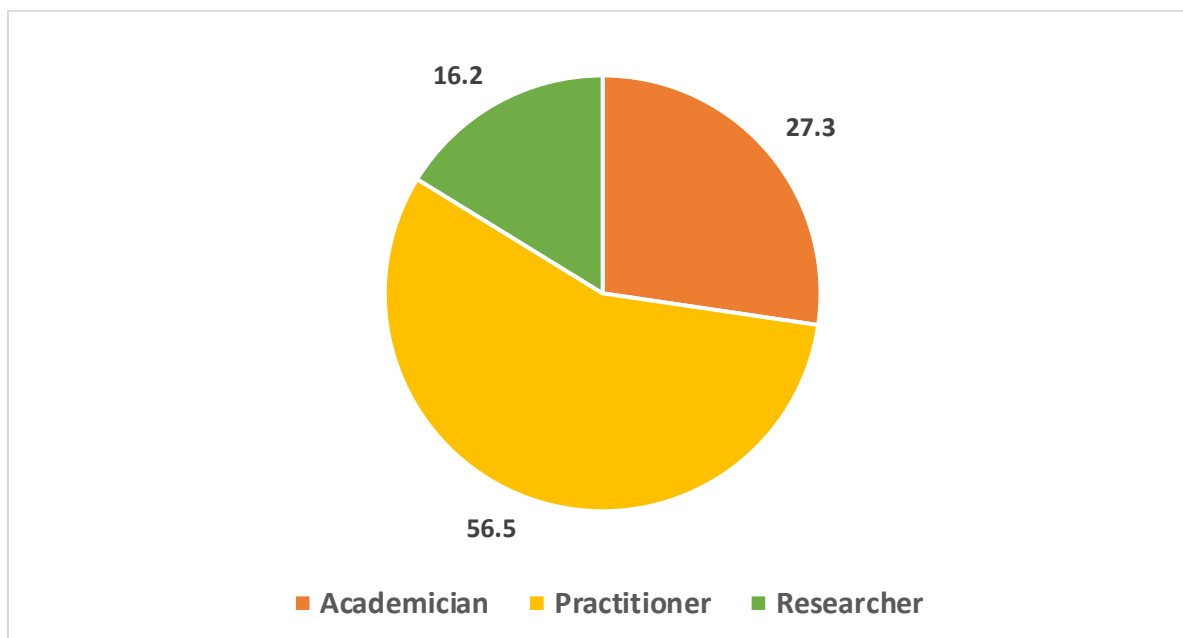|			
Researcher	54	16.2 %
Total	333	100.0 %

Figure 2.3 Percentage of Types of Areas of Psychology Professionals.

As mentioned in Table 2.1 and Figure 2.3, it was found that, 56.5 % of practicing psychology professionals responded to the questionnaire, 27.3 % of psychology professionals were from academics and 16.2 % of respondents were from research areas. Hence, a total of 333 responded to questionnaire.

The demographic detail of psychology professionals is shown in following table 2.2

Table 2.2 - Profile of Respondents for Quantitative data collection

Demographic Variables	Components	N	%
Gender	**Male**	68	20.42
	Female	265	79.58
Qualification	**Postgraduation**	229	68.77
	M.Phil.	47	14.11

		57	17.12
	Ph.D.	57	17.12
	Clinical and Health	167	50.15
Area of Work	**Education**	90	27.03
	Work and Organization	32	9.61
	Counseling	44	13.21
	Less than 5 Years	63	18.92
Work Experience	**6 - 10 Years**	222	66.67
	More Than 10 Years	48	14.41

From the table 2.2, it is explained that 79.58 % of respondents were female and 20.42 % of respondents were male. Psychology professionals with Postgraduation qualification were 68.77 % where respondents with M.Phil. and Ph.D. were 14.11 % and 17.12 % respectively. It was observed that 50.15 % of respondents were working in the area of Clinical and Health, where 27.03 % of respondents were working in an education sector. The respondents from the area of work and organization and counseling were 9.61% and 13.21% respectively. 66.67% of respondents were having 6-10 years of work experience, where 18.92% of respondents has work experience of less than five years. Respondents having more than ten years of work experiences were 14.41%.

Table 2.3 - Profile of Sample Group of respondents for Qualitative data collection

Factors	**Components**	**Frequency**	**Percent**
Gender	**Male**	3	30.0
	Female	7	70.0
Education	**Postgraduation**	3	30.0
	Ph. D	7	70.0
Occupation	**Academician**	2	20.0

	Practitioner	8	80.0
Work Experience	**5 to 10 Years**	1	10.0
	More than 10	9	90.0
	Clinical	7	70.0
Area of Work	**Education**	2	20.0
	Work and Organization	1	10.0
	Total	10	100

Table 2.3 presents the profile of interviewees selected for qualitative analysis. 70% of respondents were female and 30% were male. Similarly, the education of 70% respondents was Ph. D and 30% was of Postgraduation. In occupation, it can be seen that 80% were practicing psychology and 20% were academicians. 90% of respondents has work experience of more than 10 years. Area of work of 70% of respondents were from Clinical, 20% from education and 10% from work and organization.

2.4. RESEARCH TOOLS

For this study, survey questionnaire was constructed for quantitative data collection and semi-structured interview schedule were for qualitative data collection. Both are described in detail below.

A) Professional Development of Psychology in India

A questionnaire was developed namely Professional Development of Psychology in India. The questionnaire contains three sections. 1) Demographic Information about Practitioners. 2) Practitioners' perspectives on selection of psychology at Post-graduate level, uniformity of curriculum and issues faced by Practitioners in India and 3) Professional Development Competencies.

Section 1 consist of demographic information such as gender, education, specialization, area of work, occupation, work experience and city. Section 2 includes practitioners'

perspectives on admission procedure in Postgraduation of psychology, need of theory and practical subjects, need of nationwide uniform curriculum of psychology in Postgraduation and practitioners' perspectives on challenges faced by practitioners in their profession. Challenges such as 'Difficulties in establishing private practice', 'Lack of central licensing body for psychology in the country', 'Lack of awareness among people to seek mental health help'. Items on these challenges were constructed based on the discussions on mental health by professionals from all over India on Mental Health Policy Group and YahooGroups such as *IndianPsychologists* and *Counselor Association of India (CAI).*

Section 3 is on is professional development competencies. Items are constructed on the basis of the model by National Council for Schools and Programs of Professional Psychology (NCSPP). The NCSPP competency model of education and training identifies six competencies required for entry level practice in professional psychology. The six competencies are 1) Relationship, 2) Assessment, 3) Intervention, 4) Diversity, 5) Research/Evaluation, and 6) Consultation/Education. Each competency is understood by knowledge, skills and attitudes. All the competencies are defined in brief as below:

Relationship is the capacity to develop and maintain a constructive working alliance, and includes the ability to work collaboratively with peers, colleagues, students, supervisors, members of other disciplines, consumers of services, and community organizations (Peterson, 2007). **Assessment** is the central component of psychology, which deriving inferences from multiple sources of information to achieve a broad and cohesive understanding of a psychological system such as an individual, a couple, a family, a group, or an organization (Meyer et al., 1998). **Intervention** includes activities that promote, restore, sustain, and/or enhance positive functioning and a sense of well-being in clients through preventive, developmental, and/or remedial services (Peterson, Peterson, Abrams & Stricker, 1997). The **research and evaluation** competency are grounded in the assumption that students are trained in research so that they can acquires, organizes, and evaluates psychological information (Trierweiler and Stricker, 1998). **Consultation and Education** refers to the planned collaborative interaction between the professional psychologist and one or more clients or colleagues, in relation to an identified problem area or program. Education is the directed facilitation by the professional psychologist of the growth of knowledge, skills, and attitudes in

the learner (McHolland, 1992). The **diversity** competency requires the ability to identify and understand issues of individual and cultural difference (ICD), and issues of power, privilege and oppression.

The questionnaire was constructed with 124 statements keeping in mind above competencies and their knowledge, skills and attitudes. Then it was given to four experts to establish face validity of the questionnaire. The experts were from different areas like one from academics, one from research and two were practicing psychologists who were working in the field of psychology for more than 10 years. Experts were instructed to check the items on the basis of suitability and clarity of the item for the specific competency. The suggestions given by the experts were incorporated in the questionnaire. Eight statements were eliminated as suggested by the experts. Elimination of the statements were because of repetition of statements and the irrelevance in Indian context. Hence, the final questionnaire consisted of total 116 statements distributed among above mentioned competencies each with statements regarding Knowledge, Skill and Attitudes.

Responses of Section 2 where practitioners' perspectives for challenges faced by psychology professionals in India were asked, these responses were collected in five-point likert scale – Not a Problem, Rarely, Sometimes, Most of the times and Always. Section 3 where professional development competencies were asked, these responses were collected on 4-point scale; 1 = Not at All Needed, 2 = Low Level of Need, 3 = Moderate Level of Need and 4 = High Level of Need. Description of the questionnaire is shown in following table.

Table 2.4 - Components of the Questionnaire.

No.	Components	Total Statements
1	**Basic Information and Information about Selection and Curriculum**	**11**
2	**Challenges faced by Psychology Professionals in India**	**11**
3	**Competence Profile**	
3a	Relationship	**23**
3b	Assessment	**15**
3c	Intervention	**15**
3d	Research and Evaluation	**19**

3e	Consultation and Education	**11**
3f	Diversity	**11**

B) Semi Structured Interview Schedule

Semi structured Interview Schedule was constructed to collect the data from psychology professionals. The researcher has developed an interview schedule based on themes derived from the objectives – education of psychology, psychological practices and need of professional regulation and research questions. Then it was given to three experts for the face validity of the items of semi structured interview schedule. Experts were from the areas of academics, research and practice. They were instructed to check the items on the basis of suitability and clarity of the item for the specific competency. Suggestions were given to make themes more specific to objectives of the study. Suggestions by the experts were incorporated and semi-structured interview schedule was finalized. The description of the themes is described below.

Table 2.5 – Components of Themes

No.	Objectives	Themes
1	Education of Psychology	Selection of Students / Selection of Subjects
		Curriculum
		Education Pedagogy
2	Psychological Practices	Practitioner's Approach
		Challenges in Practice
		Improvement in quality of Practice
3	Need of Professional Regulations	Professional Regulation in India
		Need of Regulatory Body
		Change

2.5 - ACTUAL PROCEDURE

In this study, both quantitative and qualitative data were collected concurrently. The procedure of data collection is described as follows,

A) Quantitative Data Collection Procedure

Electronic Survey method was used to collect the data from psychology professionals. Goodwin (2013) defined electronic survey method, which also called e-surveying is accomplished through sending e-surveys via e-mail to a selected sample of individuals. The survey questionnaire was converted into online survey so that psychology professionals from all over the country can be reached. The application of Google, *'Google Forms'* were used for online survey. For the contact information of faculties from various universities, all universities websites were visited and email addresses were collected wherever available. Contact information were of psychology professionals, academicians or practitioners or researchers were collected through websites of 1) National Academy of Psychology (NAOP) which has around 2000 members, 2) Indian Psychologists Yahoo Group which has more than 6000 members and 3) various other psychologist forums available on Facebook and LinkedIn. After the development of online survey, the link was generated and questionnaire was sent to all above all participants with brief explanation of purpose of research and importance of their participation in the study. The link and the instructions to the participants is given below:

Dear Madam/Sir,

I am pursuing Ph.D. in Psychology from the Department of Psychology, The M.S. University of Baroda, Vadodara, on PRACTITIONERS' PERSPECTIVES ON EDUCATION, PSYCHOLOGICAL PRACTICE AND PROFESSIONAL REGULATION OF PSYCHOLOGY IN INDIA: THE MIXED METHODS APPORACH. The focus of this study is to understand and reflect upon the quality of education, psychological services, and the role of regulatory body in India. The study also attempts to know what the competencies, a prospective psychologist needs to have while starting profession. You are requested to respond to questionnaire below. Please, respond to each question as per your experience and knowledge in psychology profession. You are assured that the data will be used for research purpose only and will be strictly confidential.

Your opinion will be very significant for this research. Please, click on following link to respond to the questionnaire. Link: - http://goo.gl/gRmbga. Thank you and Good day.

In google form, the responses are recorded directly in to excel file in terms of raw scores. Raw scores mean, data are recorded in terms of options, selected by practitioners. For example, for gender, raw scores are male and female. An excel file was exported and raw scores are converted in numbers. Likewise, Male were coded as 1 and female were coded as 2.

B) Qualitative Data Collection Procedure

Semi-structured interview schedule was developed to collect responses of psychology professionals. The purpose of collecting qualitative data was to collect in depth information regarding existing scenario of psychology in India. Only those psychology professionals who had been in the field for over 10 years, were approached for the interview. Time and place were decided based on the convenience of the interviewee. As per the convenient time of all interviewee, the researcher went to the place he asked to and conducted interview. The responses were audio recorded with the prior permission of all respondents. An average duration of the interview was forty-five minutes to one hour.

2.6   DATA ANALYSIS

A) Quantitative Analysis

For quantitative data, descriptive analysis has been used. The collected data was coded and analyzed in SPSS 23.0. The descriptive statistics mainly, frequency, mean and standard deviation were used to describe the status of different variables in the study. Independent Sample T-test was used to describe the significance of difference between means of different independent variables (Gender, Qualification, Area of Work and Work Experience) and a dependent variable (Six Competencies of Model). Intensity indices for the competencies was used to rank some independent variable.

B) Qualitative Analysis

For qualitative data, thematic content analysis was to used. The responses will be coded and analyzed in nVivo 10.0.