



## REVISIONES

### Interventions to reduce alcohol consumption in adolescents: a systematic review

Intervenciones para disminuir el consumo de alcohol en adolescentes: una revisión sistemática

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#### ABSTRACT:

**Objective:** To synthesize and evaluate the scientific evidence available during the 2006-2016 period regarding interventions that have been made to reduce alcohol consumption among adolescents.

**Materials and methods:** a search was conducted in EBSCO, PubMed, Science Direct, Scielo Redalyc and Google academic, delineated to ten years, 61 articles were included that met the inclusion criteria. DeCS and mesh descriptors were used, using words keys for the search of the studies in Spanish and English and the boolean operators AND and OR.

**Results:** the level of evidence found was 2 (3%), 3 (3%), 4 (34.4%) and 5 (55.7%). 8.1% of the RCTs adhered to the CONSORT, 60.6% of the interventions were directed only to adolescents, the application scenario was 59% in school, while 34.4% received the intervention through multimedia elements and / or the Internet, at 74.1 % were given general knowledge about alcohol consumption, 18% mentioned having performed the intervention between 2 and 20 sessions, 31% followed up between 1 and 8 months after giving the treatment; 16.3% gave reinforcements and 95% of the studies showed decreased alcohol consumption among adolescents.

**Conclusions:** Interventions in adolescents regarding alcohol consumption are complex, due to the stage in which the study subject is. Analyzing the general panorama of the interventions over time allows to show the evolution of the approach to this phenomenon of interest for science.

**Keywords:** adolescents; intervention; alcohol consumption.

#### RESUMEN:

**Objetivo:** Sintetizar y valorar la evidencia científica disponible durante el período 2006-2016 respecto a las intervenciones que se han realizado para disminuir el consumo de alcohol en adolescentes.

**Materiales y métodos:** Se realizó búsqueda en EBSCO, PubMed, Science Direct, Scielo Redalyc y Google académico, delimitada a diez años, se incluyeron 61 artículos que cumplieron con los criterios de inclusión. Se utilizaron descriptores DeCS y mesh, a partir del uso de palabras claves para la búsqueda de los estudios en español e inglés y los operadores booleanos AND y OR.

**Resultados:** El nivel de evidencia encontrado fue 2 (3%), 3 (3%), 4 (34.4%) y 5 (55.7%). El 8.1% de los ECA se apegaron al CONSORT, 60.6% de las intervenciones estuvieron dirigidas solo a adolescentes, el escenario de aplicación fue la escuela en un 59%, mientras que 34.4% recibió la intervención mediante elementos multimedia y/o internet, al 74.1% se le dio conocimientos generales acerca del consumo de alcohol, 18% mencionó haber realizado la intervención entre 2 y 20 sesiones, 31% dio seguimiento entre 1 y 8 meses después de entregar el tratamiento; 16.3% dio refuerzos y el 95% de los estudios arrojaron disminuir con sus intervenciones el consumo de alcohol en los adolescentes.

**Conclusiones:** Las intervenciones en adolescentes respecto al consumo de alcohol son complejas, por la etapa en la que se encuentra el sujeto de estudio. Analizar el panorama general de las intervenciones a través del tiempo permite evidenciar la evolución del abordaje a este fenómeno de interés para la ciencia.

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**Palabras clave:** adolescentes; intervención; consumo de alcohol

## INTRODUCTION

Currently, the consumption of alcoholic beverages is a widespread habit, culturally accepted and normalized in the society in which the adolescents are being integrated by what they consider that the imitation of these social behaviors is appropriate. Addictions are a problem closely related in adolescence. For this reason it constitutes an international public health problem. <sup>(1)</sup>

In 2012, 5% of deaths in the world of young people between 15 and 29 years of age were attributable to alcohol consumption. Globally, 140 million people suffer from alcohol dependence. Globally, Europe is the region with the highest consumption of alcohol per capita, with some of its countries with particularly high consumption rates <sup>(2)</sup>

In Latin America, the World Health Organization (WHO) <sup>(3)</sup> in its annual report on world alcohol consumption in 2014 indicates that the main consumers are Chile (9.6 liters) and Argentina (9.3 liters), Mexico is in the tenth place by consuming 7.2 liters, which is above the international average of 6.4 liters per year.

The Pan American Health Organization (PAHO) <sup>(4)</sup> points out that on average, everyone in the world of 15 years or older drinks about 6.2 liters of pure alcohol annually.

Consumption of alcohol is established in adolescence, and the age of onset is becoming smaller at age, to later establish itself as an addiction in the individual, so to treat this problem when it has relatively little to have initiated increases the possibility of decreasing or well avoid consumption. <sup>(5-7)</sup> The use and abuse of alcohol among adolescents increasingly concerns various countries, as it reduces self-control of the individual and significantly increases risk behaviors, such as unprotected sex, therefore unwanted pregnancies and in addition high risk. It is one of the main causes of injuries, such as traffic accidents, violence, and premature deaths. Hence various health disciplines have been concerned with establishing interventions to address this problem that affects the individual in health, emotional and short-term and long-term financial resources <sup>(1,2, 8)</sup>

Interventions have evolved over the years, from being delivered through paper, to various media integrating multimedia, currently the use of internet for interventions especially in adolescents is widely used for the impact it has on them, in spite of this

evolution the objective pursued by these interventions is the same, to avoid and / or to diminish the consumption of alcohol in adolescents. <sup>(9,10)</sup>

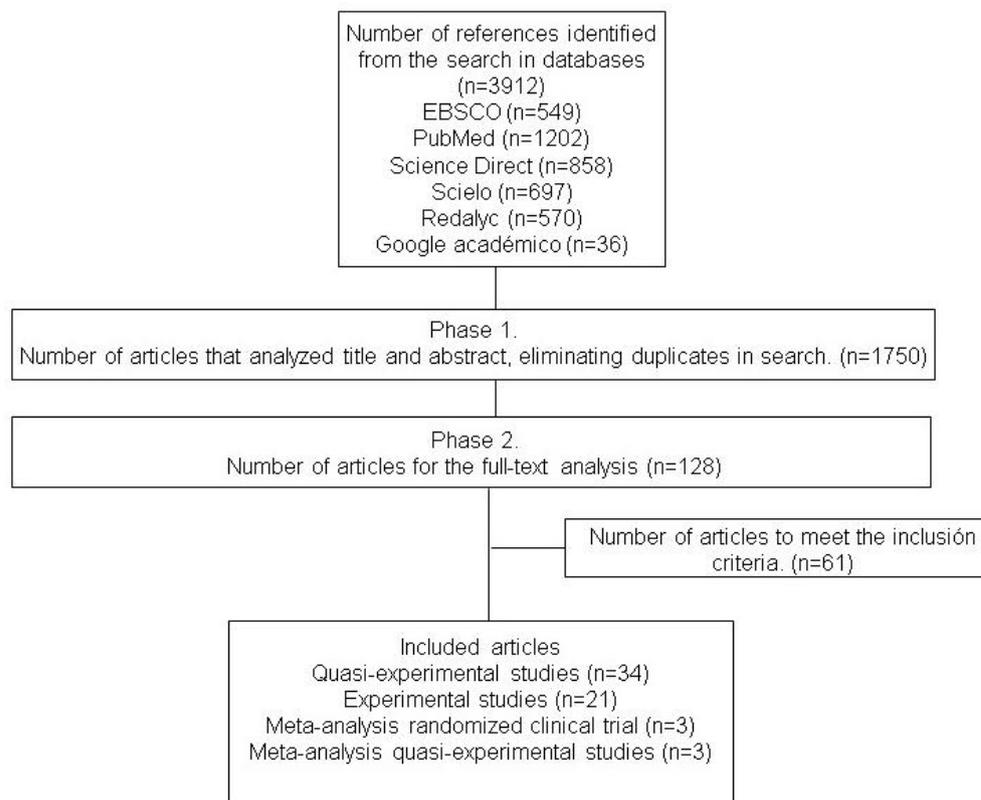
Therefore, the present work aims to: Synthesize and evaluate the scientific evidence available during the 2006-2016 period regarding the interventions that have been made to reduce alcohol consumption in adolescents.

The methodology used was proposed by Mendes, Silveira and Galvao <sup>(11)</sup>, which establish the following steps: 1) Identify the purpose of the research for literature search; 2) Define the strategy to carry out the literature search and the information to be extracted from each article. 3) Carry out the evaluation of the studies through the information of each article for selection; 4) Analyze selected search items; 5) Perform the discussion, interpretation, and conclusion of the information collected, and 6) Presentation of results obtained.

The level of evidence for each article was determined based on the classification proposed by Burns & Grove: <sup>(12)</sup> 1. Systematic reviews of randomized controlled trials (RCTs); 2. Meta-analysis of RCTs and quasi-experimental studies; Integrative review of ECA and quasi-experimental studies, 4. Experimental study ECA, 5. Quasiexperimental study.

The search for articles was done in the following databases: EBSCO, PubMed, Science Direct, Scielo, Redalyc and Google academic. DeCS and mesh descriptors were used, based on the use of key words to search for studies related to the phenomenon of interest for the present systematic review (RS); such as: alcohol, intervention, adolescents, alcohol use, alcohol consumption, adolescents, teenagers, intervention and Boolean operators AND and OR, obtaining a total of 3,912 articles, of which 61 studies were selected for fulfilling the inclusion criteria. (Figure 1)

**Figure 1.** Flow diagram for the inclusion of articles



The criteria for the selection of the articles are described below, the time from January 1, 2006 to October 31, 2016 was delimited, in order to show the panorama over the last ten years regarding the interventions in adolescents who consume alcohol. The articles included correspond to investigations of disciplines in health, such as nursing, psychology and social work. Adolescence is the stage between 11 and 19 years, <sup>(1-2)</sup> however, in many of the works have extended the age of 15 to 24 years, articles were included for adolescents and young people.

Works from Africa, Argentina, Belgium, Chile, Colombia, Cuba, Denmark, Spain, the United States, the Netherlands, Norway, Sweden and the Checay Republic of Mexico were included. The language of the selected studies was English and Spanish, complete texts that included the variables of interest for RS; the participants of the selected articles were adolescents consuming alcohol who participated in an intervention to treat their consumption.

The choice of article consisted of two phases, the first in the title review and the article summary, and in the second phase the entire article was analyzed. If the study fulfilled the criteria for inclusion in the RS, it was analyzed by three tables: 1. General characteristics of the study. 2. Bibliometric characteristics (level of evidence) 3. Methodological characteristics of the study.

## RESULTS

The total of articles included in the SR were 61, 34 of them correspond to quasi-experimental studies <sup>(5-8, 14-43)</sup> 21 experimental studies <sup>(44-64)</sup> 3 Meta analysis of quasi-experimental studies <sup>(9,11,13)</sup> and 3 of ECA <sup>(10, 65, 66)</sup>

In relation to ECA, only 8.1% (f = 5) reported adhering to the CONSORT statement (Consolidated Standards of Reporting Trials) <sup>(20, 44, 52, 54, 60)</sup>

Regarding the target population of the interventions, 60.6% (f = 37) were directed to adolescents; 21.3% (f = 13) to adolescents and their parents; 8.1% (f = 5) to adolescents hospitalized in a health institution for the consequences of alcohol; 3.2% (f = 2) were applied in adolescents and youngsters and 1.6% (f = 1) only to parents or adolescents, parents and teachers.

Regarding the place where the studies were applied, 59% (f = 36) were in the school where the adolescents studied, 11.4% (f = 7) did it in the community; 3.2% (f = 2) applied it in the rural environment and 1.6% (f = 1) did it in the indigenous environment. While 24.5% (f = 15) did not report it.

The techniques by which the interventions were delivered in the studies, 34.4% (f = 21) were delivered through multimedia elements and / or internet (web games, social networks, software among others). The 21.3% (f = 13) were through traditional health education (lectures, classes, exhibitions, leaflets, among others); interventions with combined techniques were delivered to 21.3% (f = 13) of the studies; 14.7% (f = 9) were through short intervention programs such as counseling; 4.9% (f = 3) used peer support groups and 3.2% (f = 2) implemented a local politic in the community to restrict consumption.

The topic that was addressed in most studies included more than two topics in the intervention. 74.1% (f = 46) of the interventions included knowledge about alcohol

consumption (generalities, risk factors, consequences among other contents). 26.2% (f = 16) aspects of motivation, 11.4% (f = 7) self-control, 9.8% (f = 6) self-efficacy; 8.1% (f = 5) solving problems, attitudes and social norms, 1.6% (f = 1) included life skills, suicide, values and personality. It is worth mentioning that some articles did not mention the theme that was addressed in his speech.

31.14% of the investigations reported giving the adolescents a brief intervention. Not all the articles mentioned the duration of the intervention, the results of those studies that indicated that: 18% (f = 11) reported between 2 and 20 sessions, without specifying whether they were given in days or weeks. 4.9% (f = 3) indicated 3, 14 and 20 days; 16.3% (f = 10) between 2 and 12 weeks, 6.5% (f = 4) between 1, 3, 6 and 18 months and 4.9% (f = 3) reported between 1 and 2 years.

Regarding follow-up, 31.1% (f = 19) specified it between 1, 2, 3, 6 and up to 8 months; 16.3% (f = 10) between 1, 2, 4, 5 and 10 years. Only 16.3% (f = 10) mentioned having performed a reinforcement after delivering the intervention and prior to the last follow-up, these were through parental supervision, telephone call, e-mail or cell phone message. 13.1% (f = 8) of the studies awarded a payment or incentive to participants. 9.8% (f = 6) of the studies had a qualitative component, with focus groups being the most used 4.9% (f = 3) among adolescents.

Regarding the impact of interventions on alcohol consumption, 95% (f = 58) of the studies showed a decrease in alcohol consumption, with statistical significance, however in their recommendations, most refer to the importance of follow-ups, reinforcements or strategies such as parents, peers or leaders within the intervention as well as the need for weekly or monthly self-reports by the study subjects.

In summary, 8.1% of the ECAS adhered to CONSORT, 60.6% of the interventions were directed only to adolescents, 59% of the application scenario was the school, 34.4% received the intervention through multimedia elements and / or the internet. In general, 74.1% received general knowledge about alcohol consumption, with regard to the duration of the intervention, 18% mentioned having performed between 2 and 20 sessions, 31% gave follow-up between 1 and 8 months after treatment; 16.3% gave reinforcements and 95% of the studies showed decreased alcohol consumption among adolescents.

## CONCLUSIONS

The present work has allowed synthesizing and evaluating the available evidence, in Spanish and English, regarding interventions that have been made to reduce alcohol consumption in adolescents, published in the international literature between January 2006 and October 2016.

Interventions in adolescents are complex because of the stage of the study subject, their biological development is not over, the psychosocial aspect is of the utmost importance for individuals, such as peer acceptance; in addition the phenomenon of alcohol consumption is considered as the legal starting drug for the consumption of other illegal substances; the pressure of the near social group, imitation and curiosity are some of the reasons why the adolescents begin to consume alcohol.

Analyzing the general panorama of interventions over time makes it possible to highlight the evolution of the approach to this phenomenon of interest to science, not

just nursing. The impact of combined strategies such as traditional classroom education and the use of virtual platforms and / or the Internet, allows us to approach adolescents and treat alcohol use and abuse.

The intervention time is of utmost importance, since if the adolescent is not caught from the outset by the issue to be addressed and the strategies by which the intervention will be delivered, it is very likely that the treatment will not be concluded.

The prevalence of alcohol consumption worldwide is worrisome because of the widespread use and abuse of almost all adolescents, who have adopted alcohol consumption as part of their recreation and leisure activities, and the availability of alcohol addictive substance and the social acceptance of this harmful habit for health. As a result, consumption continues to rise and the age of onset is low, it is very important that from our disciplinary field we propose interventions that impact on the harmful consumption of adolescents and thus prevents complications.

## REFERENCES

1. Garciga Ortega O. Las conductas adictivas desde un enfoque social. *Revista Habanera de Ciencias Médicas* 2013; 12(4):680-687.
2. Organización Mundial de la Salud (OMS). Alcohol y atención primaria de la salud. Disponible en: [http://www.who.int/substance\\_abuse/publications/alcohol\\_atencion\\_primaria.pdf](http://www.who.int/substance_abuse/publications/alcohol_atencion_primaria.pdf) [Acceso el 3 de marzo de 2015].
3. Organización Mundial de la Salud (OMS). Informe sobre la situación mundial de las enfermedades no transmisibles 2014 “Cumplimiento de las nueve metas mundiales relativas a las enfermedades no transmisibles: una responsabilidad compartida”. Disponible en: [http://apps.who.int/iris/bitstream/10665/149296/1/WHO\\_NMH\\_NVI\\_15.1\\_spa.pdf?ua=1&ua=1](http://apps.who.int/iris/bitstream/10665/149296/1/WHO_NMH_NVI_15.1_spa.pdf?ua=1&ua=1) [Acceso el 1° Octubre 2016].
4. Organización Panamericana de la Salud (OPS). Informe mundial de la OMS destaca los impactos negativos del alcohol en la salud. Disponible en: [http://www.paho.org/bulletins/index.php?option=com\\_content&view=article&id=1708%3Ainforme-mundial-de-la-oms-destaca-los-impactos-negativos-del-alcohol-en-la-salud&catid=916%3A mayo-junio-2014&lang=es](http://www.paho.org/bulletins/index.php?option=com_content&view=article&id=1708%3Ainforme-mundial-de-la-oms-destaca-los-impactos-negativos-del-alcohol-en-la-salud&catid=916%3A mayo-junio-2014&lang=es) [Acceso el 1° Octubre 2016].
5. Schelleman-Offerman K, Knibbe R, Kuntsche E. Preventing Adolescent Alcohol Use: Effects of a Two-Year Quasi-Experimental Community Intervention Intensifying Formal and Informal Control. *J Adolesc Health*. 2014; (54):326-332.
6. Jansena C. S, Haveman-Niesb A, Bos-Oude Groenigera I, Izebouda C, Rovera C, van't Veer P. Effectiveness of a Dutch community-based alcohol intervention: Changes in alcohol use of adolescents after 1 and 5 years. *Drug Alcohol Depend*. 2016; (159):125-132.
7. Bock C.B, Barnett P. N, Thindc H, Rosen R, Walaska K, Traficante R, et al. A text message intervention for alcohol risk reduction among community college students: TMAP. *Addict Behav*. 2016; (63):107-113. Disponible en DOI: 10.1016/j.addbeh.2016.07.012. [Acceso el 1° Octubre 2016]
8. Mendes Diniz de Andrade Barroso T.M, Oliveira Cruz Mendes A. M, Feleciano Barbosa A.J. Prevention program of use/abuse of alcohol in school-aged adolescents: stop to think. *Esc. Anna Nery* 2013, vol.17; (3):466 – 473. Disponible en: <http://dx.doi.org/10.1590/S1414-81452013000300009> [Acceso el 5 de Marzo 2016]

9. Das J.K, Salam R.A, Arshad A, Finkelstein Y, Bhutta Z.A. Interventions for Adolescent Substance Abuse: An Overview of Systematic Reviews. *J Adolesc Health*. 2016; 61-75
10. Strom H.K, Adolfsen F, Kaiser S, Martinussen M. Effectiveness of school-based preventive interventions on adolescent alcohol use: a metaanalysis of randomized controlled trials. *BioMed Central publishes*. 2014; 9-48. Disponible de: DOI: 10.1186/1747-597X-9-48 [Consultado: 10 de Marzo 2015].
11. Mendes Dal Sasso K, de Campos Pereira Silveira R.C., Galvão C.M. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto Contexto Enferm*. 2008, 17(4): 758-64.
12. Burns N, Grove SK. *The practice of nursing research*. Sixth edition: Elsevier; 2013.
13. Tebb Rebecca K P, Erenrich K, Bradner Jasik C, Mark S, Berna, James C, et al. Use of theory in computer-based interventions to reduce alcohol use among adolescents and young adults: a systematic review. *BMC Public Health*. 2016; 16:517. Disponible en DOI: 10.1186/s12889-016-3183-x [Acceso el 5 de Octubre 2016]
14. Martínez Martínez K. I, Bárcenas Meléndez A, Pacheco Trejo A. Y. En voz de la experiencia: Estrategias de enfrentamiento en adolescentes que concluyeron un programa de intervención breve en consumo de alcohol. *Salud Ment*. 2012; (35): 505-512
15. Davis Jon J. P, Houck N.L, Rowell L.N, Benson Douglas J.G, Smith C. Brief Motivational Interviewing and Normative Feedback for Adolescents: Change Language and Alcohol Use Outcomes. *J Subst Abuse Treat*. 2016; (65):66-73
16. Martino S. C, Kovalchik S. A, Collins R L, Becker K. M, Shadel W. G, D'Amico E. J. Ecological Momentary Assessment of the Association Between Exposure to Alcohol Advertising and Early Adolescents' Beliefs About Alcohol. *J Adolesc Health*. 2016; (58):85-91
17. Wurdak M, Wolstein J, Kuntsche E. Effectiveness of a drinking-motive-tailored emergency-room intervention among adolescents admitted to hospital due to acute alcohol intoxication. *Prev Med Rep*. 2015; (3): 83-89
18. Bertholet N, Daeppen J.B, Cunningham J.A, Burnand B, Gmel G, Gaume J. Are young men who overestimate drinking by others more likely to respond to an electronic normative feedback brief intervention for unhealthy alcohol use?. *Addict Behav*. 2016; 97-101
19. Schelleman Offermans K, M.Sc, Knibbe R, Kuntsche E, Casswell S. Effects of a Natural Community Intervention Intensifying Alcohol Law Enforcement Combined With a Restrictive Alcohol Policy on Adolescent Alcohol Use. *J Adolesc Health*. 2012; 580–587
20. Tait R.J, Teoh L, Kelty E, Geelhoed E, Mountain D. Emergency department based intervention with adolescent substance users: 10 year economic and health outcomes. *Alcohol Drug Depend*. 2016; 168–174
21. Jacques J.L, Knight J.R, Sherritt L, Hook S.V, Harris S.K. Do Risky Friends Change the Efficacy of a Primary Care Brief Intervention for Adolescent Alcohol Use?. *J Adolesc Health*. 2013; 449-453
22. Brown P.C, Dunn M.E, Budney A.J. Development and Initial Evaluation of a Web-Based Program to Increase Parental Awareness and Monitoring of Underage Alcohol Use: A Brief Report. *The Journal of Medical Internet Research*. 2014
23. Yurasek A.M, Borsari B, Mastroleo M, Hustad J, O'Leary Tevyaw T. Descriptive Norms and Expectancies as Mediators of a Brief Motivational Intervention for Mandated College Students Receiving Stepped Care for Alcohol Use. *Psychol Addict Behav*. 2015; 1003–1011.

24. Edelen O, Tucker J, D'Amico E. Spreading the word: A process evaluation of a voluntary AOD prevention program. *J Addict*. 2015; 315–322.
25. Teunissen H A, Spijkerman R, Cohenb G L, Prinsteinc M J, Engelsa R, Scholte R. H. An experimental study on the effects of peer drinking norms on adolescents' drinker prototypes. Author manuscript. 2015; 39(1): 85–93
26. Carrá G, Crocamo C, Bartoli F, Carretta D, Schivalocchi A, Bebbington P.E, Clerici M. Impact of a Mobile E-Health Intervention on Binge Drinking in Young People: The Digitale Alcohol Risk Alertness Notifying Network for Adolescents and Young Adults Project. *J Adolesc Health*. 2016; 520-526
27. Dumas D.M, King M, Stallworth C, Peterson P, Lundquist A. Evaluation of a Parent-Based Intervention for At-Risk Adolescents. *J Addict Offender Couns*. 2014; 36.
28. Kyrrestad Strøm H, Adolfsen F, Helge Handegård B, Natvig H, Eisemann M, Martinussen M, et al. Preventing alcohol use with a universal school-based intervention: results from an effectiveness study. *BMC Public Health*. 2015; 15:337.
29. Rulison K.L, Feinberg M, Gest S D, Osgood W, ) Diffusion of Intervention Effects: The Impact of a Family-based Substance Use Prevention Program on Friends of Participants. *J Adolesc Health*.
30. Flórez-Alarcón L, Castellanos-Morales C. A. Efectos de la entrevista motivacional sobre la motivación autónoma en jóvenes consumidores de alcohol. *Rev. salud púb*. 2011; 14 (2): 69-85.
31. Crooke A, Reid S. C, Kauer S. D, McKenzie D. P, Hearps S. C, Khor A.S, et al. Temporal mood changes associated with different levels of adolescent drinking: Using mobile phones and experience sampling methods to explore motivations for adolescent alcohol use. *Drug Alcohol Rev*. 2013; 262–268.
32. Zebregs S, van den Putte B, de Graaf A, Lammers J, Neijens P. The effects of narrative versus non-narrative information in school health education about alcohol drinking for low educated adolescents. . *BMC Public Health* (2015)15:1085.
33. Thameemul Ansari Jainullabudeen , Ailsa Lively , Michele Singleton , Anthony Shakeshaft , Komla Tsey et al. The impact of a community-based risky drinking intervention (Beat da Binge) on Indigenous young people. *BMC Public Health* (2015) 15:1319. Disponible en: DOI 10.1186/s12889-015-2675-4. [Acceso el 5 de Octubre 2016]
34. Sharpe S, Shepherd M, Kool B, Whittake R, Nosa V, Dorey E, et al. Development of a text message intervention aimed at reducing alcohol-related harm in patients admitted to hospital as a result of injury. . *BMC Public Health*. 2015; 15:815
35. Stock C, Vallentin-Holbech L, Rasmussen B. The GOOD life: Study protocol for a social norms intervention to reduce alcohol and other drug use among Danish adolescents. *BMC Public Health*. 2016; 16:704
36. Giannotta F, Weichold K. Evaluation of a Life Skills Program to Prevent Adolescent Alcohol Use in Two European Countries: One-Year Follow-Up. *Child Youth Care Forum*. 2016; 607-624
37. Koning I.M, Vollebergh W.A.M. Secondary Effects of an Alcohol Prevention Program Targeting Students and or Parents. *J Subst Abuse Treat*. 2016; 55-66
38. Spicer R.S, Miller T.R, The Evaluation of a Workplace Program to Prevent Substance Abuse: Challenges and Findings. *J Primary Prevent*. 2016; 329-343
39. Drost R, Paulu A.T, Jander A.F, Mercken L, De Vries H, Ruwaard D, et alt. A Web Based Computer-Tailored Alcohol Prevention Program for Adolescents: Cost-Effectiveness and Intersectoral Costs and Benefits. *School for Public Health and Primary Care*. 2016

40. Dawn W Foster, Clayton Neighbors, Ankita Pai. Decisional balance: Alcohol decisional balance intervention for heavy drinking undergraduates. *Subst Use Misuse*. 2015; (13): 1717–1727
41. Caudwell K.M, Mullan B.A, Hagger M.S, Combining motivational and volitional approaches to reducing excessive alcohol consumption in pre-drinkers: a theorybased intervention protocol. Caudwell et al. *BMC Public Health*. 2016; 16-45.
42. Fabelo-Roche J.R, Iglesias-Moré S, Gómez-García A.M, Hernández-Domínguez H, García-Enríquez I. An Intersectoral Intervention to Prevent Early Alcohol Use in Cuban Adolescents. *Lessons from the Field*. 2016; (18):25-28.
43. Salazar García M.L, Valdez Ruiz J. F, Martínez Martínez K.I, Pedroza Cabrera F. J. Intervenciones breves con adolescentes estudiantes rurales que consumen alcohol en exceso. *Uni Psycho*. 2011; (10): 803-815.
44. Verdurmen J.E, Koning, Wilma I. M, Vollebergh A.M, . Van den Eijnden R. J, Engels R. Risk moderation of a parent and student preventive alcohol intervention by adolescent and family factors: A cluster randomized trial. *Prev Med Rep*. 2014; (60): 88-94
45. Jander A, Crutzen R, Mercken L, De Vries H. Web-based interventions to decrease alcohol use in adolescents: a Delphi study about increasing effectiveness and reducing drop-out. *BMC Public Health*. 2015; 15-340
46. Toumbourou J. W, Douglas Gregg M.E, Shortt Delyse A. L, Hutchinson M, Slaviero T.M. Reduction of Adolescent Alcohol Use Through Family School Intervention: A Randomized Trial. *J. Adolesc Health*. 2013; .(53)778-784
47. Verdurmen J.E, Koning, Wilma I. M, Vollebergh A.M, . Van den Eijnden R. J, Engels R. Long-Term Effects of a Parent and Student Intervention on Alcohol Use in Adolescents A Cluster Randomized Controlled Trial. *Am J Prev Med*. 2011. .(5)541-547
48. D'Amico E.J, Hunter S.B, Miles J.N.V, Ewing B.A, Osilla K.CH. A randomized controlled trial of a group motivational interviewing intervention for adolescents with a first time alcohol or drug offense. *J Subst Abuse*. 2013; 400-408
49. Koning I.M, Van Den Eijnden R.J, Verdurmen J.E, Engels R, Vollebergh A.M, Wilma I.M. A cluster randomized trial on the effects of a parent and student intervention on alcohol use in adolescents four years after baseline; no evidence of catching-up behavior. *Addict Behav*. 2013; 2032–2039
50. Vaucher P, Michiels W, Lambert S.J, Favre N, Perez B, Baertschi A, Favrat B, Gache P. Benefits of short educational programmes in preventing drink-driving recidivism: A ten-year follow-up randomised controlled trial. *J Drug Policy*. 2016; 70-76
51. Lammers J, Goossens F, Conrod P, Engels R, Wiers R.W, Kleinjan M. Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. *Addiction*. 2015; 1101–1109
52. Diestelkamp S, Arnaud N, Sack P.M, Wartberg L, Daubmann A, Thomasius R. Brief motivational intervention for adolescents treated in emergency departments for acute alcohol intoxication - a randomized-controlled trial. *BMC Emerg Med*. 2014; (3): 296-306
53. Yurasek A.M, Dennhardt A. A, Murphy J.G. ). A Randomized Controlled Trial of a Behavioral Economic Intervention for Alcohol and Marijuana Use. *Exp Clin Psychopharmacol*. 2015; 3(5): 332–338.
54. Voogt V. C, Poelen E. A, Lemmers L, Engels R. The effectiveness of a web-based brief alcohol intervention in reducing heavy drinking among adolescents aged 15 to 20 years with a low educational background: study protocol for a randomized controlled trial. *Voogt*. 2012; 13:83.

55. Tomczyk S, Hanewinkel R, Isensee B. ), 'Klar bleiben': a school-based alcohol prevention programme for German adolescents—study protocol for a cluster randomised controlled trial. *Bmjopen*. 2015;
56. Elgán T H, Kartengren N, Strandberg A. K, Ingemarson M, Hansson H, Zetterlind U, Gripenberg J. A web-based group course intervention for 15-25-year-olds whose parents have substance use problems or mental illness: study protocol for a randomized controlled trial. *BMC Public Health*. 2016; 16:1011.
57. Cunningham R.M, Chermack S.T, Ehrlich P.F, Carter P.M, Booth B.M, Blow F.C, et al. ), Alcohol Interventions Among Underage Drinkers in the ED: A Randomized Controlled Trial. *Pediatrics*. 2015;136(4).
58. Segatto M.L, Andreoni S, Souza e Silva R, Diehl A, Pinsky I. Brief motivational interview and educational brochure in emergency room settings for adolescents and young adults with alcohol-related problems: a randomized single-blind clinical trial. *Ver, Brasileira de Psiqui*. 2013; 33(3)
59. Amaud N, Baldus CH, Elgan T.H, De Paepe N. Effectiveness of a Web-Based Screening and Fully Automated Brief Motivational Intervention for Adolescent Substance Use: A Randomized Controlled Trial. *J Med Internet Res*. 2016; (5)
60. Suffoletto Jeffrey Kristan B, Chung T, KwonhoJeong, Fabio A, Monti P, Bark D. An Interactive Text Message Intervention to Reduce Binge Drinking in Young Adults: A Randomized Controlled Trial with 9-Month Outcomes. *PLoS One*. 2015;
61. Bentsen P, Bentsen M, Karlsson N, White I.R, Cambridges J.M. Online Alcohol Assessment and Feedback for Hazardous and Harmful Drinkers: Findings From the AMADEUS-2 Randomized Controlled Trial of Routine Practice in Swedish Universities. *J Child Adolesc Subst Abuse*. 2016; (2): 109-115
62. Segrott J, Rothwell H, Hewitt G, Playle R, Huang CH, Murphy S, et al. Preventing alcohol misuse in young people: an exploratory cluster randomised controlled trial of the Kids, Adults Together (KAT) programme. *Public Health Res*. 2015; (15)
63. Jalling C, Bodin M, Romelsjo A, Kallme'n H.K, Durbeej N, Tengstro A. Parent Programs for Reducing Adolescent's Antisocial Behavior and Substance Use: A Randomized Controlled Trial. *J Child Fam Stud*. 2016; 811–826
64. Esmée P. Schijven, Rutger C.M.E. Engels, Marloes Kleinjan, Evelien A.P. Poelen. ), Evaluating a selective prevention program for substance use and comorbid behavioral problems in adolescents with mild to borderline intellectual disabilities: Study protocol of a randomized controlled trial. *BMC Psychiatry*. 2015; 15:167
65. Deluca P, Coulton S, Fasihul Alam M, Cohen D, Donoghue K, Gilvarry E, et al. Linked randomised controlled trials of face-to-face and electronic brief intervention methods to prevent alcohol related harm in young people aged 14–17 years presenting to Emergency Departments. *BMC Public Health*. 2015; 15: 345
66. Tanner-Smith E.E, Lipsey M. Brief Alcohol Interventions for Adolescents and Young Adults: A Systematic Review and Meta-Analysis. *J Subst Abuse Treat*. 2015; (51):1-18

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