Supplementary File 2: Data extraction of included studies regarding the before-the-party stage

Intervention (ref)	Year/ duration (country)	Target group(s)	Sample size	Target substance	Setting	Outcomes	Results	Characteristics of the intervention	Reporting STROBE / AMSTAR (Four-star Rating[14])		
Primary studies											
Test of social norms theory [20]	01/2008- 08/2009 (USA)	peer-groups crossing the US/Mexican border on weekend nights (approx. 35% of the sample <21 years old)	2,218	alcohol	Friday and Saturday nights, border crossing in San Diego (USA)/Tijuana (Mexico)	<ul> <li>changes in actual drinking correlated to changes in perceived drinking norms</li> <li>dependence of "change in-perceived- norm" scores among different experimental conditions</li> </ul>	<ul> <li>social norms feedback significantly affected participants' perceived norms</li> <li>providing participants with highly detailed information (to increase salience and specificity) appeared to reduce the effect</li> <li>efficacy of social norms feedback was undermined by individual experience.</li> <li>relationship between changes in perceived norms and exit BrACs was significant but weak</li> </ul>	Experimental design. Random sampling of groups of participants to one out of 9 conditions with 3 min. social norms feedback conditions (1 control design). Independent variables: salience of discrepancy between actual and perceived norms, specificity of reference group, trustfulness of information. Feedback regarding percentage nondrinkers in Tijuana, percentage legally drunk, average standard drinks consumed, percentage consuming >10 drinks. Entry/exit survey with questionnaire and breath alcohol concentration (BrAC).	20/22 (***)		
SMS-delivered alcohol intervention [21, 25]	11/2012- 11/2013 (USA)	Emergency department visits of patients aged 18-25 years who presented between 7 am and 1 am, 7 days per week, with hazardous alcohol consumption	765	alcohol	SMS every Thursday and Sunday for 12 weeks	<ul> <li>number of days with binge drinking</li> <li>number of drinks per day in the past 30 d</li> <li>proportion of participants with weekend binge episodes</li> <li>maximum of drinks per drinking occasion over 12 weekends</li> </ul>	<ul> <li>decrease in binge drinking days from baseline to 3 months in the SA+F group (increases in the SA group and the control group, p&gt;0.05)</li> <li>decreases in number of drinks per drinking day from baseline to 3 months in the SA+F group (increases in the SA group and the control group, p&gt;0.05)</li> <li>greater reductions in the proportion of participants with any binge drinking in the last 30 d from baseline to 3 months in the SA+F group (-14.5%) compared to the SA group (- 3.1) and the control group (-2.0)</li> </ul>	Incentive: \$20 retail store gift card Three-arm randomized controlled trial. Randomisation after self-administered computerized baseline assessments to intervention, incorporating weekly SMS drinking-related assessments with real-time Feedback (SA+F); or SMS drinking assessments (SA) only; or control. Three months after randomization, web-based follow-up questionnaire. Incentive: financial.	No STROBE rating due to study design (RCT) (****)		
Gamified Alcohol Norm Discovery & Readjustment CampusGANDR	2015 (USA)	Undergraduat e university (18-24 years)	237	alcohol	smartphone app	perceived peer drinking norms     alcohol use	participants in both conditions demonstrated significant reductions in perceptions of drinking norms alcohol consumption from baseline to follow-up	Two-arm RCT. Randomisation after computerized baseline assessement to 1. intervention (novel, gamified personalized normative feedback intervention via app) or 2. control (standard brief,web-based PNF	No STROBE rating due to study design		

[17]							<ul> <li>PNF delivered in verum group provided larger reduction in these norms than standard PNF.</li> <li>reduction in drinking was more substantial in the CampusGANDR condition.</li> <li>&gt; gamified elements may increase the efficacy of web-based PNF interventions</li> </ul>	intervention). Gamified intervention in form of facebook-connected social game including point- based reward system, element of chance, and personal icons to represent users. Follow-up with online survey after 2 weeks. Incentive: credit for an introductory psychology course.	(RCT) (****)
Digital Alcohol Risk Alertness Notifying Network for Adolescents and Young Adults: D-ARIANNA [19]	2015 (Italy, Milan)	Young people aged 18-24 years, with a smartphone and reporting occasional binge- drinking	590	alcohol	e-Health app	differences between the BD rates in the 2 weeks before and after e-Health app self- administration	At follow-up,14 days after self-administration of D-ARIANNA, young people reported a reduction in binge drinking (37% at baseline vs. 18% at follow-up)	Natural, quasi-experimental, pre-/post-test study. Participants were recruited in nightlife by peer-group facilitators (who previously received 10h training on data collection). 2-week follow-up by phone-call. Incentives: T-shirt at baseline, mobile phone top-up at follow up	21/22 (***)
Social networking site (SNS) alcohol prevention program [ <u>18]</u>	02/2013- 12/2014 (France)	Young people	1,011, 69 students as controls during 1 <sup>st</sup> , 50 during 2nd period	alcohol (43% preventive messages regarding alcohol; others for drug use, road accidents, STDs	Internet through social networks (Facebook) and mobile phone (SMS)	<ul> <li>association between festive moments and alcohol use</li> <li>consumption of alcohol at festive moments</li> </ul>	<ul> <li>reduction of the link between alcohol and partying in target population (only influenced by number of days since registration in the program) influenced by</li> <li>declared number of glasses of alcohol consumed at festive moments did not diminish consistently over recruitement periods</li> </ul>	Ecological study: Participants recruited via email or flyer in 3 periods over 2 years. In period 1&2 additionally with students as control groups. Participants periodically received prevention messages via facebook and SMS. Questionnaires at beginning and end of the program (follow-up period 3 month) Incentive: participation in lotteries.	20/22 (***)
Mobile phone brief intervention applications (Promillekoll, Partyplaner) [22]	03/2013- 04/2013 (Sweden)	University students showing risky drinking habits, and use smartphone	1,932	alcohol	smartphone apps with real-time eBAC calculation	reduction in risky drinking (AUDIT score over the cutoff level for risky or hazardous drinking)	<ul> <li>Overall, study participation did not affect drinking in any of the three study groups.</li> <li>Promillekoll participants showed significant increase in drinking occasion frequency compared to controls.</li> <li>Conclusion: eBAC calculation in the app form is not effective for reducing alcohol consumption among university students</li> </ul>	Randomized, parallel, three-group, controlled, repeated-measures design. Outcomes of two smartphone intervention groups separately compared to assessment-only control group. Participants assessed at baseline before trial and at follow-up 7 weeks later (online questionnaires). Attrition rates 30% overall.	No STROBE rating due to study design (RCT) (****)

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Reviews									
Brief interventions [23]	2011 (18 US studies, all RCTs)	College students engaged in heavy episodic drinking	6,233	alcohol	Campus	alcohol consumption (drinks/week) and alcohol- related problems	<ul> <li>At approximately 12 months, students receiving BI had a significant reduction in alcohol consumption (difference between means =-1.50 drinks per week, 95% CI: -3.24 to -0.29) and alcohol-related problems (difference between means=-0.87, 95% CI: - 1.58 to -0.20) compared to controls.</li> <li>in several studies women showed significantly greater decrements in drinking problems over time than men</li> <li>perceived alcohol peer norms mediated the effects of intervention for all drinking outcomes</li> <li>participants were given a more favorable rating for BI than other interventions or control conditions in several studies</li> </ul>	Brief interventions (BI), 30-90min, using techniques of motivational interviewing and personalized feedback, face-to-face intervention, and comparison with other conditions (such as control group or alternative intervention), conducted by professionals (psychologists, advanced peers). Follow-up periods from 1-48 month. Limitations: Data refer to college students only -> compromise the generalizability of the outcomes to European situations	8/11
Brief interventions (BI) [24]	2015 (156 studies, (81% from USA, controlled studies, mostly RCTs)	young adults, 19-30 years	No data	alcohol	High school/ University	• overall effects of brief alcohol interventions on young adults' alcohol consumption and alcohol- related problems • variation in effects associated with intervention and participant characteristics • persistence of the effects of brief alcohol interventions	<ul> <li>significantly lower levels of alcohol consumption in intervention compared to control conditions (g= 0.17, 95% CI [0.13, 0.20), equivalent to a 0.8 reduction in drinking days/month, from 6.2 to 5.4 d in the past month)</li> <li>significant beneficial effect on alcohol- related problems (g= 0.11, 95% CI [0.08, 0.14], producing a 4- percentile improvement on alcohol-related problems)</li> </ul>	BI of max. 5h during max. 4 weeks, using techniques of motivational interviewing and personalized feedback, face-to-face intervention etc., and comparison with other conditions (no treat- ment, a waiting-list control, or some form of routine treatment), conducted by professionals (psychologists, advanced peers). Follow-up periods between 1 to 24 month	8/11