CHAPTER-V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary, conclusions and recommendations has been presented in this chapter.

5.1 Summary

Nepal is a landlocked, agro based and livestock dependent country with diversified geo-ecological and climatic conditions. It stretches over a length of 850 km in east-west and width of only 145-241 kms in north-south side. It is surrounded by two big countries, China in the north and India in the east, south and the west. The country is divided further in three eco-zones, namely Mountains, Hills and Terai.

Nepal is divided into five development regions, fourteen administrative zones and 75 districts. The local administrative unit of the country remains 58 Municipalities and 3,985 Village development committees till now. For this study purpose, the Himalayan eco-zone is left out of the consideration, because the density of population is too scarce and coverage is also difficult.

In regards to the factors for motor ability, different scholars have mentioned differently ranging from 5 to 21 factors. Barrow (1977) had included 9 factors whereas Clark (1978) had included 7 factors and Johnson et. al (1966) had listed 6 factors for motor
performance. On the other hand Fleishman (1964); had listed 21 factors, among them 11 for physical fitness and 10 for motor ability, but Clayne and Hirst (1980) had mentioned only five factors for motor performance. Among them most of the experts have given the list of power, speed, agility, flexibility, coordination and balance as the factors recommended to measure motor ability, but very few have recommended Reaction time and Kinesthetic sense as factors for motor ability test. Therefore, an attempt was made by researcher in this study to include those two as well and make 8 factors for motor ability test and verified their value of factor loading to each other.

The researchers have indicated in their studies and it has also been observed by the researcher himself that eco-zones, climate and altitude also do effect on motor performance. As Sing, Kundan (1990) stated in his study that Nepali boys were better in motor fitness than Indian boys residing in the same hostel by attributing this to the climatic conditions. Therefore, in this investigation an attempt was made to see the effects of different eco-zones on the motor performance of Nepali boys. But the main purpose of this study was to develop motor ability tests battery for pre-teenage boys from different topography of Nepal, while covering three eco-zones of the country Hill, Valley and Terai boys of aged ranged from 11+ to 13+,
which group generally known as physically strong and active pre-teenage boys.

In the initial stage after laborious consultation with different references used by the different scholars in measuring motor ability of the respondents, some available, relevant and used by items were listed and consulted with subject expert, then after those items which were too easy to measure intended factor and homogeneous, on the other hand those items which have no discriminating quality and least correlated to the said factors were deleted. Finally among 32 test items only 18 items were selected for pilot study. In second phase of the study those 18 items were tested on 150 respondents representing three eco-zones and 50 respondents from each.

Thus the data collected on 150 boys in the pilot study from Hilly, Valley and Terai eco-zones of Nepal on Eight motor factors by conducting 18 tests was subjected to factor analysis utilizing the principal axises for the preliminary rotation and possible source of variance among the variables. Inter correlation matrix among the variable was obtained which was further subjected to factor analysis for extracting unrotated factors and therefore, on the basis of factor loading, linear Regression was prepared to finalize the specific motor ability tests battery for pre-teenage boys of Nepal.
In the final stage data were collected on 900 subjects for the development of norms. The percentile scale was used to prepare the norms for the motor ability tests of the boys concerned. Analysis of variance (ANOVA) was employed to evaluate the variances among subjects of three eco-zones of Nepal namely Hilly, Valley and Terai on different motor ability factors, followed by Scheffe’s Post Hoc test. Significance of mean differences in motor ability factors between urban and rural were tested by applying 't' test.

On the basis of factor analysis a motor ability tests battery consisting of vertical jump, 30m dash, side step, bridge-up test, bass-stick lengthwise, stick balance, tennis ball wall bounce, Nelson FRT and blindfold ball dribble was constructed which measured power, speed, agility, flexibility, balance, coordination, reaction time and kinesthetic perception respectively. The reliability of this test battery was ranged from .76 to .89 for different test items whereas validity ranged from .76 to .91 and objectivity from .78 to .89.

Urban and Rural boys of Nepal differed significantly on power (t= 3.13), speed (t= 13.37), agility (t= 2.15) and coordination (t= 7.63) whereas they did not show any significant differences on other factors of newly constructed motor ability tests battery. However, urban hill, valley and terai boys shown significant mean differences in almost all factors of motor ability except flexibility. Urban valley
boys were superior in power, balance, coordination, reaction time and kinesthetic perception than urban hill and terai boys. Terai boys were more agile and flexible than their other counterparts whereas urban hill boys were faster than boys of valley and terai urban area.

Rural hill, valley and terai boys differed significantly in speed (F= 119.31) agility (F= 29.71), flexibility (F= 34.86), balance (F= 13.49), coordination (F= 29.29) and reaction time (F= 5.01) factor of motor ability however, they did not show any significant mean differences in power, balance (static) and kinesthetic perception. Rural valley boys were better in power, agility, balance and kinesthetic perception as compared to their hill and terai counterparts. Whereas rural terai boys were faster more flexible more coordinator and quick in reaction time as compared to hill and valley school boys of Nepal. Percentile norms of motor ability test battery were prepared nation wide as well as eco-zone and rural urban area wise.

5.2 Conclusions

On the basis of findings and within the limitations and constraints of the study following conclusions has been made:

1. A motor ability tests battery consisting of vertical jump, 30m dash, side step, bridge-up test, bass-stick lengthwise, stick
balance, tennis ball wall bounce, Nelson FRT and blindfold ball dribble was constructed.

2. This motor ability tests battery measured power, speed, agility, flexibility, balance, coordination, reaction time and kinesthetic perception of Nepali school boys.

3. The newly developed Motor Ability Tests Battery was reliable, objective and valid.

4. Urban and Rural boys of Nepal differed significantly on power, speed, and agility in favour of urban boys and coordination in favour of rural boys.

5. Urban hill, valley and terai boys shown significant differences in almost all factors of motor ability except flexibility.

6. Urban valley boys were superior in power, balance, coordination, reaction time and kinesthetic perception than urban hill and terai boys.

7. Urban Terai boys were more agile and flexible than their other counterparts.

8. Urban hill boys were faster than boys of valley and terai urban area.

9. Rural hill, valley and terai boys differed significantly in speed, agility, flexibility, balance, coordination and reaction time factor of motor ability.
10. Rural valley boys were better in power, agility, balance and kinesthetic perception as compared to their hill and terai counterparts.

11. Rural terai boys were faster, more flexible, more coordinated and quick in reaction time as compared to hill and valley school boys of Nepal.

12. Percentile norms of motor ability test battery were prepared nation wide as well as eco-zones, rural and urban area wise for pre-teenage boys of Nepal.

5.3 Recommendations

On the basis of conclusions of this study the following recommendations are made:

1. The physical education teacher/coach may focus more on the motor ability test of the students, before they pick-up for certain sports events or training.

2. This specific motor ability tests battery could be utilized by the physical education teacher/coach/trainer for evaluation, ranking, screening, classification and selection of their boys.

3. These percentile norms could be utilized by any other researchers and concerned persons.

4. In other country also this motor ability test battery, can be used to test their respondents.
5. Similar studies could be conducted in other eco-zones and geographical regions with wider coverage in Nepal as well as for girls also.