

RESEARCH NOTE

METHODOLOGICAL ASPECTS IN THE DEVELOPMENT
OF THE LIFESTYLE SURVEILLANCE TOOLKIT IN THE ASSO
PROJECT

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Following the presentation of the ASSO Project, as discussed in the previous issue of JSSL (Tabacchi G. 2011; **1-3**: 267-269), one of the first objectives of the study is to develop helpful and efficient tools to create a web-based software for the collection of data on adolescent lifestyles. Different methods have been developed and used throughout Europe to collect information on adolescent lifestyles. In order to select the best methods to be used in the ASSO project, a Systematic Literature Review (SLR) on the most valid dietary and physical activity/fitness assessment methods used in the target population has been performed. After the SLR and a meta-analysis of the retrieved studies, different tools have been developed within ASSO, in order to create a user-friendly and cost-effective toolkit for the creation of a web-based software for the data collection. A Standard Operating Procedure (SOP) for data collection has been prepared and addressed to all the people involved in the preparation, administration and management of the questionnaires. The SOP has the purpose of standardizing methods and procedures to prevent systematic errors in the collection and reporting of data. Moreover, it is useful to provide reminders and guidelines of the correct way to deal with the information material related to the study, to perform the interviews, to manage the compilation of the questionnaire and to store the collected information. An informative letter on the project and the informed consent to be signed by the parents have been developed. After obtaining the parents' consent, a list of all the students participating in the study will be prepared and an identification code and a password will be attributed to each student in order to respect the privacy. Participants will be able fill the questionnaires after accessing on the internet.

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The questionnaires and forms embedded within the software consist of the following (Figure 1):

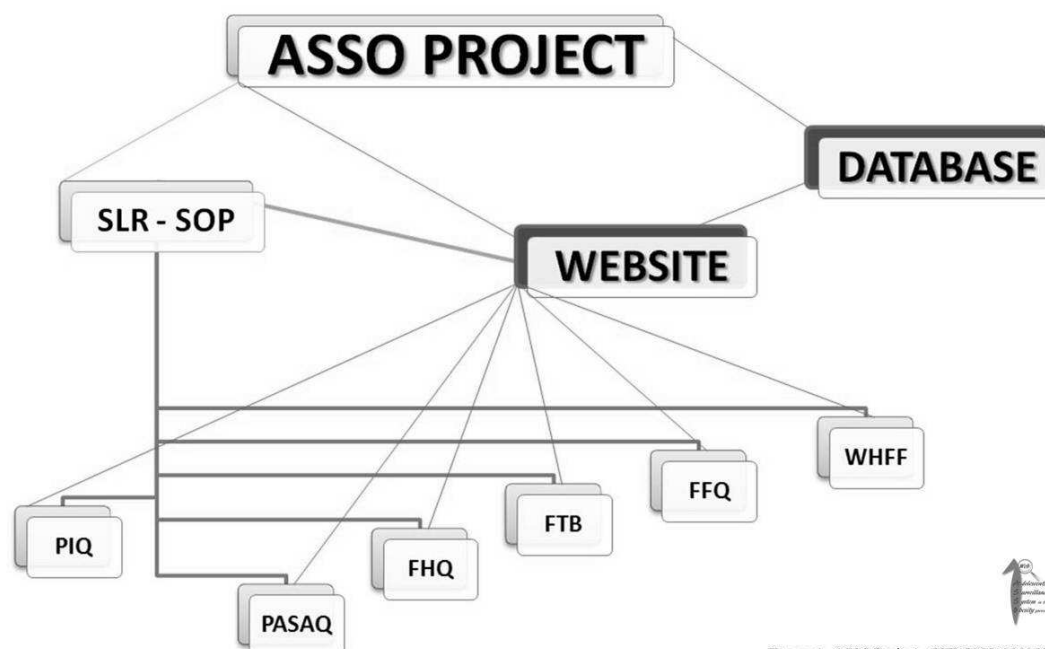


Figure 1. ASSO Project - CUP: I85J10000500001

- **ASSO-PIQ** (Personal Information Questionnaire), including four sections relative to general, family, neonatal and clinical information respectively. For the collection of data on the parents occupation, one issue concerned the use of the International Standard Classification of Occupations (ISCO): it could result too long to read and understand by the students. To the purpose of simplifying the questionnaire, a shorter classification has been drafted within ASSO. Another issue was the neonatal assessment (e.g. birth weight, natural delivery, breastfeeding, etc.): we decided to include it in the pilot study, but then we should evaluate whether it has to be considered reliable, since for this kind of information adolescents could not be able to answer without the support of the parents.

- **ASSO-PASAQ** (Physical Activity, Smoke and Alcohol Questionnaire), including three sections relative to the physical activity, smoke and alcohol habits respectively.

- **ASSO-FHQ** (Food Habits Questionnaire).

- **ASSO-FFQ** (Food Frequency Questionnaire). This questionnaire for food consumption data collection, has been developed on the basis of a SLR and a meta-analysis on the different European valid and reproducible assessment methods. The conclusions of many studies stated how a semi-quantitative FFQ can be a valid instrument for the collection of data on food and nutrient consumptions. We decide then to develop a FFQ on the basis of different FFQ validated throughout Europe, but adapted to the local situation. This FFQ will be

validated against a 7-day Food Record in the pilot study. One of the main issues is the quantification of the portion size. Since the questionnaire is semi-quantitative, a set of user-friendly portion size images has been developed within the project.

- **ASSO-FTB** (Fitness Tests Battery). Even for the field-based physical fitness tests a SLR was carried out on the most recent and predictive tests already validated. We focused our research on the three main component of the physical fitness (Cardio respiratory fitness - CRF; Musculoskeletal fitness - MF; Motor fitness - Mot F). The ASSO-FTB will contain one CRF field Test, two MF field tests (upper body and lower body) and one Mot F field test. The TEG (Technical Expert Group) is currently working on the definition of SOP according to the target population and the main objective of the project.

- **ASSO-WHFF** (Weight, Height and Fitness Form). The teachers will report anthropometric measures (weight, height and waist circumference) and results of the fitness tests on this form, and they will report these data on the software after accessing through a personal username and password. For the assessment of the body size, weight, height and waist circumference measures will be taken, after a training of the teachers for the standardization of the measuring procedure.

The implementation of the software has been done by using JAVA and the data archive system was based on MySQL database. A website of the project (<http://www.assoproject.info>) has been built up in order to disseminate the project contents and allow collaboration between people involved. Data gathered in the database will be crossed and checked throughout the duration of the data collection.

There are many methodological issues to be solved before obtaining a web-based surveillance instrument that allows a cost-effective, timely, updatable and potentially permanent collection of data. The pilot study will help us to tackle these issues and try to improve the system to apply then on a large scale.

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References

1. Artero, E. G., España-Romero, V., Castro-Piñero, J., Ortega, F. B., Suni, J., Castillo-Garzon, M. J., & Ruiz, J. R. (2011). **Reliability of field-based fitness tests in youth.** *Int J Sports Med*, 32(3), 159-169. doi: 10.1055/s-0030-1268488
2. Martinez-Gomez, D., Gomez-Martinez, S., Warnberg, J., Welk, G. J., Marcos, A., & Veiga, O. L. (2011). **Convergent validity of a questionnaire for assessing physical activity in Spanish adolescents with overweight.** *Med Clin (Barc)*, 136(1), 13-15. doi: 10.1016/j.medcli.2010.05.013
3. Ottevaere, C., Huybrechts, I., Beghin, L., Cuenca-Garcia, M., De Bourdeaudhuij, I., Gottrand, F., De Henauw, S. (2011). **Relationship between self-reported dietary intake and physical activity levels among adolescents: the HELENA study.** *Int J Behav Nutr Phys Act*, 8, 8. doi: 10.1186/1479-5868-8-8
4. Ruiz, J. R., Castro-Piñero, J., España-Romero, V., Artero, E. G., Ortega, F. B., Cuenca, M. M., Castillo, M. J. (2011). **Field-based fitness assessment in young people: the ALPHA health-related fitness test battery for children and adolescents.** *Br J Sports Med*, 45(6), 518-524. doi: bjsm.2010.075341
5. Tabacchi, G. (2011). **Asso project: a challenge in the obesity prevention context.** [letter to editor]. *Journal of Sport Sciences and Law (JSSL - 1974 4331)*, 1-3; 2011(III), 2.