Supplementary File

Appendix 1. School-based Prevention Interventions for Tobacco

	Effectiveness	Middle Childhood (5 - 10)	Early adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	Universal	Universal	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	Social competence model/ Combined social competence and social influence model/Health education model/Social learning model/Social skill training / Self-control training problem solving	Social competence model/Combined social competence and social influence model/Health education model/Social learning model, social skill training/Self-control training problem solving	No data
	Ineffective	Social influence model/Information only model/ Incentives model/Multi-curricula/Resilience protective factors programs	Social influence model/Information only model/Incentives model/Multi-curricula/Resilience protective factors programs	No data
Duration of intervention and follow-up	Effective	Long term program (12 month or more)/ At longest follow-up tobacco-only curricula	Long term program (12 month or more)/At longest follow-up tobacco-only curricula	No data
	Ineffective	No data	No data	No data
Program provider	Effective	Adult-led (combined social competence and social influences curricula)/Professionals alone (short-term programs)/Professionals and teachers together (long-term programs)	Adult-led (combined social competence and social influences curricula)/Professionals alone (short-term programs)/Professionals and teachers together (long-term programs)	No data
	Ineffective	Peer-led (higher-risk)	Peer-led (higher-risk)	No data

Appendix 2. School-based Prevention Intervention for Alcohol

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	Universal	Universal/Universal multi-component programs	Universal/Universal multi-component programs
	Ineffective	No data	No data	No data
Theoretical model	Effective	Multi-component programmed/Interventions directed to parents achieve mostly positive effects especially the Strengthening Families Program.	Brief alcohol interventions (BAIs)/Motivational enhancement therapy components/multi-component programmed/Interventions directed to parents achieve mostly positive effects especially the strengthening families Program	Brief motivational interventions Personalized cognitive behavioral intervention Computer- or web-based prevention intervention Multi-component programs (personalized feedback, moderation strategies, expectancy challenge, identification of risky situations, and goal setting)
	Ineffective	No data	Traditional (universal) media campaigns or education/information campaign/Social norms campaign against alcohol consumption/Resilience protective factors programs	Social norms campaign against alcohol consumption/Resilience protective factors programs
Duration of intervention and follow-up	Effective	No data	Short-time interval (< 3 months) and (4 - 12 months)/Long term program (12 month)	Long term program (12 months) More than 4 months follow-up for web/computer feedback in individual face-to-face feedback
	Ineffective	No data	Intervention effects > 13 months/Long-term follow up for multi component program	More than 4 months follow-up for web/computer feedback in social norms programs in university or college students/More than 4 months follow-up for web/computer feedback in social marketing campaigns in university or college students,
Program provider	Effective	No data	Professionals alone in short-term programs/Professionals and teachers together in short-term programs/Professionals and teachers together in long-term programs	Web/computer-based model Professionals
	Ineffective	No data	Teacher-led /Mentor	Mentor

Appendix 3. School-based Prevention Intervention for Cannabis

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	No data	Universal/Universal multimodal programs/Targeted uni-modal programs	No data
	Ineffective	No data	Targeted uni-modal programs delivered during early adolescence	Late adolescence/young adult (18[+]years)
Theoretical model	Effective	No data	Health education model/Social learning model/Social competence model for smoking/Mixed model Prevention/Combined programs in the long-time intervention (12[+] months), skill-based intervention models	No data
	Ineffective	No data	Social influence versus usual curricula or no intervention for Long-term follow-up (12+ months)/Resilience protective factors programs	No data
Duration of intervention and follow-up	Effective	No data	Short universal multi-modal programs/Long-term intervention>15 session/Long term program (12 month)/Short-term follow-up (< 12 months) for social competence/Short-term follow-up (< 12 months) for social influence/Short-term follow-up (< 12 months) combined programs/Long-term follow-up (12+ months) combined programs	No data
	Ineffective	No data	Without boosters/Long-term follow-up (12+ months) for social competence/Long-term follow-up (12+ months) social influence	No data
Program provider	Effective	No data	Non-teacher facilitators for universal multi-modal programs/Multiple facilitators (teacher in combination with a project worker or a parent in combination with a CD-ROM intervention) in multi-modal programs Mentor/Professional and teacher together Peer-led /Computer-delivered BI and MI+CBT	No data
	Ineffective	No data	Non-teacher facilitators unimodal programs/Peer-led interactive middle school-based programs potentially delay or prevent cannabis use in middle school students/Teacher-led the program with booster sessions	No data

Appendix 4. School-based Prevention Intervention for Substance and Drugs

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	Universal	Universal	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	No data	Health education model/Social learning/Social competence for smoking/Social influences in/preventing the onset of smoking/Affective-based programs (compared to usual curricula) Skills-based interventions/Resilience protective factors as part of a multidimensional intervention approach/Cognitive-behavioral based programs	No data
	Ineffective	Fear based models/Information model (Providing information on specific substances, including fear-arousal)/Models that Focus only on the building of self-esteem and on emotional education/Programs that involve parent	Information-giving alone, particularly fear-arousal/Address only ethical/ moral decision making or values/Complex interventions that included CB/Alcohol-specific or generic programs/Focusing on the consequences of substance use/Programs that involve parent	No data
Duration of intervention and follow-up	Effective	No data	High intensity, and meet consistently and frequently in mentoring /Long term program (12 months)	No data
	Ineffective	Programs with booster sessions	Programs with booster sessions /Short-term follow-up (< 12 months)/Combined programs/Long-term follow-up (12+ months) Combined programs/Long-term follow-up (12+ months) for social competence	No data
Program provider	Effective	Trained teachers or facilitators	Professionals alone in short-term program/Professionals and teachers together in the long-term program/Peer-led programs to be more effective than adult-led programs/Programs led by specialists (e.g., program developers, prevention agency staff, mental health professionals, graduate students) are more effective than other adult leaders (e.g., teachers and school staff)/Programs delivered by those other than teachers/Trained facilitator (including trained peers) External educators/by adults	No data
	Ineffective	No data	Peer education/ Ex-drug users as testimonials Police officers.Random drug testing /Peer-group program leads to iatrogenic effects when high-risk youth are exposed to high-risk peers	No data

Appendix 5. Family-based Prevention Intervention for Tobacco

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	Selective	Selective	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	Authoritative parenting/Motivational interviewing/Strengthen parental skills/Strengthen children's prosocial and peer resistance skills	Authoritative parenting/Motivational interviewing/Strengthen parental skills Strengthen children's prosocial and peer resistance skills	No data
	Ineffective	Healthy School and Drugs program, which consisted of online lessons for students/Focused exclusively on parents	Healthy School and Drugs program, which consisted of online lessons for students.Focused exclusively on parents	No data
Duration of intervention and follow-up	Effective	No data	High intensity of family intervention	No data
	Ineffective	No data	Low and medium intensity	No data
Program provider	Effective	Parents or family with a professional	Parents or family with a professional/Combined family plus school intervention	No data
	Ineffective	No data	No data	No data

Appendix 6. Family-based Prevention Intervention for Alcohol

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	Universal	Universal multicomponent programs	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	No data	General and alcohol-specific parenting strategies/Parent-child programs/Self-directed parent programs/Combination of general and alcohol-specific parenting program/Combination of school- and family-based interventions (e.g., LST plus strengthening family's program; LST + SFP)/The intervention consisted of school-, parent-, and community-based components,	No data
	Ineffective	No data	Family-based intervention alone/Alcohol-specific parenting only.	No data
Duration of intervention and follow-up	Effective	No data	Training <12 hours	No data
	Ineffective	No data		No data
Program provider	Effective	No data	Computer-based approach/Parent self-directed and professional-delivered methods.	No data
	Ineffective	No data	No data	No data

Appendix 7. Family-based Prevention Intervention for Cannabis

	Effectiveness	Middle childhood (5 - 10)	Early adolescence, adolescence (11-18)	Adulthood (19 and above)
Type of intervention	Effective	No data	Uni-modal programs (universal or targeted)	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	No data	No data	No data
	Ineffective	No data	Strengthening Families Program	No data
Duration of intervention and follow-up	Effective	No data	No data	No data
	Ineffective	No data	No data	No data
Program provider	Effective	No data	No data	No data
	Ineffective	No data	No data	No data

Appendix 8. Family-based Prevention Intervention for Substance or Drugs

	Effectiveness	Middle Childhood (5 - 10)	Early Adolescence, Adolescence (11 - 18)	Adulthood (19 and Above)
Type of intervention	Effective	No data	Selective prevention in family relationships dimension/Selective prevention in positive parenting dimension	No data
	Ineffective	No data	No data	No data
Theoretical model	Effective	Family bonding/Support parents on how to take a more active role in their children's lives Support parents on appropriate discipline/Support parents on how to be a role model for their children	Positive Family Relations/Future Orientation/Integrated preventive interventions that target common risk and protective factors for a variety of youth problem behaviors/Combined model for students and parents/School-based programs, which include both student and parent components/School-based and multiple prevention strategies	No data
	Ineffective	Information model (Provide information to parents about drugs so that they can talk about it with their children)/Focus exclusively on the child Programs that undermine parents' authority	Problem Solving/Resisting Peer Risk Parental monitoring and management of child behavior	No data
Duration of intervention and follow-up	Effective	Series of sessions (often around 10 sessions)	Illicit substance use: ≤ 24 hours of training	No data
	Ineffective	No data	No data	No data
Program provider	Effective	Parent(s)/Whole family/Delivered by trained individuals	Deliver by experts/Youth and parent(s) in the home/Youth and peers in the school setting/Youth with parents and teachers both in school and in the home	No data
	Ineffective	Delivered by poorly trained staff	No data	No data

Appendix 9. Community-based Prevention Intervention for Tobacco

	Effectiveness	Middle Childhood (5-10)	Early Adolescence, Adolescence (11-18)	Adulthood (19 and Above)
Type of intervention	Effective	No data	Universal	Universal
	Ineffective	No data	No data	No data
Theoretical model	Effective	No data	Social learning theory/School-based multi-component intervention/cardiovascular disease prevention programs aimed at entire populations /Combined with school-based multi-component interventions	Social learning theory/cardiovascular disease prevention programs aimed at entire populations
	Ineffective	No data	Social influences model Community action/organization theory/The focus of cancer prevention; with influencing youth and adult smoking behavior as secondary components	The focus of cancer prevention; with influencing youth and adult smoking behavior as secondary components
Duration of intervention and follow-up	Effective	No data	Intervention durations longer than 12 months/For daily and weekly smoking up until 8-year follow up for monthly smoking up until 4-year follow up	No data
	Ineffective	No data	No data	No data
Program provider	Effective	No data	Intervention delivery by school teachers and other faculty members/Parental involvement	No data
	Ineffective	No data	No data	No data