In recent decades the main focus of health policies in Sub-Saharan Africa has been communicable diseases; a relatively low burden of diabetes mellitus and cardiovascular diseases has been reported. However, there is clear evidence of the rising incidence and prevalence of non-communicable diseases (NCD) in developing countries. It is estimated that by 2020, NCD in Sub-Saharan Africa will be almost 50% of the burden of disease. Rapid urbanization with changes in lifestyle, especially dietary habits and physical activity patterns could explain at least partially the ongoing epidemiological transition.

Population studies on other continents have demonstrated the protective effect of physical activity in the primary prevention of diabetes and cardiovascular risk factors. Evidence to support or disprove this assumption is lacking in African populations. Where available, conclusions are mostly based upon self-assessment of activity level and classification into broad activity groups, and more recently a 7-day recall of activity. Studies of physical activity in these populations were not mainly designed to address epidemiological purposes, some attempted to compare measurement instruments or measure interseasonal variation. There is a need for accurate epidemiological assessment of physical activity with regard to the rising burden of non-communicable diseases in these populations.

The question of the most appropriate method for population-based study of physical activity has been extensively debated, and questionnaires are the best consensual.

Objective To develop and validate a questionnaire for measuring physical activity within Sub-Saharan Africa.

Methods We designed the Sub-Saharan Africa Activity Questionnaire (SSAAQ), based upon existing questionnaires and an activity survey carried out in Cameroon. The questionnaire targeted past-year occupation, walking/cycling and leisure-time activities, and was administered by trained interviewers on two occasions, 10–15 days apart to 89 urban and rural consenting Cameroonians aged 19–68 years. Reliability was assessed by inter-interview comparison and repeatability coefficients (standard deviation of the test-retest difference). Validation was performed against a 24-hour heart rate monitoring and accelerometer recording.

Results The questionnaire was highly reproducible ($r = 0.95; P < 0.001$). The inter-interview difference did not differ significantly from 0, with a repeatability coefficient of 0.46–1.46 hours. Total energy expenditure from the questionnaire was significantly correlated to heart rate monitoring ($r = 0.41–0.63; P < 0.05$) and accelerometer measures ($r = 0.60–0.74; P < 0.01$). Subject’s self ranking of their activity did not match the questionnaire’s quartiles of activity.

Conclusions The present study presents the design and confirms the reliability and validity of SSAAQ in a rural and urban population of Cameroon and shows that subject’s self ranking of activity might not accurately serve epidemiological purpose.

Keywords Questionnaires; heart rate; energy metabolism; exercise; reproducibility of results; Africa; monitoring, physiologic; epidemiology methods

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method for this purpose. Several questionnaires have been
validated in various parts of the world, however socio-cultural
differences require the development and validation of a specific
questionnaire to be used in different populations. These
specificities also need to be taken into account when designing
valid internationally agreed questionnaire which would allow
for cross-country comparisons of epidemiological studies.

The present study, which is part of a project to tackle the
emerging pandemic of NCD in Sub-Saharan Africa, addresses
the design and validation of a questionnaire for the measure-
ment of physical activity—the Sub-Saharan Africa Activity
Questionnaire (SSAAQ)—to be used in epidemiological
surveys in these populations.

Material and Methods

Designing the questionnaire

The Sub-Saharan Africa Activity Questionnaire (SSAAQ) was
designed to be administered by an interviewer to allow for the
literacy level expected in the target populations, and the stand-
ardization of data collection. The percentage of the population
completing primary school in Cameroon is estimated at 64% and
69% for males and females, respectively.

The core was built upon existing validated questionnaires. The
SSAAQ is shown in the Appendix. We aimed to evaluate
occupation, leisure-time activity, and walking and cycling to
work over the past 12 months to account for seasonal variations
in activity. Frequency of performance, duration of sessions
and intensity were required for each activity reported. Twenty
volunteers from urban and rural Cameroon were asked to
provide us with a full listing of activities they had ever
performed and were administered the questionnaire for the
purpose of piloting. The questionnaire was revised accordingly.

Occupation

Job title and its corresponding code was recorded, with further
classification into three categories according to the type of activity performed, whether light, moderate or intense to avoid
misclassification of activity intensity between individuals with
the same job title, based upon the description provided by
Kriska et al. Duration of employment was recorded for each
job in order to allow for multiple occupations.

Walking and cycling

Pace and time were recorded.
Leisure-time activities that had been performed at least six
times over the past year were reported in terms of frequency
and duration. Past month leisure-time physical activity was also
recorded for the purpose of comparison with habitual leisure-
time activity.

Self-assessment of current year physical activity by the subject
was done using a closed-ended question: ‘how would you
describe your physical activity—nil, light, moderate, intense’.

Data interpretation

The average daily or weekly duration of each activity was
computed and the metabolic cost calculated using Ainsworth's
compendium. This metabolic cost is expressed as a metabolic
equivalent (MET) score which is the ratio of the working
metabolic rate divided by the resting metabolic rate. One
MET = 1 kilo cal per kg of body weight per hour (kcal.kg\(^{-1}\).h\(^{-1}\))
and represents the energy expenditure at rest. For occupation
1.5, 2.5 and 6 MET were used as energy estimate of light,
moderate, and heavy occupations, respectively. Estimates
of total energy expenditure were computed assuming that
the time not reported was spent at the resting metabolic rate
(1 kcal.kg\(^{-1}\).h\(^{-1}\)).

Calculations

\[
\text{Expenditure in MET} = \frac{(\text{months/yr}) \times (4.3 \text{ weeks/month}) \times (\text{days/week}) \times (\text{ACTIVITY hours/day})}{365 \text{ days/yr}}
\]

Testing for reliability and validity

The study population consisted of a convenience sample of 102
urban and rural dwellers recruited from Yaoundé, the capital
city of Cameroon, and Bafut, a rural area of western Cameroon
where subsistence farming is the main occupation. We aimed
for equal gender, age group and residence distribution. Thirteen
subjects were excluded from the analysis because of incomplete
data due to participants’ time constraints. Eighty-nine subjects
aged 19–68 years were therefore included in the analysis; their
characteristics are shown in Table 1.

Procedure

The questionnaire was administered to each participant on two
separate occasions 10–15 days apart. This time span between
the two interviews was felt to be long enough to avoid simple
recall of previous answers, but short enough to avoid consistent
change in activity over time.

Between the two interviews, each subject wore, over a
24-hour period, either a motion sensor, a heart rate monitor or
both depending on their acceptability. For personal convenience
of the volunteers, only six subjects wore a motion sensor in the
urban sub-sample. The motion sensor used was a Caltrac™
accelerometer (Hemokinetics), consistently worn on the anterior
left hip by the subjects using an adjustable-size belt that records
bodily movements and expresses the results as kilocalories of
energy expended, taking into consideration age, sex, weight and
height entered prior to the recording. Heart rate was recorded
using a Polar Accurex Plus™ heart rate monitor (Polar,
Finland) consisting of a chest transmitter to detect heart rate
and a wrist watch which records the minute-to-minute heart
rate from the transmitter. Data were subsequently downloaded
to a computer using a serial interface with its communication
software (Polar Training Advisor). Day-period recordings were
used in the analysis.

The questionnaire was administered by two trained
interviewers at each site. Coding and categorization especially
for occupational activity needed standardization. This was
achieved by role-play sessions in addition to the guidelines
provided. The Bafut 8-day/week calendar was taken into
consideration, and current events were used as references to
help in frequency and duration recall.

Statistical analysis

Data were analysed using SPSS 7.5 for Windows software.
Results are expressed as means and standard deviation or
The overall correlation coefficient between time reported in the two interviews in this population was 0.95 (P < 0.001). The total estimates of energy expenditure from the questionnaire were similar in both interviews (P < 0.001).

Occupational activity was similar between the two interviews for both sexes in urban and rural populations in terms of time spent in activity and energy expenditure (P < 0.001). The Spearman rank order correlation coefficients are shown in Table 2. The mean difference between the two interviews was 1.86 min, with a repeatability coefficient of 0.8 hours for the whole sample. The repeatability coefficient was R = 0.94 hours (95% CI: –0.24, 0.11) for the subjects <30 years of age, R = 0.84 hours (95% CI: –0.13, 0.14) for subjects aged 30–49 years, and R = 0.74 hours (95% CI: –0.22, 0.12) for those aged ≥50 years.

Walking time records were highly reproducible with the inter-interview Spearman ρ above 0.74 in all age and sex groups for the expenditure and the time spent, even when accounting for the pace of walk (Table 2). Cycling was not computed because only three rural subjects cycled. The repeatability coefficient for the subjects <30 years, 30–49 years, and ≥50 years was R = 0.86 hours (95% CI: –0.12, 0.30), R = 1.12 hours (95% CI: –0.20, 0.16), and R = 0.58 hours (95% CI: –0.15, 0.10), respectively.

Leisure-time activity reports were also highly reproducible though less than the other sections of the questionnaire in the rural population. Indeed, in urban dwellers the reports of leisure-time activity are given with an inter-interview correlation coefficient between 0.94 and 1.0 (P < 0.001) while in rural populations it could be as low as 0.57 in some subgroups, though significant (P = 0.004) (Table 2). The repeatability coefficient for the subjects <30 years, 30–49 years, and ≥50 years was R = 0.72 hours (95% CI: –0.34, 0.51), R = 1.04 hours (95% CI: –0.24, 0.11) and R = 1.42 hours (95% CI: –0.31, 0.45), respectively.

**Low reproducibility group**

Further analysis of the subjects with the lowest agreement in leisure-time activity reports between the two interviews showed (inter-interview leisure-time difference >2 hours/day) there were 17 subjects, mostly rural (88%) with high physical activity related energy expenditure, and taking part mainly in environment.
leisure farming and housework with variability recorded in the estimation of time spent in those activities but not in their frequency. In this subgroup, the correlation between total expenditure computed from the two interviews was statistically significant ($r = 0.93; P < 0.001$).

Validity (Table 3)

Validity was assessed against motion sensor results expressed as movement count or energy expenditure estimates (kcal/day) converted to MET/day, and heart rate monitoring results expressed as area under the minute-to-minute heart rate curve and above individual resting heart rate.

Heart rate monitor versus questionnaire

Heart rate monitoring correlated significantly with daily occupational expenditure calculated from the questionnaire in both men and women of urban and rural settings ($P < 0.05$) with the lowest correlation coefficient in rural women ($r = 0.44$). Likewise, leisure-time physical activity correlated significantly with heart rate monitoring with the coefficient varying from 0.38 in rural women to 0.75 in rural men. Correlation with walking to work or for leisure varied from $r = 0.50$ to $r = 0.62$ ($P < 0.01$). As shown in Table 3, total energy expenditure estimates calculated from the questionnaire data were significantly correlated with heart rate variability in all subgroups with $r = 0.41$–0.63.

Motion sensor versus questionnaire

Correlation with motion sensor was analysed only in the rural population. Six subjects in the urban sample wore the motion sensor, because of the small sample size, no analysis was done on this measure. Motion sensor measurement of total energy expenditure correlated significantly with heart rate monitoring in both settings ($r = 0.75$; $P < 0.01$).

Table 2  Spearman rank order correlation between interview 1 and 2

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td><strong>Occupational activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours/working day</td>
<td>0.85</td>
<td>0.98</td>
</tr>
<tr>
<td>MET</td>
<td>0.97</td>
<td>0.78</td>
</tr>
<tr>
<td><strong>Walking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slow pace</td>
<td>0.87</td>
<td>0.85</td>
</tr>
<tr>
<td>Brisk pace</td>
<td>0.98</td>
<td>1.00</td>
</tr>
<tr>
<td>MET</td>
<td>0.96</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Leisure-time activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours/day</td>
<td>0.77</td>
<td>0.94</td>
</tr>
<tr>
<td>MET</td>
<td>0.80</td>
<td>0.94</td>
</tr>
<tr>
<td>Current year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours/day</td>
<td>0.57*</td>
<td>1.00</td>
</tr>
<tr>
<td>MET</td>
<td>0.68</td>
<td>0.98</td>
</tr>
<tr>
<td><strong>Total expenditure</strong></td>
<td>0.96</td>
<td>0.88</td>
</tr>
</tbody>
</table>

Unless otherwise specified, $P$ values are all $< 0.001$.

* $P < 0.01$.

Table 3  Correlation between physical activity estimated by the questionnaire, the motion sensor and heart rate monitor

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>N</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td><strong>Occupational activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate monitor</td>
<td>0.72**</td>
<td>0.44*</td>
</tr>
<tr>
<td>Walking to work and for leisure</td>
<td></td>
<td>0.56*</td>
</tr>
<tr>
<td>Motion sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate monitor</td>
<td>0.70**</td>
<td>0.38*</td>
</tr>
<tr>
<td><strong>Leisure-time activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate monitor</td>
<td>0.63**</td>
<td>0.74*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate monitor</td>
<td>0.63**</td>
<td>0.41*</td>
</tr>
</tbody>
</table>

* $P < 0.05$; ** $P < 0.01$.
expenditure did not correlate significantly with separate components of questionnaire-derived energy expenditure. The correlation coefficient was 0.42 and 0.40 (NS) for occupation, 0.47 ($P < 0.05$) and 0.23 for walking in rural women and men, respectively. The highest correlation was found with leisure-time activities in rural men ($\rho = 0.80, P < 0.001$). Total energy expenditure estimates from the questionnaire and total energy expenditure measured by motion sensor were significantly correlated in both women ($\rho = 0.74, P < 0.001$) and men ($\rho = 0.60, P < 0.01$).

Self-assessment of physical activity

The subjects’ evaluation of their activity did not correlate with estimates from the questionnaire or objective measures of activity. However, in the urban sub-sample none of those reporting light physical activity for the past year were found within the upper quartile of energy expenditure. Likewise, all the urban subjects reporting intense physical activity were found in the 3rd or 4th quartile of energy expenditure.

Discussion

It was our intention to design a questionnaire for the accurate assessment of physical activity in epidemiological studies in Sub-Saharan African populations. We developed the SSAAQ from existing questionnaires and an activity survey, and studied its reproducibility and validity among a group of rural and urban dwellers in the Republic of Cameroon. We report satisfactory repeatability and validity data based upon test-retest study and correlation with objective measurements of physical activity, achieved within an acceptable time for interview and coding.

The issue of objective reference measures for physical activity questionnaire validation has been extensively debated. Heart rate monitoring and motion sensor correlates well with doubly labelled water, the gold standard in free-living conditions. However, the behaviour changes induced by the use of a device are difficult to estimate. In the pilot phase of SSAAQ evaluation, a few subjects had to be re-examined because they stopped their habitual activity on the day they wore the equipment, being afraid of damaging it. Participants were therefore strongly advised to carry on with their normal activities during the study. Unfortunately, for practical reason, we did not perform calibration for the heart rate monitoring in the present study, and therefore studied individual heart rate variability as a reflection of activity status.

To compute energy expenditure, we used Ainsworth’s compendium of metabolic cost of activities. The compendium was based on measurements performed in a western population and might possibly reflect the activity-performance pattern. Indeed being a carpenter in a western country would not mean exactly the same as in a developing country, because of the type of equipment and the labour intensity of the job. Whether these data can be used in SSA without error is therefore questionable. To reduce the potential errors, a simple scale was used based upon the type of activity performed rather than the job title to estimate occupation related expenditure.

For energy expenditure estimates, MET were preferred to kcal. Indeed, using kcal would mean that a 100 kg person expends twice as much energy while walking than a 50 kg person, which is probably not true. Moreover, it is also not clear whether the relationship between energy expenditure and resting metabolic rate for a particular activity is the same for all individuals. Thus, there is a need for tables providing sex, age and weight specific reference values for energy expenditure per activity for all such studies. However, to date, MET are the best estimates of activity related energy expenditure, especially in epidemiological studies.

The aims and findings of the present study are consistent with the available literature, as the need to develop and validate an activity questionnaire accounting for population specificities is emphasized. The repeatability and test-retest correlation coefficients obtained are comparable to those previously reported, with a similar time span (2 weeks) between test and retest.

As could be anticipated, repeatability in our study population was higher than observed where a 5–11 months time span existed between two consecutive interviews. We chose a relatively short interval between interviews to avoid the influence of seasonal variation. However, the relatively low reproducibility observed in some subgroups of our study population may simply reflect their true activity pattern. We had only one strange report of hours of activity per day. Unstructured or non-systematic activity patterns have been reported in some groups in western countries, especially in children and the elderly. In Africa, Benefice reported similar findings in adolescent girls of rural Senegal. Global observation of SSA communities has never been reported. This might weaken the validity analysis based upon one 24-hour recording with objective measurements, and recording over several days might overcome day-to-day variation but not solve the question of seasonality in activity.

Total expenditure calculated from the SSAAQ in both the rural and urban subjects examined was correlated to heart rate monitoring and movement sensor data, with comparable coefficients as reported in previous questionnaire validity studies. For example, in the Pima Indians, Spearman $\rho$ varied from 0.27 to 0.80 with the motion sensor, which is comparable to that found in this study, which was 0.18–0.81.

Taken separately, the different components of activity as reported did not always significantly correlate with the motion sensor. However, they correlated well with heart rate monitoring, with the highest coefficients observed with walking in all subgroups but one. Indeed, most SSA rural populations depend on walking as their main method of transportation. This activity is well structured and probably among the most adequately reported during interview. It also represents the major difference between individual activity levels within a community. Its related energy expenditure was significantly higher in rural populations of all age groups in our study. Urban dwellers reported mean 5.5–5.8 hours/day of leisure-time activity without over-expenditure due to typical urban sedentary activities (cinema and TV watching, reading and writing, housework …). These data confirm those of a previous study that suggested high energy expenditure in rural populations where their habitual diet consist of rather high fat, alcohol and energy foods.

Indeed, Africa has 600 million inhabitants distributed among more than a thousand tribal groups originating from different physical environments, with variable literacy, cultural
background and lifestyle.\textsuperscript{18} It is therefore sociologically and economically complex, comprising hunter-gatherers, rural populations living on subsistence farming, and a rapidly growing semi-urban and urban population with a lifestyle varying from nearly rural to western type. This influences the type of activities and the method of transportation. Occupation might differ in pattern and intensity, as a result of seasonality and, because of low salary levels, people being dependent on having more than one job. Therefore, unlike westernized countries where the main difference in energy expenditure is mostly attributable to leisure-time activity,\textsuperscript{33} Sub-Saharan Africans’ physical activity might be much more variable.

In this light, the design of SSAAQ allowed for flexibility in activity patterns as observed in the target populations. Our results suggest that physical activity can be accurately assessed by means of appropriately designed and standardized questionnaire and data collection procedure in SSA communities. We suggest that our methods could serve as a basis for physical activity survey in SSA as they emphasize the socio-cultural and economic background of the population under study. However, as this study was conducted in two samples of Cameroonian, international standardization and validation of SSAAQ is needed.

**Grants and Acknowledgements**

This project was funded as part of the Essential Non-communicable Disease Health Intervention Project (ENHIP) by the DFID under the auspices of a DFID grant for the project health in the next millennium. ES received additional sponsorship from the Mediterranean Group for the Study of Diabetes (MGSD).

We acknowledge Drs AP Kengne, L Fezeu, S Dongmo and Mr E Minkoulou (Cameroon Essential Non-communicable Disease Health Intervention Project), KL Rennie (Cambridge, UK), Prof. D Simon (Créteil, France) and B Balkau (Villejuif, France), who provided the authors with assistance in designing, piloting, analysing and reviewing this project.

**KEY MESSAGES**

- The Sub-Saharan Africa Activity Questionnaire was based upon several existing questionnaires and aims at the evaluation of past-year occupational and leisure-time activity, and also emphasizes walking time.
- It is shown to be repeatable and valid in urban and rural Cameroonian suggesting that physical activity can be accurately assessed by means of appropriately designed and standardized questionnaire and data collection procedure in SSA communities.
- The design of SSAAQ allows for flexibility in activity patterns as observed in the target populations. We therefore suggest that our methods could serve as a basis for physical activity survey in SSA as they emphasize the socio-cultural and economic background of the population under study.
- International standardization and validation of SSAAQ is needed.

**References**


Appendix 1: The Sub-Saharan Africa Activity Questionnaire

### SECTIONS 1 & 2: OCCUPATIONAL ACTIVITIES; WALKING/CYCLING TO WORK (PAST YEAR)

<table>
<thead>
<tr>
<th>Job name</th>
<th>code</th>
<th>Date at start and finish (mm/yy)</th>
<th>months held</th>
<th>cycle to work</th>
<th>walk to work (min/day)</th>
<th>Job schedule</th>
<th>cat. A,B,C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>start finish</td>
<td></td>
<td>min/day</td>
<td>brisk pace</td>
<td>mo./year</td>
<td>d/week</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 3: LEISURE-TIME ACTIVITIES

In the table below, check all activities the subject did at least 6 times over the past year. Do not include activities related to his/her job.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housework</td>
<td>1</td>
<td>Aerobic dancing</td>
</tr>
<tr>
<td>Needlework</td>
<td>2</td>
<td>Swimming</td>
</tr>
<tr>
<td>Hairdressing</td>
<td>3</td>
<td>Gymnastics</td>
</tr>
<tr>
<td>Home repairs</td>
<td>4</td>
<td>Light traditional dance</td>
</tr>
<tr>
<td>Gardening (around the house)</td>
<td>5</td>
<td>Vigorous traditional dance</td>
</tr>
<tr>
<td>Gardening (around the house)</td>
<td>6</td>
<td>Classical dance</td>
</tr>
<tr>
<td>Painting</td>
<td>7</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Hunting</td>
<td>8</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Fishing</td>
<td>9</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Reading/Writing</td>
<td>10</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Teaching (at home)</td>
<td>11</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Video game</td>
<td>12</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Indoor games</td>
<td>13</td>
<td>Intense farming</td>
</tr>
<tr>
<td>General/Video/TV watching</td>
<td>14</td>
<td>Intense farming</td>
</tr>
<tr>
<td>Discussions/meetings</td>
<td>15</td>
<td>Intense farming</td>
</tr>
</tbody>
</table>

#### 2.1 PAST YEAR

Write down the number of session per week, the number of month per year and the mean duration of a session for each activity performed over the past year.

#### 2.2. PAST MONTH

Write down the number of session over the past month and the mean duration of a session for each activity performed during this period of time.

### SECTION 4: PERSONAL EVALUATION OF PHYSICAL ACTIVITY

- How would you describe your physical activity for the past year? Intense [ ] Moderate [ ] Light [ ] Null [ ]
- Would you like to do (more, less, the same)? More [ ] Less [ ] The same [ ] Doesn’t know [ ]