

HEALTH PROMOTING SCHOOLS: A MULTICOMPONENT PROGRAM TO PREVENT BEHAVIORAL RISKS AMONGST ADOLESCENTS (2014 -2017)

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Abstract. This article is based on the analysis of the systematization of the Health Promoting School project implemented in Lima, Peru, from 2014 to 2017 by an agreement between the International cooperation agency of South Korea and the Ministry of health in Peru. A description of the phases developed, the strategies used, and the alliances built for their implementation will be presented. For that purpose, a review of secondary sources and interviews to key players as primary sources were made. The project considered the prevention and health promotion paradigms as complementary ones.

Keywords: health promoting schools / health promotion / health education / intersectorial cooperation

ESCUELAS PROMOTORAS DE LA SALUD: UN PROGRAMA MULTICOMPENTE PARA PREVENIR LOS RIESGOS CONDUCTUALES EN ADOLESCENTES (2014-2017)

Resumen. Este artículo se basa en el análisis de la sistematización del Proyecto de las Escuelas Promotoras de la Salud, implementado en Lima, Perú, del 2014 al 2017,

a través de un acuerdo entre la Agencia de Cooperación Internacional de Corea del Sur, y el ministerio de Salud de Perú. Se describe el desarrollo de las fases del proyecto, las estrategias que se usaron, así como las alianzas que se construyeron para la implementación del proyecto. Para el análisis se revisaron fuentes secundarias y se entrevistaron a los agentes clave, como fuentes primarias. Consideramos que los paradigmas de prevención y promoción de la salud deben ser considerados como complementarios.

Palabras clave: escuelas promotoras de la salud / promoción de la salud
/ educación de la salud / cooperación intersectorial

INTRODUCTION

According to data from the National Institute of Statistics and Information, INEI, the main problems for adolescents are alcohol, cigarettes and drugs consumption rates, bullying and depression rates are high among adolescents, because of dysfunctional families, the exclusion and social inequality, the limited access to social services or basic services, among others (INEI, 2015)

World Health Organization, WHO, and the Pan-American Health Organization, PAHO, pointed out that the goal of the Health Promoting Schools, HPS, is *“forming of new generations that have the abilities, knowledge and the skills needed to promote and take care of their health, their family and the community’s health, as well as creating and maintenance healthy study, work and community environment”*.

In Peru, the Health Promoting School Program, HPS, arises from the Agreement between the ministry of Health, MINSa and the Ministry of Education, MINEDU, signed in 2002 year. It has as main objective to “contribute with the comprehensive human development of the students and the education community, through the enhancement of health promotion actions” (National Directorate of Health Promotion, DGPS, 2005). The implementation of HPS has been developed from the year 2003, at first, to the primary level schools. From the year 2004, the Program has been implemented in secondary level schools nationwide.

The agreement highlights the appropriate control of growth and development during childhood. Based on a preventive nutrition, through the timely care and treatment of people under 18 years old, with emphasis on those under 5 years old; furthermore, it looks for generating knowledge and abilities in the education community parties for the development of healthy practices, both individual and collective; moreover it encouraged the dissemination of contents on nourishment, nutrition, and hygiene. (2002 MINSa-MINEDU Agreement).

In the new 2017 school curriculum, the graduate profile contains a definition which points out that, during the education/learning process, the student will be able to perform an active and healthy life for his/her wellbeing, taking care of their body and respectfully interacting in the performance of different physical, daily or sports activities (MINEDU 2017).

Parents, teachers, school managers, therefore the whole school community, are acknowledged as important socialization agents and, therefore, key parties in the proper implementation of the proposal. The articulation with the health sector turns to be important to the HPS. Nevertheless, this initiative requires an active involvement of the Ministry of Health, MoH, through technical assistance, e.g. giving training to the members of the educative community in health issues, besides performing early

diagnoses and deliver timely care to at risk adolescents identified. In Peru, the lack of exercise, obesity, bad eating habits, environmental pollution and stress, are factors that increases the prevalence of chronic diseases, cardiovascular diseases, diabetes and cancer (action plan HPS 2005)

The HPS Project was focused at the secondary level. The project developed strategic components based on the recommended strategies made by PAHO, as well as on the Technical Regulation document for the comprehensive health care in the Adolescent Life Stage (2005) of MINSA. It also is aligned with the new curriculum approved by the MINEDU (2017), and considers the regulation and procedure established by the "Management Guide for the health promoting school's strategy" from year 2006, by the MoH.

This paper is based on the systematization document which describe and analyze the process and phases of the HPS project through the review of secondary sources and interviews to the main parties involved. The latter were interviewed for the purpose of collecting their perceptions, evaluations and contributions; with special emphasis on the degree of appropriation and involvement in the entire process.

LOGICAL FRAMEWORK OF THE HPS PROJECT ACTION PLAN

The logical framework of the HPS project took as reference the 6 strategic areas recommended by PAHO / WHO and the 6 essential elements established in 2010 by the IUHPE (International Union for Health Promotion and Education): 1. Healthy school policies, 2. Social environment of the school, 3. Physical environment of the school, 4. Individual health skills and competences for action, 5. Links with the community, 6. Health Services.

The logical framework was developed with the data gathered through an initial diagnosis in the selected schools of Lima Norte and Callao. The Project intervenes in Lima region, in Comas District, as well as in Callao region, through Ventanilla and Bellavista Districts, which are constituted of poor population.

In Peru, the lack of exercise, obesity, bad eating habits, environmental pollution and stress, are factors that have mainly generated the prevalence of chronic diseases, cardiovascular diseases, diabetes and cancer (Action Plan, 2015). In order to address this situation, it was considered that the HPS project could contribute to develop an intervention oriented not just to reduce diseases, but-above all- help to prevent and promote self-care for health.

Alcohol, cigarettes and drugs consumption rates, bullying, feelings of depression, suicidal thoughts, learning problems, gangs, drug abuse, violence and depression rates are high among adolescents, as a result of dysfunctional families, the exclusion and social inequality, the limited access to social services or basic services, etc. (Action Plan, 2015).

According to these data, the logical framework was the following (see Figure 1).

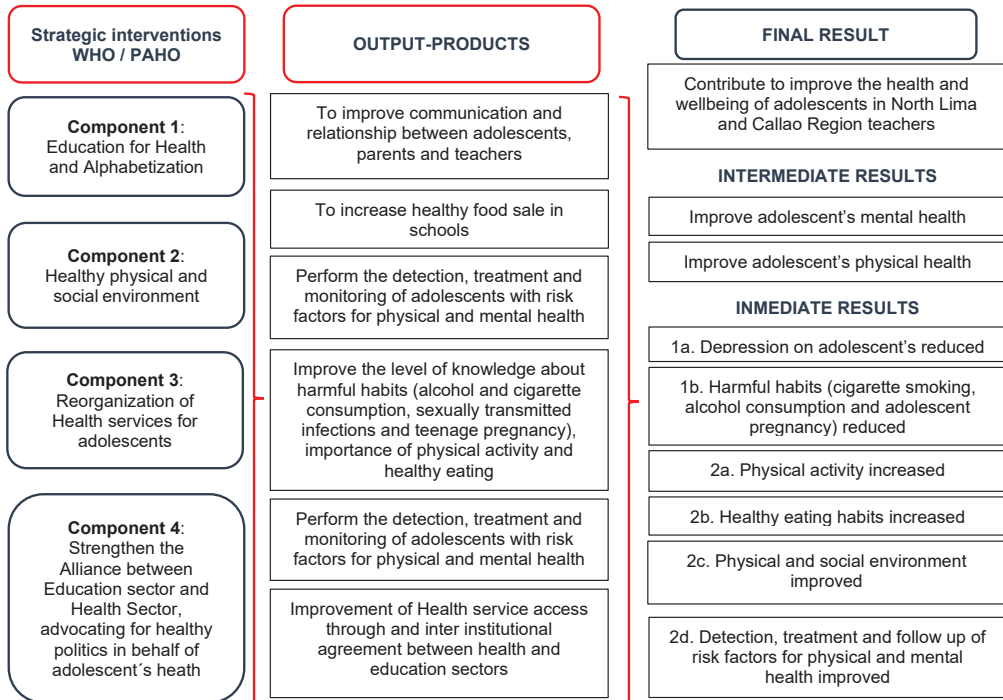


Figure 1. Logic frame of the Health Promoting Schools

The HPS Project implemented the following strategies to promote healthy lifestyles and habits in adolescent's life stage (see Figure 2)..



Figure 2. Health Promoting Schools (HPS): A multicomponent program to promote healthy lifestyles

The HPS project was aimed to improve health behaviors and to reduce the risk factors that are behind those unhealthy behaviors. Its purpose, according to the health promotion framework, is to implement strategies involving the whole school community, making a contribution to improve the school culture and its surrounded environment to a healthy one and therefore, impact in the quality of life of the adolescents, their families and its communities.

“Addressing the risk factors and reinforcing the protecting factors from the education environment contributes to improve the life styles, but this depends on a multisector and multidisciplinary action for the modification of knowledge and settings where the adolescents study, entertain, feed, wash themselves and also directly affect the healthy lifestyles”. (Health Promoting Schools Action Plan, KOICA 2015)

SCOPE OF INTERVENTION OF THE PROJECT HPS

The Project was implemented in Lima region, in Comas District, as well as in Callao region, through Ventanilla and Bellavista Districts and carried out with the health authorities and officials of the Health Directorate and the health network of Túpac Amará of Callao (see Figure 3).

The public secondary level schools of the Comas district, Alborada Francesa and Presentación de María; from Bellavista district, San Pedro 5050 and of Ventanilla district Perpetuo Socorro, were selected, among other criteria, for being located in the area of influence of four Maternal and Child Health Centers that KOICA has been supporting to improve their infrastructure and organization.



Figure 3. Area of study and schools

a. Ventanilla District

Ventanilla District is in Constitutional Province of Callao. According to data from INEI (2013) has approximately 277,895 inhabitants. Population from 12 to 16 years old is 30,098(10.8%) of the entire population of Ventanilla).

This school was within the scope of intervention of the Maternal Child Health Center Pachacutec, built and equipped by the project.

b. Bellavista District

Bellavista District is in Constitutional Province of Callao with a population with lower incomes. It has approximately 75.163 inhabitants. It has five secondary public school with a total of 3,802 students.

The beneficiary school of the project was San Pedro 5050, with a total of 417 students. This school is within the scope of intervention of the Maternal child health center Bellavista, built and equipped by KOICA.

c. Comas District

Comas District is in the department and province of Lima. According to data from INEI (2004), has approximately 522.760 inhabitants. According to Comas Coordinated Development Plan 2011-2021, is the third most populated district in Lima Metropolitan.

The HPS intervened in two jurisdictions 1) Laura Rodriguez Dulanto, Santa Luzmila II. The first one has a population of 34.346 inhabitants, 2 public secondary school with a total of 939 students; the second one, with a population of 33.269 inhabitants, one public secondary school with a total of 1.318 students.

The two interventions schools were Alborada Francesa, located in Laura Rodriguez Dulanto jurisdictions and Presentación de María in Santa Luzmila II.

GENERAL OBJECTIVE OF THE HPS

Contribute to foster the health and wellbeing of the adolescents and the education community promoting healthy settings and lifestyles in the scope of the health promotion program in North Lima and Callao.

STRATEGIC OBJECTIVES

Contribute to improve the levels of knowledge, habits, and healthy behaviors and the prevention of disease in the adolescents of the project scope.

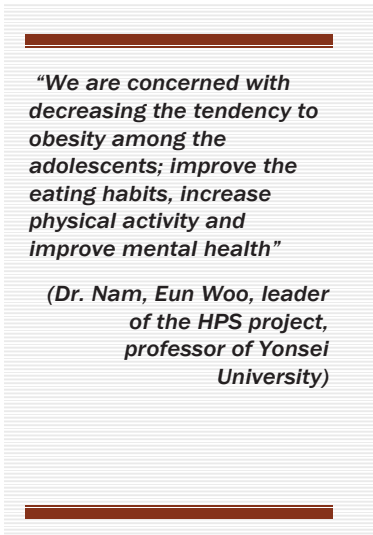
Strengthen the competencies of the health and teaching staff to promote, protect, and improve the comprehensive health of the adolescents with the participation of the entire education community, participation of the community and local actors;

Promote the development of healthy setting that foster, strengthen and facilitate healthy habits and behaviors in the adolescents of the project scope.

IMPLEMENTATION PHASES

The program was developed from 2013 to 2017. Every year had an action plan according to the established targets.

The HPS Program was implemented by the Ministry of Education (MINEDU) and the Ministry of Health of Peru (MINS/DEPS), Health Centers in the intervention areas, as well as the education community. Korea International Cooperation Agency (KOICA), Yonsei University's Global Health Center (YGHC) and Pan American Health Organization PAHO/WHO gave technical support all along the process.



“We are concerned with decreasing the tendency to obesity among the adolescents; improve the eating habits, increase physical activity and improve mental health”

(Dr. Nam, Eun Woo, leader of the HPS project, professor of Yonsei University)

The methodology was based on the empowerment of the social actors, playing an active role in the decision-making process about the activities and, therefore, in the implementation phases of the HPS Project.

44 Health professionals and teachers were, at the same time, beneficiaries and benefactors, being responsible to carried out the management and execution of the activities of the HPS Project with the technical support of KOICA and PAHO. For that reason, they were trained at different levels from 2014 to 2017 in topics related to health promotion, determinants of health, mental health, nutrition, comprehensive health counselling.

Phase 1: Baseline Diagnosis:

This stage corresponds to the formulation of a research protocol for the baseline survey. Its objective was to gather information regarding behaviors, habits and health status related to anemia, overweight, drug consumption among others.

The research methodology was developed by the National Institute of information ad statistics, INEI. 14,787 students from 17 secondary public schools were selected with a stratified random sampling was applied, located in the intervention scope.

In the first stage of the sampling, the classrooms were chosen by proportional probability sampling (PPS). The students were chosen in the second stage based on

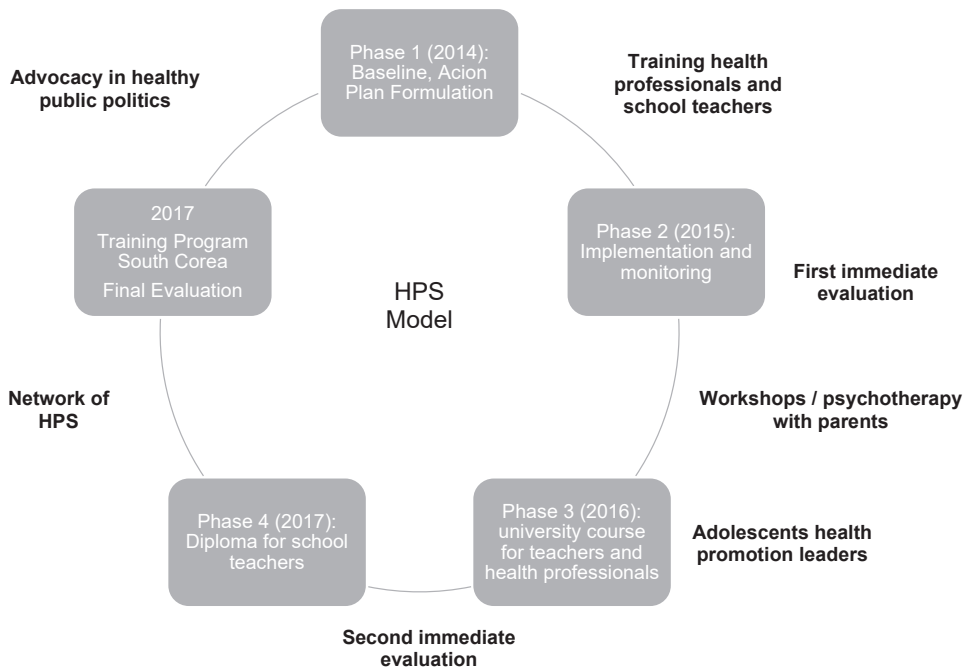


Figure 4. Phases of implementation of the HPS Project, 2014 - 2017.

simple random sampling. The sample size was chosen at a confidence level of 95% and a maximum permissible sampling error of $\pm 3.15\%$, leaving 981 students in 55 classes in 11 schools.

The questionnaire used in this survey took as reference, the Global School-based Student Health Survey (Encuesta Global De Salud Escolar, Resultados-Peru, 2010) and was reviewed by the Ministry of Health and PAHO/WHO. The survey was approved by the Ethic Committee of the Health Directorate of Callao (DIRESA Callao) and YONSEI University.

The questionnaire was comprised of 180 question items regarding demographic characteristics, subjective perceptions, dietary habits, personal hygiene, physical pressure, mental health, smoking, drinking, drugs, gender-related characteristics, STDs and AIDS, physical activities, school life and physical examination. This questionnaire was used for both, to the school of intervention and control school, not only in the baseline but also at the annual evaluation from 2014 until 2017. At the same time, during the first year, training courses were delivered to both, health professionals and teachers.

Phase 2: implementation

The second stage corresponds to the implementation process, for which is of great importance to have the documents of the Action Plan, to incorporate the health promotion activities in the Schools work.

In this sense, with the analysis and results of the baseline data, the action plan of year 2015 is elaborated, which contains 4 components that consider strategies for each one, with the purpose of achieving the established objectives and goals (see figure 5).

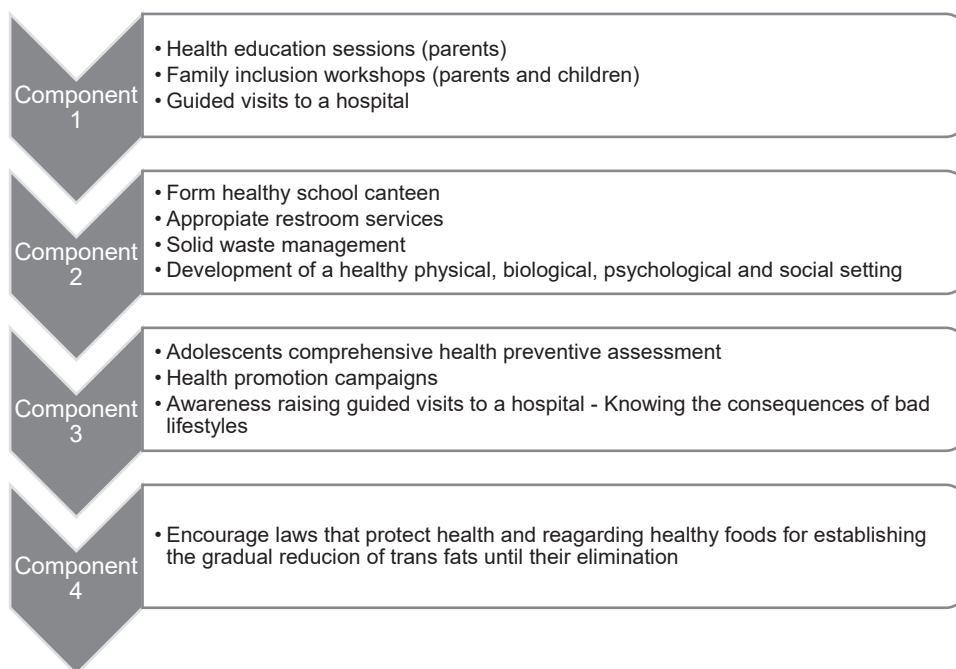


Figure 5. Components of the Action Plan (2015)

Education to students

The thematic areas are cross-sectional for the education of all the students who participate within the scope of the HPS program; however, the way how they are developed varies according to the grades.

The contents are focused on the prevention of non-communicable diseases and health promotion for healthy lifestyles.

Education topics for the students:

Thematic areas:

- 1: Healthy Nutrition and Eating
2. Prevention of drugs, alcohol and cigarettes
3. Sexual and reproductive health
4. Physical Activity
5. Hygiene Habits
6. Mental Health and Culture of Peace

Education to parents

The sessions with parents are done twice a month and in differentiated groups (parents from 1st and 2nd grades/parents from 3rd, 4th and 5th grades).

The HPS program considers important to focus on the parents as key influential actors in the health and behavior of their children, so that the achievement of three important functions for a proper development of the HPS model can be done: provision of support, role models, establishing limits.

The sessions' contents are directly related to the topics developed in the education to the students.

Thematic Areas

1. Healthy Nutrition and Eating
2. Prevention of Drugs, Alcohol and Cigarettes
3. Sexual and Reproductive health
4. Physical Activity
5. Body Hygiene Habits
6. Mental Health and Culture of Peace

Phase 3: execution

In this third stage the nurse, the psychologist and the nutritionist along with the teachers were responsible for the implementation of the activities and strategies of the Action Plan of the HPS project.

Compliance monitoring, needed supplies, technical support and monitoring of the execution of activities was provided by the KOICA executive team.

Phase 4: evaluation

This stage includes the annual evaluation of the indicators of the HPS Project to monitor progress. The survey was applied to intervention and control schools, thus monitoring the impacts of the strategies. Each year the results were disseminated, and the difficulties identified, in order to reorient the activities, if needed (Action Plan 2015 of the Health Promoting School)

Beneficiary population

The HPS Project beneficiaries are all the members of the school community: students, parents, authorities, teachers, cafeteria concession holders, members of the neighboring communities and health staff of the selected health centers, but the principal beneficiaries are the teenagers.

RESULTS

The results were organized in five factors with some categories within. Predisposing (intention to change), reinforcement (closer relationships with parents and friends), facilitator (get information about alcohol, tobacco, illicit drugs, sexual intercourse), behavior (experience of using licit or illicit drugs, sexual intercourse, fighting), environment (bullying, being insulted, physical or verbal violence between parents) and psychological (suicidal thoughts, depression, subjective happiness, self-evaluation health). It was found some interesting results, mainly in terms of trends, because, as is known, behavioral changes take a long. Figures 6, 7 and 8 show some of the main results.

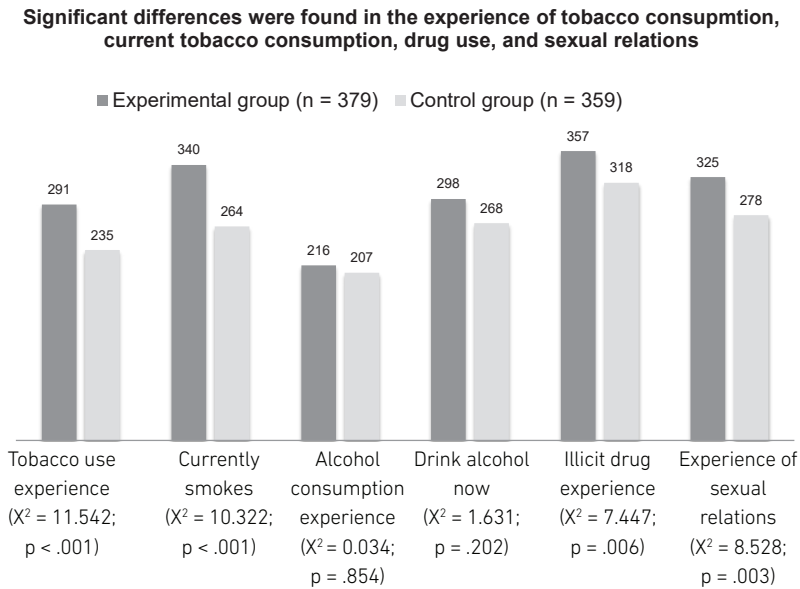


Figure 6. Effectiveness of the HPS Project on Behavioral Factors

The number of friends has been increased as well as the more comprehensive attitude of the parents in regard of the adolescents needs.

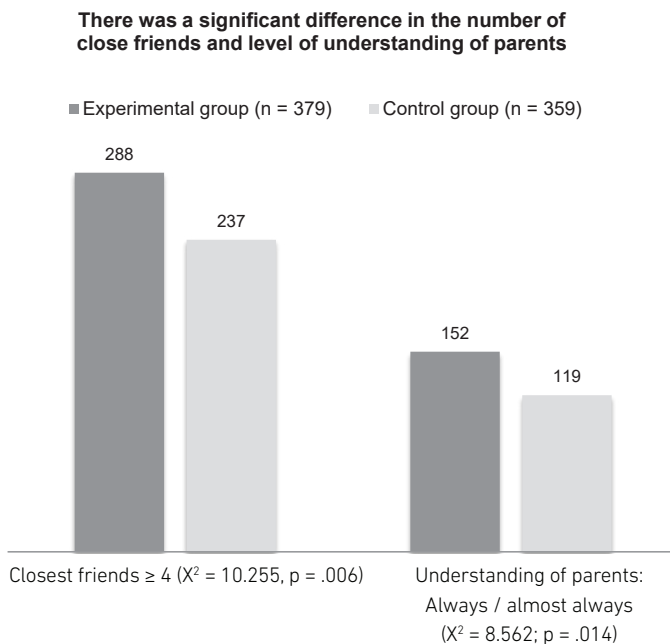


Figure 7. Effectiveness of the HPS Project on Reinforcement Factors

The HPS had a positive influence in regard of the motivation of the adolescents to look forward for information on key topics for their health and development.

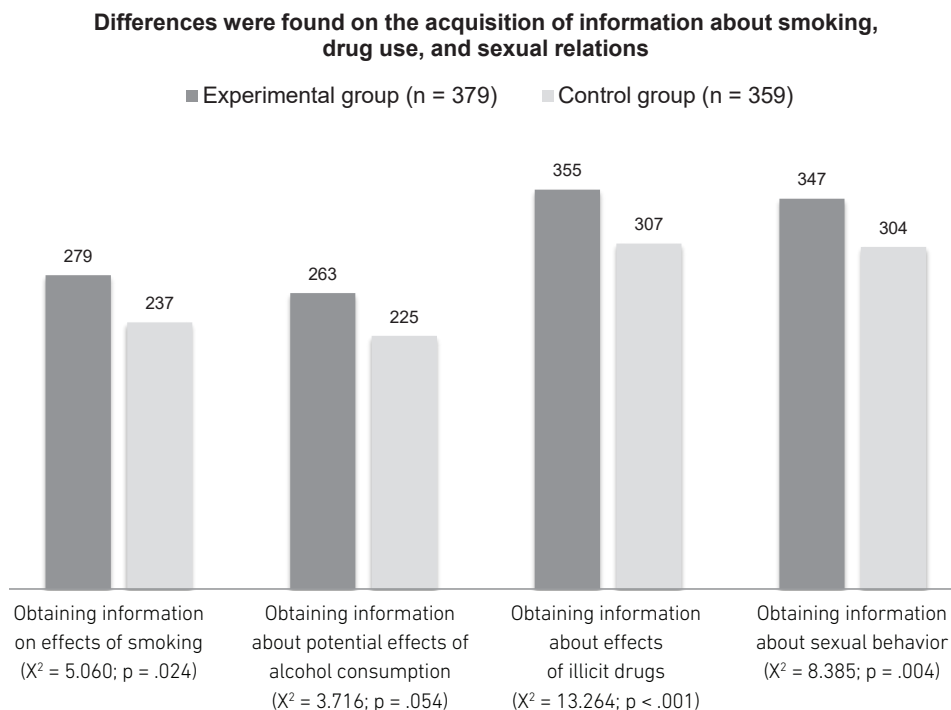


Figure 8. Effectiveness of the HPS Project on Facilitating Factors

The HPS showed a significant influence in the adolescent's behavior regarding tobacco consumption, illicit drug use and sexual relations.

INNOVATIVE ELEMENTS PERCEIVED BY KEY PLAYERS FROM THE SCHOOL COMMUNITY:

a. Training and focus on health promotion

“Now teachers work educational sessions on violence, bullying, sexuality, drug use and, it is in these sessions, where students become more confident with their tutors and they begin to talk” (Director Alborada Francesa School).

“This space is very important, because they find that their problems are of interest to adults” (Director Alborada Francesa School)

“The information received about healthy practices: tooth brushing, hand washing, healthy eating, personal hygiene. Training on the importance of self-esteem,

self-control, emotional management, assertive communication styles to take better care of oneself and prevent risky behaviors, drug use, alcohol, unprotected sex, among others. (students' opinions)

b. Multicomponent approach and psychotherapy workshops

"The approach of working with the whole educational community, articulated to the health center, the local and regional governments was innovative and usefull". (Teachers' opinion)

"Have a comprehensive diagnosis as a baseline: Mental health: feelings of loneliness, depression, bullying, suicidal ideas, drug use, addictions, risk behaviors in general" (parents' opinion).

c. Articulation between sectors and early detection

"The articulation between the health center and the educational institution improves coverage and the quality of care for the adolescent population" (Health personal)

"It helps to identify risk factors in students who are apparently healthy. "The teenagers come because they are healthy, but in the care some pathologies are detected and they can be attended to early" (Medical, MI Santa Luzmila Health Center 2)

CONCLUSIONS, LESSONS LEARNED AND RECOMMENDATIONS

Conclusions

- The HPS Project improved knowledge about the adolescent's health, the intention of behavior change, the ability to obtain information about the health, the family bond through the improvement of the affection of the parents, and the subjective happiness.
- Significant differences were found between the experimental group and the control group, in the number of close friends and level of understanding of the parents.
- Significant differences were found between the experimental group and the control group in the experience of tobacco consumption, current tobacco consumption, drug use, and sexual relations.
- Significant differences were found between the experimental group and the control group in the experience of tobacco consumption, current tobacco consumption, drug use, and sexual relations.

Key players perceptions regarding the benefits of the HPS Project

- Involvement of the entire education community guarantee the sustainability of the HPS.
- The agreement between the school and the health services allowed deliver early care to at risk adolescents.
- Psychotherapy workshops with parents contribute to their awareness of the characteristics of adolescence and its risks.
- Professionals from the health and education sector agreed that the HPS model, is a very good strategy to promote healthy lifestyles at the education community.

Lessons learned

- Strategic alliances among Ministry of Health, Ministry of Education and Local government are necessary to impact positively in adolescent health.
- Having an initial database of the adolescent's health at school is very useful to identify the ones with risk factors early and, offer them timely and personalized medical and psychological care.
- Psychotherapy workshops aimed at parents have proven them how important is to have a closer emotional relationship with their teenage children
- Without an adequate training process on adolescent health topics to teachers and health professionals, it cannot be expected to have the expected results on adolescent's health.

Recommendations

- Taking into account that the project includes the need to give sustainability to the HPS project, it is necessary to design policies that guarantee economic support and political commitment to the HPS strategies.

APPENDIX

ACHIEVEMENTS FROM 2014 TO 2017

Goals	Objectively verifiable indicators	Achievements				Final achievement
		Baseline survey 2014	2015	2016	2017	
Goal Contribute to improve the physical, mental and social health of Peruvian adolescents						
1. Improve mental health	1-1 Suicidal ideation rate	26.4%	29.3%	26.9%		25.1%
2. Improve physical condition	2-1 Overweight rate	20.6%	17.9%	19.1%		19.2%
IMMEDIATE RESULTS						
1-a Reduce depression in adolescents	1-a-1 Depression rate	62.1%	50.3%	49.6%		55.3%
1-b Reduce harmful habits in adolescents	1-b-1 Consumption of cigarettes (last 30 days).	17.9%	41.7%	25.6%		17.0%
	1-b-2 Consumption of alcoholic beverages (last 30 days).	53.1%	49.3%	35.8%		50.4%
2-b Improve dietary habits in adolescents	2-b-1 Percentage of adolescents who have consumed all kinds of cookies, sodas, ducos, more than once in a day during the last 7 days .	78.5%	81.5%	81.2%		70.7%
2-c Improve healthy habits	2-c-1 Percentage of hand washing with soap after using the SS.HH	90.4%	90.8%	88.3%		94.9%
1-b-1 The level of knowledge about the prevention of harmful habits in adolescents is improved.	1-b-1-1 Level of knowledge about health problems caused by cigarette smoking **	77.0%	93.0%	72.0%->99.2%		85.0%
	1-b-1-2 Level of knowledge about health problems caused by the consumption of alcoholic beverages **	77.0%	93.0%	72.0%->99.2%		85.0%
	1-b-1-2 Level of knowledge about the health consequences of teenage pregnancy **	62.0%	70.0%	77.1%->96.1%		85.0%

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