Background: There are validated methods for assessing physical activity. For tests conducted in a laboratory, the respiration chamber or calorimetry may be used, while a more sophisticated method and considered as the gold standard is the doubly labeled water method. These procedures are expensive and require procedures that are feasible in controlled environments. For a population survey, the most practical method used is the questionnaire method. It can identify specific activities and when used together with frequency, duration and employing metabolic costs from published tables may accurately predict different levels of physical activity and energy expenditure.

Objective: To establish the validity of the method used in assessing physical activity by comparing the energy expenditure values from the self-administered questionnaire with the indirect calorimetry method.

Methods: Thirty (30) subjects, aged 20-65 years old were randomly selected for the study. The participants were asked to accomplish a Physical Activity Questionnaire for three days which gathered information on the activities performed as well as the length of time spent per activity. The activities were classified as self-care, occupational, housework and recreational. The energy cost of activities were derived from the Metabolic Equivalent Activity Chart (MET) of Naughton. To validate the results derived from the questionnaire, basal metabolic rate (BMR) and energy cost of basic activities of all the thirty subjects were measured through indirect analyzer. To determine the time spent per activity, time and motion study, actual observation and interviews were conducted for three days. Paired t-test using the STATA Software package was employed to analyze whether the mean of the 2 groups were statistically different from each other. The same analysis was done in comparing values derived from the classification of activities: self-care, occupational/industrial/housework and recreational.

Results: The mean TEE for the questionnaire and the indirect calorimetry methods were 2280.34 and 2307.23 respectively. Result of t-test performed on the 2 groups revealed that they were not significantly different from one another at 0.05 level. Activities were classified into 3 categories namely: (1)self-care, (2)housework and occupational combined together and (3)recreational. Self-care activities included sleeping, resting, sitting, personal necessities/toilet activities, showering and light standing. The time spent in this category was both 11 hours giving about 46% of the total activities. All activities done during work and household tasks were classified as occupational and housework. Just like the self-care category, the time used in this activity was also 46% or 11 hours for the 2 methods.

All leisure activities whether sitting, standing and lying, sports activities irregardless of whether it was light, moderate or heavy and all types of exercise belong to the recreational group. The number of hours spent for this category was the same for the 2 methods, which is 2 hours or equivalent to 8% of all activities. In the distribution of energy expenditure by classification of activities, although different values were
obtained on the amount of energy expended, said differences did not give a significant result at 0.05 level. **Conclusion and Recommendations:** The physical activity questionnaire developed showed validity and applicability in terms of energy expenditure and time spent to this sampled group of population studied. It is possible that because of the limited number of subjects studied, a different outcome may appear if the study will be applied to other population groups and the application of the method to larger populations of free-living people may always be open to question and accuracy. It is recommended that more subjects be considered in the validation study and reliability and repeatability tests be performed for a better and conclusive result.