

Contribution Of Pilot Study: Critical In Planning Research Design

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Abstract: I decided to have a doctoral degree in Psychology because it was here that I thought my thirst for a deeper knowledge in Psychology would be quenched especially in Clinical Psychology. For this I joined Ph. D programme under the able guidance of my mentor and guide Dr. Nishi Tripathi, Department of Psychology, SHIATS, Allahabad. I completed my doctoral programme in October, 2015. I thought a lot and decided to share my experiences while conducting the pilot study which according to me is an important part in designing a research plan especially when I am developing and administering a checklist to identify children with ADHD (Attention Deficit Hyperactivity Disorder). The conclusions drawn and process involved in meeting the purposes of the pilot study would be helpful for the aspirants in the area of research. Sometimes pilot study is considered as useless and wastage of time and energy but according to me it is very critical and essential for a social science research where we have to observe and study human beings, especially when they are children we have to be very careful. Full reports of pilot studies are rare in the research literature (Lindquist, 1991; Muoio et al, 1995, van Teijlingen et al. 2001). Therefore, I am here sharing the relevance and importance of pilot study from my practical experience in my research.

Keywords: pilot study, ADHD (Attention Deficit Hyperactivity Disorder), ADHD Checklist & Rating Scale', seminar, children, teachers, construction and administration

According to me and my guide, for a smooth conduction of a research study it is very important to have a well planned and well prepared outline of the research methodology. Each step should be deeply understood and comprehensively rehearsed before entering the field. A lot of reviews and readings in the concerned area are to done before planning the study. Carefully designed Methodology should be one of the most important interests in the field of data collection in order to avoid undue errors and delays.

After finally coming to terms with the area of work and finalizing the title/topic of the research study we had to decide upon the target population and the sample. The purpose of the study was to identify the children with ADHD and then to prepare the cognitive profile of children picked from schools or diagnosed by the Psychiatrists of the city of Allahabad. The focus group was children of age ranging from 7 to 14 years

studying in 2-8th standards and also children diagnosed by Psychiatrist of the same age group.

Keeping these facts in mind I divided my study in two phases: namely; the Pilot Study and the Main Study. The first phase had two sections namely: Scale Construction and its administration. During the pilot study my respondents were teachers of children studying in classes 2nd to 8th after pilot study only my respondents will be children with and without ADHD.

The main study was divided into two sections.

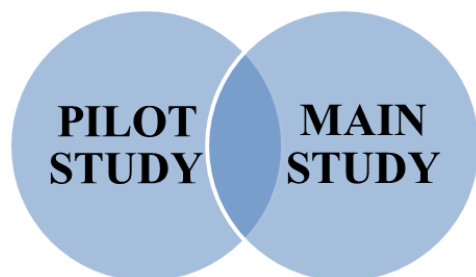


Figure 1

Since my area of study touched the very sensitive area of childhood neurological disorder, ADHD (Attention Deficit Hyperactivity Disorder), I and my guide worked extensively on the mode of data collection and sampling in order to avoid over diagnosis. Over diagnosis has been a problem with ADHD due its behavioural symptoms. According to Center for Mental Health in Schools (2013), errors are common when diagnoses of ADHD are made. These include indicating a person has ADHD when they do not (designated as a false positive), indicating a person doesn't have ADHD when they do (designated as a false negative), or misclassifying the person's problem. In this respect, some argue that rising ADHD prevalence rates reflect many false positives; others argue the increases reflect a reduction in false negatives. Hence we decided to conduct a pilot study first in order to identify potential practical problems in following the research procedure ahead.

However, a pilot study can also be the pre-testing or 'trying out' of a particular research instrument (Baker 1994: 182-3). According to Teijlingen, E, R., & Hundley, V., pilot studies are a crucial element of a good study design. Conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood. It may be considered as a miniature of the main study and enhances the successful completion of the final study with very little hurdles faced. In my study pilot study proved a great benefit in the process of data collection.

There were two objectives for the pilot study:

- ✓ Construction of the checklist- 'ADHD Checklist & Rating Scale' for identifying children with ADHD
- ✓ Administration of 'ADHD Checklist & Rating Scale'

For the pilot study data was to be collected only from 5 schools randomly selected from the list of schools in Allahabad. After selecting the schools the first step was to get the permission of the school authorities to allow me to conduct the study in their schools. A thorough investigation of ADHD symptoms and already existing checklists to identify ADHD symptoms in children, it was found that existing checklists do not fit the Indian scenario there was a need for checklist which could relate with ground problems of children with ADHD in India especially Allahabad. During the process of construction of the checklist five schools from Allahabad city were randomly selected.

My first respondents were the teachers of the children studying in classes 2nd to 8th standard. A Power Point Presentation was prepared covering the wide area of ADHD symptoms and social, psychological, emotional and academic problems emanating out of this childhood disorder. When I

went to the first school I got to interact to 21 class teachers. A seminar on children with ADHD was conducted for the teachers in order to acquaint them with the following:

- ✓ What is ADHD? Meaning and concept
- ✓ Its prevalence among children with special focus in India and Allahabad
- ✓ Causes of ADHD
- ✓ Its effect on social functioning focusing on friend circle/peer relations
- ✓ Its effect on psychological emotional wellbeing
- ✓ Its effect on academic problems faced by children
- ✓ Need to overcome ADHD in children
- ✓ Need for proper care and help for children with ADHD

The seminar provided awareness to them of the problems of ADHD children. After the seminar ended the teachers were personally interviewed using structured interview schedules in areas of the specific nature of the children's problems in the school environment, special focus on ADHD symptoms in children, which consisted of both open and closed ended questions including demographic information about teachers. The analysis of the interview added to the existing information about the classroom environment in which children spent seven to eight hours daily excluding holidays. The same procedure was repeated in all schools selected.

From these interviews, specific and review of existing literature from books journals, research updates, and recent newspapers cuttings generated abundance knowledge about ADHD in children. From the present reservoir along with DSM-IV criteria relevant themes were generated. On the basis of these emerged themes, a list of items was prepared for each subtypes i.e. Inattentive, Hyperactive/impulsive and combined type separately, so that the checklist not only helps in identifying children with ADHD but also to divide them according to subtypes also.

In appropriation with the present topic the focus being on method, I will not discuss analysis in detail. In order to authenticate the items of checklist, two experts in the area of psychology were asked to rate these items. Inter-item correlation was calculated to find out the consistency between the ratings of two experts. Statements or items were developed on each problematic or associated behavior. Existing checklists were also considered and existing gaps were marked and incorporated in the checklist. The checklist was formulated addressing the types of ADHD in children, the problems faced by the children themselves, their teachers and the peer group, the psychological effect that affects the day to day activity of the child having ADHD etc. Method of scoring and analysis was developed. A criterion for classification of children with ADHD and their subtypes was prepared. A set of 44 items was prepared. The items were divided in the light of the three subtypes of ADHD in children and these were the dimension (a) Inattentive, (b) Hyperactive/Impulsive(c) Combined. Development of items proved to be very time taking and difficult process throughout the research.

Next step in the pilot study was to administration of the checklist which was named 'ADHD Checklist & Rating Scale'. For this purpose also the same five schools were again contacted. The teachers who attended the seminars were asked to list the students who according to them met the criteria of problematic children in their respective classes. After that each

teacher was requested to fill in the checklist for each child listed by them. For each child I was preparing a demographic profile which would help in further understanding of the child. Then each form was collected from the concerned teachers and the same process was repeated in all the schools selected. It was seen that no question was left unanswered before collecting the checklists from the teachers. I thanked each teacher and promised them that they will be provided with feedback.

Scores on the checklists were entered in SPSS for analysis. Administration and assessment of the checklist on pilot subjects in exactly the same way as it will be administered in the main study helped to provide an idea about the strength and weaknesses of the procedure adopted. Here it was found that the instructions read out to the teachers though were apt, needed to be written down instead of read out so that it provided more clarity without any confusion. If the instructions were written down the teachers/respondents could read any time when they have problems during assessing the checklist. After administering the checklists the teachers were asked to give their feedbacks which helped in identifying ambiguities of items difficulty in understanding the language of the items and unnecessary items were removed. Another aim was to record the time taken to complete the ADHD Checklist & Rating Scale' and decide whether it is reasonable to include all the items or not. It was concluded that the time taken in administering 'ADHD Checklist & Rating Scale' was reasonable. Most of the teachers hesitated in answering one question which was later removed from the list of items and was in re-worded in so that the answer can be interpreted in terms of the information that is being required.

It has been said that pilot studies are likely to be "underdiscussed, underused and underreported" (Prescott and Soeken, 1989 p60). Well-designed and well-conducted pilot studies can inform us about the best research process and occasionally about likely outcomes. Therefore investigators should be encouraged to report their pilot studies, and in particular to report in more detail the actual improvements made to the study design and the research process. Given below are the conclusions drawn from the outcome of the pilot study.

CONCLUSIONS DRAWN

- ✓ It helped in shortening and revising the 'ADHD Checklist & Rating Scale' developed to identify children with ADHD

- ✓ It helped in assessing adequacy and feasibility of ADHD Checklist & Rating Scale' and the procedure involved in scoring and analysis
- ✓ It helped in assessing the research plan and research design of the study
- ✓ It helped in understanding whether the research protocol is realistic and would be workable in field
- ✓ It helped in establishing whether the sampling frame and techniques of data collection are effective in accordance with the objectives and hypothesis of the research design
- ✓ It helped in extracting and working on logistical problems which might occur using proposed methodology
- ✓ It helped in detecting what resources (finance, staff) are needed for a planned study
- ✓ It helped in understanding the contribution of pilot study in actual improvements made to the study design and the research process
- ✓ Though it took six whole months in pilot study much time was saved in main study.

There were three schools which did not give permission and one of it withdrew after the first step which was very sad and disheartening.

REFERENCES

- [1] Baker, T.L. (1994), *Doing Social Research* (2nd Edn.), New York: McGraw-Hill Inc.
- [2] Center for Mental Health in Schools (2013). Schools and the challenge of LD and ADHD misdiagnoses. Los Angeles: Author at UCLA. <http://smhp.psych.ucla.edu/pdfdocs/ldmisdiagnoses.pdf>
- [3] Lindquist, R. (1991). Don't forget the pilot work! *Heart Lung* 20: 91-92.
- [4] Muoio, R., Wolcott, L., and Seigel, H. (1995). A win-win situation: The pilot program. *Journal of Continuing Education in Nursing*. 26: 230-233.
- [5] Teijlingen, E, R., & Hundley, V. (2001) The importance of pilot studies Sociology at Surrey University of Surrey social research UPDATE ISSUE 35 T (ISSN: 1360-7898)
- [6] Prescott, P.A. and Soeken, K.L. (1989), The potential uses of pilot work. *Nursing Research* 38: 60-62.