CHAPTER FOUR

METHOD

4.1 Research Design

The study was based on the Post-test only Control Group Design. There were two groups in the study, the experimental group and the control group. As it was not possible to assign the respondents within the the two groups randomly, this was a Quasi Experimental design.

The weakness of non-random assignment was compensated by selection of a well-matched control group.

With a well-matched control group, any significant difference on a matched comparison could then be assigned to the influence of the study variables.

A weakness of this design is that a pre-test of the participating adolescents was not undertaken. A pre-test would have allowed comparisons of the psychological variables of the participants before and after participating in the ARP programme. However, due to time constraints, a post-test only design was used. This was thus, a cross-sectional study which allowed comparisons at a point in time. This was considered suitable for an initial exploration.

4.2 Subjects

4.2.1 Sampling Design

The Secretariat of the ARP Programme is the Ministry of Youth and Sports Malaysia. The researcher thus worked closely with the officials from the Ministry to identify the participants as well as obtain the necessary permission to undertake the field study.

The ARP Secretariat at the Ministry did not have a comprehensive list of ARP participants registered with the Programme. It did however, have a list of participants who had qualified for the Bronze Award. Almost all the participants were those from the original batch of participants who had registered with the Programme when it was first launched in May 1992. The officer-in-charge estimated that to date, more than 2,100 participants had registered with the Programme, and were participating at various levels, that is, some were working towards the bronze, and others towards the silver. There was as yet no one qualified with silver who was working towards the gold award. Unfortunately, the Ministry only had a list of those who had qualified for the bronze, and were in fact, waiting for the ceremony for the handing over of the award. This list contained 1,130 participants from 40 groups throughout the country.

The researcher was also informed that since the launching of the *Rakan Muda* Programme about three months earlier, there had been a substantial slow-down of the promotion and implementation of the ARP Programme. While the ARP Programme had been aggressively promoted throughout Malaysia since its launching , the

emphasis recently had shifted to the newer *Rakan Muda* Programme. Although the ARP Programme had been classified as one of the programmes under the *Rakan Muda* Programme, specifically under *Rakan Masyarakat* (Community Friends), the popularity and significance of the ARP Programme had been tremendously reduced.

Even so, in some areas there was still reasonable continuity of the Programme. Areas that were identified where the programme was still relatively active were Manjung District in Perak, the groups in Wilayah Persekutuan and the groups in the district of Johor Bahru.

Further, at that time, there was to be a joint ARP Camp at Port Dickson. The Programme was to be attended by about 100 participants from Malaysia and Singapore, that is, 50 from Malaysia and 50 from Singapore. The participants from Malaysia were to be selected from groups all over Malaysia. The Minsitry had sent a circular about the programme to ARP groups that were considered still active, requesting them to nominate two or three members to participate in the Camp. This being an international programme, the leader of the groups concerned probably chose the most active members to particpate in the Port Dickson Camp. As this sample had participants from all over Malaysia, and thus had some representation of a national sample, it was decided to interview all the Malaysian participants at the Camp. Permission to do so was obtained from the Project Officer in the Ministry.

Thus, it was decided that the experimental group would be made up of four groups:

    i.   All Malaysian participants from the ARP camp in Port Dickson

    ii.   All participants in Manjung District

    iii.   All participants in Wilayah Persekutuan

    iv.   All participants from the district of Johor Bahru

It was anticipated that about 200 ARP participants would be obtained for the experimental group. This total reflected about 10% of the total number of adolescents participating in the programme, and was considered sufficiently large to observe whether there were significant differences between the ARP and non-ARP group.

For the control group, it was decided that 150 students would be contacted in Manjung, involving non-participants of the programme. The students would be in the age range of 14 - 19. This age group was chosen as the researcher was made to understand that most of the ARP participants began to get involved in the programme, in the non-examination years, that is Form Two and Form Four, when they were in fact aged 14 and 16 years old. Since the programme had been in operation for about 3 years, it was expected that the age of the ARP participants would be in the ranges of 14 to 19. Thus, the aim here was to acquire a control group as similar as possible to the experimental group.

The control group was selected based only on the criteria of age. Theory and past research indicated that age plays a significant role in identity development. With increasing knowledge, experiences and cognitive ability, a person develops a clearer sense of his personal identity with advancing age.

The control group was not selected based on the criteria of race or gender. While the relationship between age and identity development has been clear, the relationship between gender as well as race and identity development has not been very clear. While there have been suggestions that there are differences, different researchers have indicated different results on what these differences were. Further, it was also convenient for the researcher to select the participant based on age as all that he needed to do was ascertain the age range required and invite only those within the age range to participate in the study. The school selected for the control group appeared to have a disproportionately large female as well as Malay population. Thus, it would have been difficult to select based on gender as well as racial criteria.

4.3 Procedure

Altogether there were for major groups surveyed in the research. The groups were the participants from the Malaysia/Singapore ARP camp in Port Dickson, the group from Manjung District, Perak, the groups from Wilayah Persekutuan and the groups from Johor Bahru.

The first group to be surveyed were the participants at the ARP Camp in Port Dickson. At the Camp, the Malaysians were separated from the Singapore participants. All Malaysians present at the camp were surveyed. Altogether, 56 participants participated in the survey. There were 5 groups in the Malaysian camp as follows:

Table 4.1 : Malaysian Groups in the Port Dickson Camp

Institution/Group	No. of Participants
Wilayah Persekutuan Group	37
MRSM Muar	3
MRSM Jasin	3
Sekolah Sri Garden	9
Maktab Perguruan Ilmu Khas	4

The second group of participants interviewed were from Manjung. The local youth officer was approached for his support and assistance to undertake the research on both the experimental and control group.

The researcher was informed that the ARP participants were those that had joined the programme when it was first launched. No new group had been formed since. To contact the experimental group there were some difficulties. Most of those who had registered and participated in the programme had left school, either after their *Sijil Pelajaran Malaysia* (Malaysian Certificate of Education) or *Sijil Tinggi Persekolahan Malaysia* (Higher School Certificate). Some were waiting for examination results, and others had moved to bigger towns either to continue their education or get jobs. Still others were unemployed.

The Department identified 120 participants that had been registered with the Programme. The local youth officer sent a letter to all the participants informing them of the study as well as calling them to attend a briefing and discussion on the future of the Programme.

On the day of the meeting, a total of 53 participants turned up. After an introductory talk by the Youth Officer, the researcher undertook the study. All those who attended were asked to complete the questionnaire.

The approach to call the Control Group was different. In a semi-residential school in Sitiawan (the only school with Form Six), all students in Form 2, to Form 6, were informed by the School Supervisor during assembly, that there would be a talk on Career Development on a certain Saturday. They were also told that they would be asked to complete a questionnaire for some research being undertaken.

On the day of the talk, 102 students turned up. Most of the students who had turned up were those staying at the hostel. Again after an introductory talk by the local officer the researcher undertook the study. All students who attended on that day were asked to fill in the questionnaire. The questionnaire that they completed was exactly the same as that filled by the experimental group. After the research, a talk on Career Development was given by an officer arranged by the Department.

The next group interviewed was the Wilayah Persekutuan group. Again this group had been identified as a relatively active group by the Ministry. The researcher approached the Head of the Unit and requested his assistance and support. He was informed by the Head that he was organising a recreation programme for 45 of his members. Further, the Head of unit invited the researcher to undertake the study on the day of the progarmme. Thus on the day of the programme, the researcher was there early to undertake the survey before the programme began. He discovered however, that out of the 45 who came, 19 had already attended the Camp in Port Dickson and thus had already answered the questionnaire. Thus, they were excluded from the sample. The remaining 26 participants were then briefed and they filled the questionnaire.

The final group interviewed were from Johor Bahru. The researcher was informed by the local youth officer in Johor Bahru that 8 schools in the vicinity of Johor Bahru had recently started and were actively participating in the Programme. She further estimated that there were about 75 ARP participants in the 8 schools.

To contact the participants, the local youth officer wrote to the schools requesting the Head-Master in the respective schools to inform the students to attend the survey being undertaken. On the day of the research, altogether 56 students from the 8 schools were present.

The procedure in carrying out the research for both the experimental and control group was similar. Both groups completed the same questionnaire. At the beginning each respondent was given the questionnaire and a free pen. The participants were then briefed on how to fill the questionnaire. They were told to answer all the questions. They were to choose only one of the choices given, that is the choice that represented their views or most closely represented their views. Then the researcher proceeded section-by-section and discussed one or two example questions and answers from each section to give them an idea of the questions asked and the choices available. The participants were not told the actual reason of the research, except that this study was being undertaken to obtain opinions of ARP participants (for ARP participants) on various personal and current issues. For the control group, the researcher explained that the purpose of the study was to obtain the opinions and aspirations of Malaysian adolescents. Throughout the survey, the researcher was present. All inquires were answered. The participants had no difficulty in answering the questions. They took 30 - 45 minutes to complete the questionnaire. The questionnaires were then collected to be analysed later.

The total number of respondents who participated in this research were 282 respondents. Of these, 180 were in the experimental group, while 102 were in the control group. The experimental group were from 7 institutions and groups as follows:

Table 4.2: Organisation of the ARP Group

Institution	Frequency	Percentage
Wilayah Persekutuan Group**	63	35.0%
Negeri Johor Group	56	31.1%
Negeri Perak Group	42	23.3%
Sri Garden School*	9	5.0%
Maktab Perguruan Ilmu Khas*	4	2.2%
MRSM Muar*	3	1.7%
MRSM Jasin*	3	1.7%
TOTAL	180	100%

* Interviewed at the ARP Camp in Port Dickson
** Includes the participants from Port Dickson as well as those interviewed in Kuala Lumpur

The majority of the participants, that is more than 89%, were from three institutions, namely the Wilayah Persekutuan group, the Johor group and the Perak group.

The control group was from one school, that is, Sekolah Menengah Ahmad Boestamam, Manjung, Perak comprising of students from Form 2 to Form 6, aged 14 to 19.

4.4 Questionnaire

The research questionnaire measured 6 variables, that is identity development, self-esteem, social responsibility, attitude towards authority, social skills and goal-setting. The identity development scale was developed by the researcher while the other scales were back-translated (Brislin, 1970) from existing scales and modified.

The research questionnaire had 5 sections. Section A attempted to determine the status of the respondents. The first question that was asked was whether he/she was an ARP participant. Those that were not ARP participants, were asked to circle "No" for the first question and go straight to Section B. Those who were participants, circled "Yes", and further had to give details of their organisation, date of registration and the level of their participation, that is, whether they were at the level of working towards bronze, silver or gold. After answering Section A, the participants continued with Section B.

After Section A, there were 5 more sections. Section B, which had 20 items, measured identity status. Section C, which had 21 items, measured self-esteem, social responsibility and attitude towards authority. Section D, which had 20 items, measured social skills effectiveness and goal-setting. Altogether there were 61 items measuring 6 psychological variables, that is, identity development, self-esteem, social responsibility, attitude towards authority, social skills effectiveness and goal-setting.

From the pilot, the reliability of the scales were as follows:

Table 4.3 Reliability of Scales in the Final Questionnaire

Scales	No. of Items	Reliability: r-value	p-value
Identity Development Scale	20 items	0.68	0.001
Self- Esteem Scale	9 items	0.59	0.001
Social Responsibility Scale	6 items	0.72	0.001
Attitude towards Authority Scale	6 items	0.69	0.001
Social Skills Scale	9 items	0.60	0.001
Goal-setting Scale	11 items	0.71	0.001

Section B, which had 20 items, measured the identity status of the respondents. The overall reliability of the scale was 0.68 at the p-value of 0.001. There were 4 sub-scales in the test. Out of the 20 items, there were 5 items measuring career status, 5 items measuring political status, 4 items measuring religious status and 6 items measuring interpersonal status.

For each item the respondent was to choose from 4 choices, each choice was representative of one status level. The identity score of the respondent was to be determined by summing the scores chosen. Thus, the overall scores were in the range of 20 to 80. Similarly, for each sub-scale the identity score was determined by summing the scores on that sub-scale. Thus, for the career and the political sub-scales the identity score was in the range of 5 to 20. For the religious sub-scale, the scores varied from 4 to 16, while interpersonal scores ranged from 6 to 24. The Identity Status Instrument was self-administered.

Section C, which had 21 items, measured self-esteem, social responsibility and attitude towards authority. The scoring for all three scales was on a 5-point Likert scale, with answers ranging from "strongly disagree" to "strongly agree". For all three scales scoring was done by summing the scores after adjusting the scores of reversed items.

Self-esteem was measured by a 9-item scale. The reliability of the scale with modifications after the pilot was 0.59 at the p-value of 0.001. Social responsibility was measured by a 6-item scale. The reliability of the scale was 0.71 at the p-value of 0.001. Attitude towards authority was measured by a 6-item scale. The reliability of the scale was 0.69 at the p-value of 0.001.

Section D, which had 20 items, measured social skills and goal-setting. The social skills scale was made up of 9 items. It was also scored on a 5-point Likert scale, with answers ranging from "always admire" to "always dislike". Scoring was done by summing of the individual scores. The overall reliability of the social skills effectiveness test was 0.60 at the p-value of 0.001.

The goal-setting score had 11 items and was scored on a semantic differential scale. The answers ranged from low purpose statements to high purpose statements. The individual scores were summed to get the total score. Scores ranged from 11 to 77. The overall reliability of the instrument was 0.71 at the p-value of 0.001.

In the final section, that is Section E, of the questionnaire, the background of the respondents was determined. Raw data was obtained on the race, age, sex and the academic level of the participants.

4.5 Data Analysis

It was assumed that the variables being measured were normally distributed over the population. Further, for all the 6 scales in the questionnaire, the interval level of measurement was used. Thus, parametric testing was used in the data analysis.

Firstly, t-test was used to compare the means of the ARP and non-ARP group. The t-test was used to ascertain whether the means of the identity scores as well as the means of the self-esteem, social responsibility, attitude towards authority, social skills and goal-setting scores were significantly different between the experimental and control groups. The number of respondents in the experimental and control group, that is 180 and 102 respectively, were considered sufficiently large to allow the use of statistical analysis.

Additionally, t-tests were used to ascertain whether the identity scores were significantly different between male and females, Chinese and Malays as well as between different age groups in the experimental group.

Correlation analysis provided information about the strength of association between two or more variables. Pearson correlation analysis was used to determine the relationship between identity development and self-esteem, social responsibility, attitude towards authority, social skills and goal-setting behaviours.

Finally, regression analysis was used to estimate a linear relationship between a dependent and one or more independent variables. Regression analysis was used with identity score as the dependent variable and self-esteem, social responsibility, attitude towards authority, social skills and goal-setting behaviours as the independent variables, to understand the interaction and contribution of these variables towards variance in the identity score.

4.6 Validity and Reliability of the Final Questionnaire

The above questionnaire, which contained 6 scales, was used in the actual field study. Thus, the six scales containing 61 items were tested for reliability and validity. The 6 scales tested for reliability were the identity development scale, the self-esteem scale, the social responsibility scale, the attitude towards authority scale, the social skills scale and the goal-setting scale. The reliability of the scales and the validity of the items are summarised below. (Detailed description of the validity validity of each item for all the 6 scales are located in Appendix A).

Table 4.4: Summary results of Reliability and Validity of Items in the Questionnaire

Scale	No. of items	Reliability	No. of valid items	p-values of valid items	No. of items not valid
Identity Development	20	0.66**	13	11 items= 0.001 2 items= 0.01	7
Self-esteem	9	0.43**	7	5 items = 0.001 2 items = 0.01	2
Social responsibility	6	0.34**	5	5 items = 0.001	1
Attitude towards Authority	6	0.39**	4	4 items = 0.001	2
Social Skills	9	0.58**	9	8 items = 0.001 1 items = 0.01	0
Goal-setting	11	0.74**	11	11 items = 0.001	0

** significant at 0.001

The identity development scale had 20 items, comprising of 4 sub-scales. The career identity scale had 5 items, the political identity scale had 5 items, the religious identity scale had 4 items and the interpersonal identity scale had 6 items. Each of the items were tested for validity.

Of the 5 items in the career identity scale, one had a p-value of 0.001, another 0.01 while 3 items were not valid. Of the 5 items in the political identity scale, all 5 items had a p-value of 0.001. Further, of the 4 items in the religious identity scale, all 4 items had a p-value of 0.001. Finally, of the 6 items in the interpersonal identity scale, one item had a p-value of 0.001, one item a p-value of 0.01 while 4 items were not valid.

Thus, as shown in Table 4.4.Thus in summary, of the twenty items in the identity development scale, 11 items had p-values of 0.001, 2 items had p-values of 0.01 while 7 items were not valid.

The self-esteem scale had 9 items. Of these, 5 items had p-values of 0.001, 2 items had p-values of 0.01 and finally 2 items were not valid.

The social-responsibility scale had 6 items. Of these, 5 items had p-values of 0.001 while one item was not valid.

The attitude towards authority scale had 6 items. Of these, 4 items had p-values of 0.001 while 2 items were not valid.

The social skills scale had 9 items. Of these, 8 items had p-values of 0.001 while one item had a p-value of 0.01.

The goal-setting scale had 11 items. All 11 items had p-values of 0.001.

All 6 scales had an acceptable reliability of p-value of 0.001. Thus, generally it can be said that the scales used were reliable. Scale reliability range from 0.34 to 0.66.

Thus, all 6 scales used in the study were reliable at p-value 0.001. Of the total of 61 items, 44 items had p-values of 0.001, 5 items had p-values of 0.01, while 11 items were not valid. The scale with the most non-valid items, that is 7 out of 20, was the identity development scale. This scale was developed by the researcher for the first time and many more retests may be needed to further improve and refine the scale. The scale was developed after undertaking 2 pilot surveys. Here, at attempt was made to improve its reliability, which succeded, but to a limited extent. The measure needs to be further strengthened empirically.