

**INCLUSIVE AND HEALTH EDUCATION TO PREVENT RISKY BEHAVIORS AND
MARGINALIZATION. THE INCIDENT OF ALCHOL ABUSE AND ROAD ACCIDENTS AMONGST
HIGH SCHOOL STUDENTS OF L'AQUILA
EDUCAZIONE INCLUSIVA E EDUCAZIONE ALLA SALUTE PER PREVENIRE COMPORTAMENTI
A RISCHIO E MARGINALIZZAZIONE. L'INCIDENZA DELL'ABUSO DI ALCOL E INCIDENTI
STRADALI TRA GLI STUDENTI DELLE SCUOLE SUPERIORI DELL'AQUILA**

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ABSTRACT

A school policy for inclusion and sustainability is attentive, with the curriculum, to the promotion of values such as health and legality. The survey carried out at the high schools of L'Aquila explores the spread of this culture. As our data shows, detrimental alcohol consumption increases with age, is more prevalent among "repeaters", and women are more sensitive to the risk of marginality. The university/school collaboration therefore intends to encourage the development of transversal skills (*decision making, problem solving, etc.*), as important protection factors.

Una *policy* scolastica per l'inclusione e la sostenibilità mira, tramite il curricolo, alla promozione di valori quali la salute e la legalità. L'indagine nelle scuole superiori dell'Aquila esplora la diffusione di tale cultura. Come i nostri dati mostrano, il consumo dannoso di alcol aumenta con l'età, è più diffuso tra i "ripetenti", e le donne sono più sensibili al rischio di marginalità. La collaborazione università/scuola intende quindi favorire lo sviluppo di competenze trasversali (*decision making, problem solving ecc.*), quali importanti fattori di protezione.

KEYWORDS

Curriculum, inclusion, health culture, protective factors
Curricolo, inclusione, cultura della salute, fattori di protezione

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Introduction¹

Health is a value that cannot be ignored in a sustainable society, and in a school aimed at promoting equity and inclusion. *Health in All policies* (HiAP), in this respect, expresses a vision that modifies the very concept of health: no longer the absence of disease, but a dynamic, transversal activity of promoting well-being, which finds its foundation in the centrality of the person, and in the development of individual and social skills primarily at school. In Italy, the document “Integrated policy guidelines for schools that promote health” (January 2019), proposes a global approach to school. In light of this, the *Schools for Health in Europe foundation* (SHE)’s aim is to improve the health of children and young people based on a specific understanding of health which includes a series of components: school policy for health promotion; physical and organizational environment; social environment; individual skills and capacity for action; community cooperation.

In line with what has been just said, we think that the organization of the school community as a whole must be centered not only on the *curricula*, but also on the promotion of healthy lifestyles, helping to create a favourable environment for students. In such a context students will be able to develop knowledge, skills and habits necessary to live healthily even in adulthood. Numerous studies show the correlation between well-being and performance in studies at all school and university levels and show the importance of promoting health, including mental health (Agnafors, *et al.*, 2020; Colizzi, *et al.*, 2020; Heradstveit *et al.*, 2017). In addition, since health and education are interconnected, by promoting health at school it is possible both to achieve educational, social and professional objectives, and to facilitate the health of the entire school community. Great progress has been made in increasing life expectancy and reducing some of the most common causes of death linked to infant and maternal mortality.

Despite this, many more efforts are needed to completely eradicate a wide variety of diseases and address numerous and diverse health-related issues, whether recent or persistent. For instance, among the goals to be achieved indicated by the United Nations 2030 Agenda and the *Sustainable Development Goals* are: strengthening the prevention and treatment of substance abuse, including drug abuse and harmful alcohol consumption; halving the global number of road deaths

¹ The present survey is part of the activities planned by the project “Guida la tua vita”, funded by the Presidency of the Council of Ministers and coordinated by the Municipality of L'Aquila. Although the present work is the result of a common commitment, introduction is to be attributed to A. Santelli; paragraph 1 is to be attributed to M. Muselli, while paragraph 2 is to be attributed to M. V. Isidori. Finally, the conclusions are to be attributed to both M. V. Isidori and A. Santelli.

and injuries; strengthen the capacity of all countries, especially developing countries, to warn, reduce and manage health-related risks, both domestically and globally.

On 20 January 2023, the World Health Organization's meeting conducted with professional associations and academia on the implementation of the *Global Alcohol Action Plan 2022-2030* was concluded. This Plan aims to promote the implementation of the Global Alcohol Strategy by exploiting available evidence to control alcohol and address the harms associated with alcohol consumption. Studies during and after the pandemic have shown that alcohol intake increased among girls as did cigarette smoking (ISS, 2023). The situation is not reassuring in the European context where from 15 years of age an average of 11.3 litres of pure alcohol are consumed per year, especially among males (18.3 liters against 4.7 for females).² Moreover, it must be noted that the mentioned *Alcohol Action Plan*, to which the *National Alcohol Observatory* (ONA) of the *Istituto Superiore di Sanità* (ISS, 2023) has contributed greatly since 2019, is also part of the broader global strategy of United Nations 2030's Agenda to combat chronic-degenerative diseases. Its main objective is to reduce risky and harmful alcohol consumption by 10% by 2025.

Starting from this premises, the present survey, carried out at the high schools of L'Aquila, aims to explore, through the administration of a questionnaire, the spread of the culture of health and the prevention of risky behaviours among students. The main goal of the survey is to design educational and didactic intervention actions that involve both young people and teachers. To this end, teachers first participated in a training course on the mentioned topics and then contributed to the drafting and distribution of a questionnaire to the students. Attention was paid in particular to alcohol abuse behaviours and its correlation with road accidents; awareness of the dangerousness of the conducts; knowledge of the highway code, and, finally, to the correlation between alcohol abuse and academic performance. As a result of the survey, promoted by the institutions of the territory and the USR, students have developed awareness programs in favour of the entire youth community of L'Aquila, and the introduction of all these themes in their curricula.

² UN Sustainable Development Group (2020). Policy Brief: The Impact of COVID-19 on Children. (160420_Covid_Children_Policy_Brief.pdf)

1. Sample and Materials

The sample consists of 234 students (138 males, 96 female) with an average age of 16.5 years. 35% of the sample is enrolled in a vocational institute; 33.7% in a technical institute, and 31.3% is enrolled in a high school (lyceum). 85.9% of students attend the fifth year, while 82.5% are of Italian nationality (Tab. 1).

Variables	N (%) / Media \pm DS
Gender	
- Male	138 (57,5%)
- Female	96 (40,0%)
- Other	6 (2,5%)
Age	16,5 \pm 1,5
School	
- High School (lyceum)	75 (31,3%)
- Professional Institute	84 (35,0%)
- Vocational Institute	81 (33,7%)
Year	
- I year	50 (20,8%)
- II year	6 (2,5%)
- III year	74 (30,8%)
- IV year	24 (10,0%)
- V year	86 (85,9%)
Lives in family	234 (97,5%)
Repeating	34 (14,2%)
School insufficiencies	
- None	154 (64,2%)
- One	35 (14,6%)
- Two	26 (20,8%)
- Three	14 (5,8%)
- Four	11 (4,6%)
Years in Italy	
- Since birth	208 (86,7%)
- From 1 to 3 years	8 (3,3%)
- From 4 to 7 years	3 (1,3%)
- More than 7 years	26 (8,7%)
Language spoken	

- Italian	198 (82,5%)
- Albanian	14 (5,8%)
- Romanian	13 (5,4%)
- Other	15 (6,3%)

Table 1 (Descriptive sample data)

The questionnaire with multiple choice answers, proposed by the teachers at the end of the first quarter, is based on 34 items. It consists of two main sections: the first one focuses on descriptive data (age, sex, school level, school of origin), while the second focuses on spoken language and academic performance. The questionnaire, among other things, aims to investigate the diffusion of the culture of legality and their knowledge of the highway code; the culture of health and the students' knowledge of the consequences of alcohol use. In particular, we studied the effects of alcohol on health (dependence, tolerance) and on the production of risky conduct such as road accidents. We also investigated their knowledge on the effects of alcohol in relation to learning processes and therefore to academic performance.

2. Results and Discussion

We have detected that for 49.9% of boys and girls, alcohol can be a problem from both a mental and physical point of view if you exaggerate in use. Considering the distribution by age groups, most of the students for each year we studied think that the alcohol is a problem when taken in high doses. There are no significant differences in opinions amongst groups. Early use of alcohol involves a strong interference with the processes of maturation and brain development. Precisely at that age, in fact, numerous neuropsychic functions are consolidating in relation to the mechanisms of learning, memorization, motivation as well as coordination and reward systems. At the same time, important aspects of personality (self-esteem, self-efficacy) and psycho-cognitive aspects (problem analysis processes, decision making, etc.) are developed and defined (Isidori, 2020).

Despite that, research on the national territory shows that in 2019, 66.8% of the 11-year-old population consumed at least one alcoholic beverage in the year. The percentage of daily consumers of alcoholic beverages is 20.2%. The share of those who consume alcohol occasionally increased (from 41.5% to 46.6% in 2019), and that of those that who, weekly, drink alcohol between meals (from 25.5% to 30.6% in 2019) (ISTAT 2021).

When asked in our questionnaire *Have you ever taken alcohol to the point of being drunk over the past six months?* 66.6% of students answer *No*. Boys report getting drunk more than girls. However, this difference was not statistically significant (Tab. 2).

	Male		Female		Other		p-value
	N	%	N	%	N	%	
Never	66	47.8%	59	61.5%	4	66.6%	0.322
Yes, one time	31	22.5%	16	16.7%	1	16.7%	
Yes, several times	41	29.7%	21	21.9%	1	16.7%	

Table 2 (Alcohol consumption in the last six months)

The boys who report getting drunk several times were significantly older than the others. In particular, it is possible to observe an increasing trend in age (Tab. 3).

	N	Average age	DS	p-value
Never	129	16.3	1.5	0.003
Yes, one time	48	16.5	1.5	
Yes, several times	63	17.1	1.2	

Table 3 (Distribution of alcohol abuse “drunkenness” and age)

As the class of students in the school year increases, we noted that the proportion of boys who report never getting drunk decreases and the proportion of those who report getting drunk several times increases. This trend was statistically significant (Tab. 4).

	Class					p-value
	1	2	3	4	5	

Never	33 (66.0%)	4 (66.6%)	46 (62.2%)	12 (50.0%)	34 (39.5%)	0.004
Yes, one time	14 (28.0%)	1 (16.7%)	9 (12.2%)	4 (16.7%)	20 (23.3%)	
Yes, several times	3 (6.0%)	1 (16.7%)	19 (25.6%)	8 (33.3%)	32 (37.2%)	

Table 4 (Distribution of drunkenness in classes)

Regarding the degree of awareness about the danger of driving vehicles after drinking, and the knowledge of the consequences of driving under the influence of alcohol also in regulatory terms, 72% of young people say they are aware of the fact that driving after drinking is dangerous; 91.3% abstain from driving and 72.1% organize safety conditions in returning home by car at night after the disco (only those who are sober can drive). Only 1.3% say they have had their license or license revoked for driving while intoxicated. In the face of this, 73.8% of the sample does not know the phenomenon of *Binge Drinking* (Tab. 5).

Do you think that driving after drinking is dangerous?		
- Yes	173	72,1%
- It depends	62	25,8%
- No	5	2,1%
Have you ever been in a car with someone driving drunk?		
- No	158	65,8%
- Yes	82	34,2%
Have you ever driven after drinking?		
- No	219	91,3%
- Yes	21	8,8%

Have you ever had your license (scooter or car) revoked for drunk driving?		
- No	237	98,8%
- Yes	3	1,3%
Do you organize with your friends to make sure that after a party or a night at the disco there is someone who can drive as sober?		
- No	67	27,9%
- Yes	173	72,1%
Do you know the phenomenon of <i>Binge Drinking</i> ?		
- Yes	63	26,3%
- No	177	73,8%

Table 5 (Knowledge of the highway code and of the danger of alcohol compared to driving)

National data also show that there is an increase of accidents for drunk driving involving at least one driver aged 15-24 years which go from 0.6 in 2001 to 1.3 in 2019 (ISTAT, 2021). In addition, according to the General Directorate of National Police, the first ten months of 2022 show an increase of over 14% of minors reported or arrested compared to the same period of 2019. The same happens with sexual violences with an increase of over 15% compared to 2021 (Yusuf *et al.*, 2021).

With respect to the group we studied, and with reference to the effects of alcohol on cognitive functions, in particular the potential effects on academic performance, 50% of male and 50% of female of the sample say that it can negatively affect school performance. There is no significant difference of opinion between genders and students belonging to different schools. Regarding the correlation between alcohol use, regular school attendance and other potential indicators of early school leaving, most boys report that they have not skipped classes as a result of alcohol use, without significant differences in responses between genders. However, compared to females, a higher proportion of males report absences at school. Those who are absent from school due to alcohol use have an average older age (17.1 ± 1.2 vs 16.5 ± 1.5). This difference, albeit small, is not significant ($p=0.0496$). The highest proportion of absences due to alcohol is found in boys attending a technical institute (9.9%). However, this difference compared to other schools is not statistically significant. 17.7% of “repeating” students report absences at school

due to alcohol, compared to 7.8% of “non-repeaters” (important but not statistically significant difference: $p = 0.064$) (Tab. 6).

	Non-repeating		Repeating		p-value
	N	%	N	%	
Getting drunk					
Never	114	55.4%	15	44.1%	0.474
Yes, one time	40	19.4%	8	23.5%	
Yes, several times	52	25.2%	11	32.4%	

Table 6 (Alcohol consumption among repeating and non-repeating students)

The latter data are consistent with national reports for which alcohol and drug use in adolescence is related to a low average of grades in the various disciplines of the curriculum, and a high number of absences from school in the school year (Sedibe *et al.*, 2021). In fact, the habit of using alcohol and drugs during the period of upper secondary school negatively affects academic performance and facilitates disaffection for the school (ISS, 2023). This also suggests that situation of well-being is positively correlated with academic performance (Agnafors *et al.*, 2020). Another important aspect we investigated in our survey has to do with students' perception of social and economic issues. For instance, we found that high school students are significantly more concerned about the problem of unemployment than students enrolled in both technical and vocational institutes ($p = 0.044$). We also have gender-related differentiations, females report a significantly greater concern than males about the spread of current forms of marginality (unemployment M / F 4.23 / 1.09, violence 4.45 / 0.9, alcohol 3.28 / 1.27 and AIDS 4.25 / 1.07). We find these data quite interesting given that young people, in order to assume protective attitudes towards risky behaviours, must develop not only cognitive but also emotional and relational skills. Higher levels of concern about alcohol are strongly associated with a higher level of concern about drugs ($p < 0.001$) and violence ($p < 0.001$). This aspect is particularly reassuring because in this age group the so-called “polyconsumption” also seems to be widespread. That between young people and drugs is an alarming combination, especially if we think that current trends favour the development of drug addiction before the age of 19. In our country, in 2019, hospital discharges of young people with drug-related diagnosis were 2,918 equal to 40% of the total drug-related hospitalizations (ISTAT 2021).

Very few teenagers go to recovery centers of their own free will: many are left alone, and their condition are often not monitored which is a breeding ground for addiction. Finally, to mention the possible influence of family education (Van der Hof *et al.*, 2020). from an international comparative perspective, the group we studied shows a significant difference in average levels of concern about alcohol depending on the language spoken ($p = 0.020$). In particular, Romanian-speaking boys show the highest levels, Arabic-speaking ones the lowest.

Conclusions

Alcohol abuse tends to manifest and develop especially in adolescence. It is evident, therefore, that the greatest preventive and educational efforts must be made at this stage of a person's life. It is important for this reason to strengthen those protective factors such as interest in study, self-esteem, self-efficacy, academic self-esteem and good communication with peers and adults. These are all significant elements that ward off and prevent the occurrence, in pre-adolescence and adolescence, of behavioural disorders such as alcohol abuse and substance addiction (Michelle *et al.*, 2018). Therefore, prevention today means providing the new generations with tools and opportunities that help them face the complexity of living. As we have seen, the percentage of young people who consider themselves in good health, physical and psychological, is significantly down compared to recent years, especially in the pandemic and post-pandemic period. The relationship with the peer group can be one of the most relevant risk or protective factors to lead to substance abuse (Yusuf, *et al.*, 2021). The school must encourage the acquisition of a series of psychosocial skills that the WHO groups into five main interconnected areas (decision making and problem solving, critical and creative thinking, communication and interpersonal relationship skills, self-awareness and empathy, emotions and stress management skills) and in reference to which the study of the cognitive attitude of the students investigated in our survey has a significant importance.

The school, in collaboration with the Ministry of Education, University and Research and the Presidency of the Council of Ministers, is the privileged place for the training of future citizens, the place where students, from the early years of primary school, have the opportunity to learn to be with others, acquire values, information, knowledge, and become responsible adults. It is also clear that the role of teachers is fundamental to contribute to the formation of the new generations (Treacy *et al.*, 2020), not in place of families with whom it is necessary to promote ever greater collaboration, but by strengthening their function of

observation and monitoring of attitudes, behaviours and lifestyles. The combination of health and legality education guided for instance by the transversal character of the civic education *curriculum* (Law 92/2019) can ensure a plurality of learning objectives and expected skills, not individually attributable to a specific discipline, but to a multiplicity and heterogeneity of them. It is therefore a question of developing in educational institutions the sharing and promotion of the principles of legality, active and digital citizenship, environmental sustainability and the right to health and well-being of the person (Michelle *et al.*, 2018).

To conclude, and with reference to the developments of our research (that represents a central moment of an inter-institutional project broader than the one described), we aim to both develop and systematize the training of high school teachers on these issues, especially in the light of the evidence of this first intervention. It is important that teaching skills and educational attention towards the primary and secondary prevention of alcohol use related to road accidents increase. We also want to make systematic the active participation of students in different educational-didactic actions among peers in school classes as well as in extracurricular contexts. For this reason, short films, flash mobs, and the composition of musical texts for children have been organized by social cooperatives operating in the area. The material was then submitted to a prize competition and also disseminated through digital channels. In terms of future research actions, we intend to monitor the spread of the culture of psychophysical health and self-management related, in particular, to school success among those who attend the first four years of high school.

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