



UNODC

United Nations Office on Drugs and Crime



UNODC Youth Initiative

DRAFT DISCUSSION GUIDE II
2012

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September 2012. Draft UNODC Youth Initiative Discussion Guide, second volume.

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1. Media sells us dreams

Our everyday lives are filled with messages and images conveyed by media. Think of how many times a day you hear music, listen to radio, watch TV, see ads, surf in the Internet, read. Messages delivered by media influence our perceptions, and also our perceptions on drugs. Media creates meanings in various ways, and tries to make us to believe in them. Media literacy can be defined as the ability to access the different forms of the media, to understand and to critically evaluate different aspects of the media and its contents. It means asking questions on what we watch, listen, see and read. Media literacy can be learned.

In general media messages try to convince us and make us to believe in them, and sometimes the messages coincides with the scientific knowledge, where as sometimes not, when for example the commercial interest are emphasized more. Messages delivered by various forms of media can also inspire people to do things that compromise their personal wellbeing. It is important to understand the techniques that media uses. A proper understanding of these techniques helps us to interpret the messages and images correctly, to select the right form of media when we are looking for reliable information, and make informed choices.

Most media messages try to persuade us to believe or do something, especially advertisements. In order to persuade, a variety of techniques is used, such as flattery, repetition, superlatives, associations, symbols, humor, celebrities, and charisma. We make a mental association with an emotion, a feeling or a desire, and a specific product or a brand. Advertisers try to connect a good feeling to their product hoping that once the potential customer is in the store the same feeling will reproduce and the customer will choose their product. Media has the power to affect us all and that is why media is such a huge business.

Media messages that seek to promote alcohol and tobacco products use these same techniques. For example, they try to link the product with a positive connotation, such as fun, beauty, success, and wealth. Often the advertisement shows many people using the product – trying to convince us that everyone is using the product. Furthermore, advertisement often use celebrities to grab our attention. In some countries, alcohol and tobacco products are extensively advertised. At the same time they are illegal products for underage use.

Also movies, TV shows and music videos are capable of sending us messages on various substances and even on illicit drugs. Negative consequences for such actions are seldom presented. Furthermore, in countries where advertising for alcohol or tobacco is illegal, the companies might use indirect marketing strategies, such as marketing other product of that same brand, like non-alcoholic beer. Sometimes the companies use also product placement, and display their products in movies, television programs or in video-games.

One way to understand the ways media can influence our perceptions and attitudes is to think about the “text”, which is the information we actually see or listen, and the so-

called “sub-text”, the meanings underlying in the message. Once the message reaches to audience, it is interpreted according to the receivers individual prior knowledge, experience, values and beliefs. Analyzing the sub-text is called “deconstructing” the messages. Subtexts can be found from all kind of media products, from newspapers to music and advertisements.

All the messages delivered in the media are constructed by people like you and me, and the techniques they use can be identified, - media messages once constructed can be deconstructed. Deconstructing means analyzing media messages to understand how they work. This might include asking questions, such as:

- Who produced the message and why?
- what techniques were used in the production?
- to whom it is targeted?
- how it is intended to influence the target audience?
- How it is intended to make the receiver feel or think?

Below are some other questions that might help you in deconstructing messages and interpreting critically the different forms of media you encounter.

- What technologies are used to produce and distribute the messages?
- Who makes the messages?
- Who owns the companies delivering the message, and how do they make a profit?
- Who controls the production and distribution of media, and are there laws about this?
- Whose voices are heard in the media and whose are excluded?

- How does media use different forms of language to convey ideas or meanings?
- What are the effects of choosing certain forms of language, such as a certain type of camera shot?
- How is meaning conveyed through the combination or sequencing of images, sounds, or words?

- Is this text intended to be realistic? Why do some texts seem more realistic than others?
- How do media claim to tell the truth about the world?
- What is included and excluded?
- Do media texts support particular views about the world? Do they include moral or political values?
- How do media represent particular social groups? Are those representations accurate or stereotyping?
- Why do audiences accept some media representations as true, or reject others as false?

- Is the media aimed at particular audiences?
- How do media reach audiences?
- How do audiences use media in their daily lives? What are their habits and patterns of use?
- How do audiences interpret media? What meanings do they make?
- What pleasures do audiences gain from media?
- What is the role of gender, social class, age, and ethnic background in audience behavior?

Discussion points

- How much time does media take up in your life? Are you happy with the amount of time you spent using media?
- What are the most common types of media used by your classmates?
- Are your parents interested in what you are watching or listening? Do they know what kind of media you consume? Do you think they should?
- What advertisement do you like the most? What adds do you remember the best? Why? Is it because of the slogan? Colors?
- When do you trust an advertisement? What kind of features in an advertisement make you believe in its message?
- What kind of media contents you think are 'cool'? By whom these are created? How does advertising and media influence your perceptions on what is 'cool'?
- How do your friends influence your media consumption patterns and habits? How do they influence what things you do, buy, or see?
- Do you listen to any music where the lyrics mention drugs? Have you seen lately movies that have portrayed drug use? What kind of images on substance use have you encountered in social media?
- What kind of messages on substance use does popular culture typically carry? Why?
- Do you think there should be ratings on music the way there are on movies?
- What kind of anti-drug campaigns have you seen? Do you think those have affected your perceptions on drug use? What kind of persuasion strategies have they used?

Activities

Shopping list

Look through newspapers and magazines and make a list of things you would like to buy. Now ask yourself how did every product's ad make you feel? Why you want the product? Is this your own free choice, or are you being persuaded by the advertising techniques?

Deconstruct an ad and share it on Youth Initiative Facebook page!

Collect a sample of alcohol and tobacco ads from variety of magazines. You can also divide the class into two teams, one searching the ads of tobacco and the other group on alcohol. Glue the ad in the center of a poster and start deconstructing it by discussing over following points. Try to make comparison with the facts you already know about drugs:

- **Source and audience:** Whose message is this? Who created or paid for it? Why? Who is the target audience? What is their age, ethnicity, profession, interests? What makes you think so?
- **Color and design:** How does this ad get your attention? What is being empathized? Where are the characters?

- **Relationships:** What kind of lifestyle is presented? What values are expressed? What assumptions does the ad make about gender? Are these assumptions realistic? What "problems" does the ad solve? Does the message create unrealistic expectations?
- **Persuasion techniques:** What persuasion techniques are used?
- **Language:** What comes in your mind when you see these words and phrases? What associations you make when looking at the ad?
- **Subtext:** What are the advertisers trying to make you believe?
- **Accuracy:** What is true and false about the subtext messages in this ad? What is left out? Why do you think the ad works/does not work?

After discussion, you have discovered what is accurate and what is not accurate in the mass media. Now complete the poster by writing down the ideas discussed as short sentences. Make an exhibition at your school to raise the others awareness about the techniques what media is using. Don't forget to post the picture of the poster on Youth Initiative Facebook page.

If you have the possibility to use computer deconstruct a alcohol or tobacco ad by using Voicethread (www.voicethread.com). It is a free website what allows registered students who are at least 13 years old to upload and comment images, video, documents. Make a video of deconstructing an ad and share it on Youth Initiative Facebook page.

Make a poster of The big lie!

Analyze various alcohol and tobacco ads. Make a poster what has two columns. In the first one write the image of what the ad gives about a drug and on the second one write the effect of drugs in real life. For example in some ads tobacco is associated to good taste (menthol) but in reality smoke has a bad smell.

If you cant find alcohol or tobacco adds, or indirect advertisement of alcohol or tobacco (such as Camel boots for example), try analyzing for example a rap-song featuring drug use related lyrics.

Rewriting the script!

The way various drugs are portrayed in the movies is not necessarily realistic. Make a research about risks of different drugs on the health. Then find a movie where you see people using drugs. Discuss how is it seen in the film. Is the drug use shown in the movies what it's really like? Do you think that the people who make movies glamorize drug use? Do they make it look cool? Do they make it look dangerous? Did you see any bad consequences of drug use in movies you have seen?

Now rewrite the transcript and make the film drug free. Use your creativity! Make a video and post it on Youth Initiative Facebook page.

Resources

Office of National Drug Control Policy "Above the influence" campaign
www.abovetheinfluence.com

Nida for teens
teens.drugabuse.gov/

The Media Straight Up! Critical Thinking Skills for Pennsylvania's Youth
medialiteracyguide.org/

Talk about Alcohol
www.talkaboutalcohol.com/

Media Education Lab
www.mediaeducationlab.com

The Center of Alcohol Marketing and Youth
www.camy.org/

Project Look Sharp
<http://www.ithaca.edu/looksharp/>

European Commission. Media Literacy
http://ec.europa.eu/culture/media/literacy/index_en.htm

European Commission. MEDIA program
http://ec.europa.eu/culture/media/index_en.htm

Canada's Center for digital and media literacy
<http://mediasmarts.ca/>

II. Entertainment venues

The entertainment venues are spaces where youth escape from their daily routine, meet new people, socialize, try new experiences and also assume new risks. These venues can have both positive and negative impact on the health and wellbeing of youth. While these venues can offer positive socializing or interesting cultural experiences, relatively large amounts of all alcohol, tobacco and illicit drug use takes also place in recreational settings. In many parts of the world, legal and illegal drug use has become a consistent feature of nightlife.

Many teenagers typically believe that without alcohol, tobacco or illicit drugs it is not possible to enjoy dancing, be able to dance all night long, have a boost of confidence and energy. Yet the reality is far from that. The short-term consequences of substance use can be for example bad breath, smell, slurred speech, vomiting, drowsiness, decreased coordination and engagement in other risky behaviors, such as unsafe driving or unsafe or involuntary sex. Besides the short-term risks, substance use can also have serious long-term health risks and is closely related to the other party-related risky behaviors such as violence, assaults, unprotected sex and road safety.

One of the core elements of harm reduction in nightlife venues is to be aware of the risks of substance use. First of all, huge and excessive alcohol consumption and binge drinking creates a range of health and social problems. There shouldn't be any selling of alcohol to those under the legal age. Researches have shown that the elements of the brain that encourage impulsivity and risk-taking develop early, while the portions of the brain to improve self control and inhibit impulsive behavior do not fully emerge in most people until the very late twenties. Youth alcohol consumption is also associated with increases in risky behaviors such as alcohol-related violence, injuries, assaults, risky sexual behavior, illicit drug use and unsafe driving.

Secondly, in nightlife settings there is often lot of smoking. Both active and passive smoking can cause substantial health damage. Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases. Many people say that they are only social smokers and smoke only when going out, justifying they can quit whenever they want. Actually, cigarettes contain highly addictive psychoactive ingredient, nicotine. Researchers have shown that one in two recreational smokers will become addicted to nicotine. Smoking on the dance floor or in crowded bars can cause damage or burns. It also poses an extra fire risk. Passive smoking can also cause many health problems such as asthma, respiratory illnesses, sore eyes and throat, breathing problems and an increased risk of lung cancer.

Thirdly, there is a close association between nightlife and the recreational use of illicit drugs. Many people use drugs because they feel it helps them to have good time. Yet, the effects of any illicit drug can be unpredictable and can result in addiction, serious injury or death. Finally, the simultaneous use of multiple different substances occur among youth in the entertainment venues, and can have serious and unintended consequences.

Concurrent consumption of alcohol may increase dangers associated with the use of illicit drugs, and also for example combining the so called energy drinks with alcohol, although in many places popular, can lead to severe intoxication.

Although strong legislation and its good compliance are an important part of safe nightlife, there are numerous other steps that can be taken to reduce the probability of unwanted incidents occurring in entertainment venues. The club owners and party organizers can contribute in many ways: educating the staff on responsible serving practices, and on how to recognize and handle intoxicated clients, on violence prevention and conflict management. The owners and managers of entertainment venues can also create written substance use policies, and inform both staff and clients on the existing legislation concerning substance use and on the consequences of substance use. Further more, they can protect the health of the clients by establishing co-operation with health and social services and with law enforcement, and for example establishing chill out areas where people can cool down and have access to free water. Young people themselves can contribute by being aware of the consequences of substance use, by knowing how to avoid and deal with situations where they are offered substances or experience social pressure to use them, and most importantly looking after them selves and their friends, to make sure everyone arrives back home safely and happily, relaxed from the fun night out.

Discussion points

- What was your funniest or most memorable night out – describe it!
- Are your parents aware where and with whom you spend your free time?
- Do you think they should be?
- What are the ‘cool’ places to hang out and spend leisure time among your friends?
- Are the entertainment venues and night life always safe in your community? What are the most common health risks affecting youth in them?
- How common is the substance use in the entertainment venues you go to? What are the reasons for substance use?
- How is the substance use perceived by your peers? How are the persons abusing drugs perceived? How are the persons not abusing drugs perceived?
- How you ever been offered drugs in entertainment venues? If yes, how did that feel? If not, how would you think you would react?
- How can you recognize when somebody is intoxicated?
- What are the national policies in your country regulating the substance use among youth? If you would have the power to decide, would you change them? How?

Activities

Be part of the tobacco free OxyGen generation!

Test your knowledge on tobacco by playing games on the OxyGen website.
<http://www.oxygen.org.au/games/>

Think of the situation in your community and try to find accurate information in the internet concerning your community. Is the situation similar?

Come with me

It is a short game what can also be used as icebreaking idea. Find a partner. You tell your partner "Come with me" but your partner has to reply "No". For the next three minutes you have to convince your partner to come with you but your partner still refuses. Then, change the roles. You only use the lines "Come with me" and "No". The emotions, mimics and body language are the essential part.

Short stories

Write a short story about how you would say no to tobacco, alcohol and drugs in nightlife venues and how would all this contribute to making nightlife safer. Post the story on Youth Initiative Facebook page. Feel free to comment all the other stories already posted.

Additionally, to find the most effective NO's play the games on:
<http://www.thecoolspot.gov/index.asp>

Classroom CSI: creating your own crime scene investigation

There are so many news about accidents occurring to youth after a night out: drunk driving, bar fights, drowning, rape etc. Crime scene investigation is a great way to learn about the dangers of drug use in nightlife venues. The objective is to work your way backward through a story that you create, so that you and your friends can use the facts to figure out what happened. In working to solve the case, you will investigate all the possible factors that may have led up to the „crime scene“. You and your peers can use this chance to talk openly about which drugs may be in the victim's system, why, and what other factors may have served as a motivation to use drugs in nightlife venues.

First make a research about drugs, then draft the plan of the story and scenario. It should link to a real-life scenario. Be creative! Think of who would be suitable to play the teen victim, the doctor or forensic scientist, teen's parents, teen's friends, investigators or detectives to examine the "crime scene" and figure out the victim's cause of death.

Start the story of a young person who dies or winds up in the hospital emergency room as a result of a night out partying. Start asking your peers to think about what substance could have caused this teen's death or health condition. Let the researchers explore the facts about the substance and make the side effects and consequences as realistic as possible. How did the victim come into possession of the drugs? Why did he or she do it? What factors influenced his or her choices? How could this been avoided?

Make a video and post it to Youth Initiative Facebook page!

Can't think of a scenario? Check out the guidelines how to create a classroom CSI : <http://teens.druguse.gov/peerx/activity-guide/documents/create-a-classroom-csi.pdf> or Google for some more ideas. Now think how you can use these ideas to develop a crime scene of drug use in nightlife venues.

Cartoon

Discuss what you have learned. Draw cartoon featuring the possible ways you can experience pressure to experiment with drugs, the consequences of substance use in entertainment venues and/ or the most efficient ways to resist this pressure and to protect your and your friends' health.

Resources in English

Healthy Nightlife Toolbox

<http://www.hnt-info.eu/default.aspx>

European Council Pompidou Group, Safer Nightlife in Europe

http://www.coe.int/T/DG3/Pompidou/Source/Activities/EXASS/Guide_SaferNightLife_en.pdf

Dance Safe. Promoting health and safety within the rave and nightlife community

<http://www.dancesafe.org/>

Safer Festival

<http://www.saferfestival.org/>

Safer nightlife

<http://www.safernightlife.org/>

Safer nightlife

<http://www.democitydrug.org/index.php?page=safener-night-life>

Resources in Spanish

Energy Control

<http://energycontrol.org/>

Si vamos de fiesta

<http://www.sivamosdefiesta.com/>

Juego de Exeo

<http://www.exeo.info/>

Q de festa! (Catalonia)

<http://www.qdefesta.cat/espais/>

Resources in French

Fêtez Clairs

<http://www.fetez-clairs.org/>

Association Avenir Santé : Monte ta soirée: pour une fête plus responsable

<http://www.montetasoiree.com/index.html>

Party Wise

http://www.partywise.be/tips_index.html

Quality Nights: des organisateurs de soirées s'engagent pour votre bien-etre.

<http://www.qualitynights.be/index.php/accueil>

III. What do drugs cost to environment?

There are probably public areas in your community where you find garbage and cigarette butts because people smoke there, or areas that feel unsafe because of the risk of encountering intoxicated people. These examples show how social environment suffers from the substance use. But have you ever thought what are the consequences of the substance production and use to the natural environment?

The cultivation of illicit drugs and tobacco is causing a considerable environmental damage globally. In general, the cultivators focus on maximizing the harvest rather than the needs of environment or of the local populations. In many cases drug production causes severe lacks in food cultivation, and makes also the soil unfertile in the long run. Deforestation, soil erosion, contamination of soil and water, the disappearance of flora and fauna are just some of the examples of the negative consequences of drug production. The intense use of agrochemicals have a considerable negative impact on the environment, as the fertilizers, herbicides and pesticides seep into the soils and pollute waterways and ecological systems.

Since the manufacturing of drugs is illegal, there is no need for the people involved to follow any kind of environmental norms. Also the environmental concerns on tobacco growing are legitimate. The tobacco industry generates a number of chemical by-products that are considered harmful for the nature. In developed countries, appropriate disposal of these chemicals is strictly regulated. However, the same might not be true in developing countries where the tobacco is grown. All this affects the land we live on and the water that we drink.

Some drugs are manufactured synthetically. It is a chemical process where highly inflammable and poisonous chemicals are used. The waste created during the manufacturing is simply thrown into water supplies, farmlands, road-sides. Sometimes, the waste is highly toxic and can eventually lead to soil and groundwater pollution that persist for years. For example, producing one pound of methamphetamine produces up to six pounds of toxic waste.

The zones most gravely affected of drug industry are in South America, Middle East and Southeast Asia. There are many programs trying to reduce the environmental consequences of illicit drug growing. Their purpose is to create crop substitution programmes helping the communities to replace the drug industry with the production of other products, such as wool or bananas. However, in many regions drug industry is more profitable and participating in it is a more realistic way to earn a living for the local populations compared to legal trades.

There is a lot that countries and communities can do to reduce environmental consequences of drug and tobacco production. Similarly, now that you are aware of the extreme environmental harm created by the drug production, you can help to spread the word and curb the consumption down!

Discussion points

- What consequences of substance use can be seen in your surroundings, both in the environment and in the social environment?
- Do you think people often think these environmental issues when deciding to use tobacco or other substances? Why or why not?
- Do you think awareness about these issues would reduce substance use? Why or why not?
- Are you aware what has been done to reduce the illicit drug cultivation? What do you think should be done?
- How could you raise the awareness of your community about the environmental consequences of drug abuse?
- Why in some countries people use more substances than in others?

Activities

Brainstorming

How do you think that growing and producing drugs/tobacco might have an impact on the environment? Think as many consequences you can (forests, pesticides, impact on food production, pollution, fires, climate change, ozone layer, crop displacement)

What do drugs cost to our earth? – Research by youth

Log on to the Internet and start finding out more about environmental consequences of the growth and production of drugs, including the effects of the tobacco industry.

Divide the class into small groups. Give one research topic to every group, for example natural illicit drugs, synthesized illicit drugs, tobacco. Have the students find relevant background information. Then let them present the findings in front of the others. Make a list of as many environmental impacts as possible. You could have some groups consider only local impacts and other consider only global impacts. Ask students to present/discuss what their recommendations would be to reduce the environmental impact of these substance production and use.

As an extension activity, groups could be asked to create a model, display or poster depicting the local and global impacts of these substance production and use on the environment.

You can also use the findings to write an article for the school newsletter or local paper about how the substance production and use affect our social and natural environment.

Photo exhibition

Organize a photo competition in your class on the theme "social effects of the substance use". Use photography to document all the negative consequences of substance use you

find in your community, such as cigarette butts, alcohol beverage bottles, a public place that feels unsafe at night because there might be a risk of encountering intoxicated people there, a shop that sells alcohol to minors or anything else you can think of. Make a photo exhibition of the best shots in your school hallway/youth center.

Cleaning up the community!

Divide class into small groups and ask them to develop strategies for disposing of cigarette butts safely and in an environmentally friendly manner. Now plan a campaign in your community to raise awareness of the people and to make the community cleaner. Think who will be the target, what would you like the campaign to achieve, how the campaign messages and activities could be promoted. Think how could you highlight this issue to the target audience. Poster displays, video interviews, letters to the editor and newspaper articles are some suggestions to present the issue to a target audience.

Role play

Divide the class into groups of six. Allocate each person one of the following roles: environmentalist, health worker, tobacco company representative/ drug mafia boss, local landowner, local unemployed person, and government Minister.

Ask students to investigate the issue from their role perspective. The issue is the following: the class is considering going into the production of tobacco/illicit drugs. Assume that you need 10,000 hectares land to produce enough tobacco/illicit drugs to be profitable. Before making a decision you need to investigate: the impact on the environment from using this much land for tobacco production; where you could buy this much land; the health impacts on the surrounding population of this type of land use; whether you have an available workforce to work the land.

Now think of what are the alternative uses of this 10,000 hectares of land. What good things would come out of this alternative? How do you think you would feel if you were living in this community and this much land is being used for illicit drug/tobacco industry. How do you think you would feel if you were living in this community and the land is being used for the alternative activity?

In conclusion, what decision do you think you would make about this business opportunity?

Resources

Environmental effects of illicit drug cultivation and processing in the Andean region

http://www.unodc.org/pdf/andean/Andean_report_Part2.pdf

Tobacco in Australia

<http://www.tobaccoinaustralia.org.au>

Clean up Australia

<http://www.cleanup.org.au/au/>

Clean Up the World

<http://www.cleanuptheworld.org/en/>

OxyGen Resources for schools to be part of the tobacco free OxyGen generation

www.oxygen.org.au/resources

Get the Facts about Environment

<http://www.drugwarfacts.org/cms/Environment>

Justthinktwice Fiction: drug production does not damage environment

http://www.justthinktwice.com/factsfiction/fiction_drug_production_does_not_damage_the_environment.html

HuumeBoikotti Environmental impact 2005

<http://www.huumeboikotti.org/en/environment.html>

Tobacco and the Environment. Smarter than smoking campaign fact sheet

http://www.oxygen.org.au/downloads/New_StS_FS/Tobacco_and_the_environment.pdf

The Cigarette Butt Pollution -project

<http://www.cigwaste.org/>

Butt Free Australia -campaign

<http://www.buttlitteringtrust.org/>

IV. Genetic Vulnerability and Drug Use

Why some individuals start to experiment with drug use, while others do not? Why some become addicted fast, and others not? What are the factors that lead to drug use?

Individual differences in drug-use patterns are the result of a combination of environmental and individual, including genetic, factors. As shown in previous chapters, many reasons could influence the drug use among young people, such as imbalanced family environment, or drug-using peers. One of these risk factors is genetics.

Genetic influences in substance use has recently started to receive considerable attention, as brain imagining and other research techniques have produced new knowledge on how do genes and biological traits affect substance use. Various studies have been conducted seeking to determine if genetic influences are involved in substance use and dependence; to explore whether some persons are born with higher tendencies to end up using drugs. To date, researchers have identified numerous genes that affect the risk for becoming dependent on alcohol and other drugs. More specifically, scientists have discovered structural biological differences in drug addicts and their non-addicted siblings, suggesting that there is an inherited vulnerability to addiction. Studies focusing on identical twins and adopted children indicate that as much as half of an individual's risk of becoming addicted to drugs can be influenced by his or her genes.

These genetic influences may contribute to drug use through personality characteristics, such as sensation seeking, impulsivity, tendency towards risk taking, sensitivity towards internal and external stimuli, that all increase the likelihood of drug use, and that may be genetically determined. Genetic influences may also contribute to the development of drug dependence by altering the effects of a drug (e.g., causing greater euphoria in some people than in others, and in a similar manner creating very unpleasant effects to some individuals). In addition, they may contribute to both drug use and dependence by being responsible for the absence of normal protective factors (e.g., failure to experience a hangover after excessive alcohol use).

There is also connection between vulnerability towards drug use and vulnerability towards other antisocial behaviors and mental health, especially to anxiety and depression. This connection is multifaceted, and could be explained assuming that the same individual traits and genetic characteristics cause vulnerability to all of these conditions, by noting how early exposure to stress or trauma can lead to both mental illnesses and substance use, or by looking at the tendency of persons with mental disorders to self medicate them selves with various substances. Substance use might also make some persons more vulnerable towards mental disorders.

All these biological influences are however modified by the environment we live in. The biological features we are born with will not determine how we are going to grow up, and whether we are going to start experimenting with or using drugs. Our unique biological and genetic features will rather determine the way we are responding to the various stimuli in our environment.

Genetic features influencing the drug use behavior always come hand-in-hand with the socialization environment where individuals grow up, and are mediated by the various environmental factors influencing them in families, schools, peer-groups and societies. For example parenting is a one factor that we know can have powerful positive influence counteracting genetic vulnerability. If a person that would have the genes associated with higher probability of problematic drug use grows up in a secure and warm home environment, he or she can very well do even better than his or her peers in average, and does not necessarily start experimenting with or using drugs. Also our own conscious action can affect how

Discussion points

- What new did you learn about genetics after reading this? What do you think genetics tell us in terms of vulnerability towards drug use?
- How does this knowledge on the genetic reasons behind drug use affect your perceptions about drug users?
- Were you aware about the links between mental health and substance use?
- How could we consciously develop the protective factors, that protect us from risky behavior – whether the risk is caused by biological or environmental factors? What would be the easiest ways for example to build up supportive social networks, to enhance our decision making skills, to enhance a supportive and warm family culture at home, or to learn how to relax?

Activities

Invisible traits

Separate the students into pairs. Try not to pair best friends together, since you want an objective view for this activity. Have the students study each other's physical appearance and write down the obvious different traits that each other has, such as hair, facial characteristics, skin marks, bone structure etc. Explain to the students that these are some of the traits that other people can see and that they could possibly pass down to their own children in the future. Go a little further by asking the students about personality traits. Discuss how not only visible traits pass down, but also invisible traits, and emphasize how we are not still predisposed by our genetics, but can have a great effect on our own development and even on our personality, especially during the adolescent period when the brains are rapidly growing. Discuss what kind of positive ways to influence to our behavior, moods, feelings and social relations the students are aware of. Ask everybody to find or develop a practical example of this, for example what could we do to increase patience, or positive thinking, or the relaxation in stressful moments.

Portrait of a drug user

Ask the students to think of the drug use they know and have encountered either in their own life, in media or in fiction. Are there different 'types' of drug users? Do they recognize drug users who (wish to) appear as 'cool'? Ask them to draw or other ways create visual presentation of drug or alcohol user, and of the reasons that make him or her to use drugs or other substances. Then discuss how the knowledge we have on the biological individual level reasons for drug use influence our perceptions of drug users, and especially the way some of them might appear as 'cool' or rebellious.

Understanding by filling in the blank

Find a short informational paragraph about genetics and drug use, either from a text already used in class or from an outside source (e.g. scientific articles), and copy it onto the board. Once students have read the paragraph and understand the text, erase one word per sentence, then have the students fill in the blanks. Once they do so, start a new round erasing more words. Continue this process until they rewrite the entire paragraph.

Perfect home

Discuss with the students how good home environment can protect youth from drug use. As the first part of the exercise, if the time allows and you have access to the internet, divide the students in to groups and ask them to do an internet search on the topic, and prepare a 5-minute presentation to the rest of the group how and why home and family can be such a powerful protective factors.

Then proceed in to the second part, and ask them to do collages using old magazines and scissors, glue, pens and paints. The collages should represent their view of the ideal home environment for the children to grow. If they find it difficult, you can start by asking everyone to close their eyes, and start imagining the perfect home: what would it feel like to wake up there, what would it smell like, who would live there, would there be plants or animals, how would people behave towards each other, what kind of rituals and celebrations would take place there, and so on. After the collages are ready, debrief by letting everyone to tell about his/her work, how did it feel to do it, and what they think are the most important things in their own ideal homes.

Resources

Nice summary on the influence of genes to drug use behaviour by the University of Utah:
<http://learn.genetics.utah.edu/content/addiction/genetics/>

PI: Pedigree Investigator, On the Case of Nicotine Addiction. Try your hand at building a pedigree for a family afflicted with nicotine addiction. Watch video interviews, and interpret surveys to discover if smoking could be "in the genes" for the Marshall family.
<http://learn.genetics.utah.edu/content/addiction/genetics/pi.html>

Good overview of the link between vulnerability towards drug use and towards mental illnesses:

<http://www.drugabuse.gov/publications/research-reports/comorbidity-addiction-other-mental-illnesses/why-do-drug-use-disorders-often-co-occur-other-men>

Another comprehensive overview of the topic:

<http://www.enotes.com/vulnerability-cause-substance-abuse-reference/vulnerability-cause-substance-abuse>

Drugs and the brain - article by NIDA:

<http://www.drugabuse.gov/publications/science-addiction/drugs-brain>

Article in the Atlantic explaining the vulnerability with the term "orchid children":

<http://www.theatlantic.com/magazine/archive/2009/12/the-science-of-success/307761/>

Summaries on the genetics of alcoholism:

<http://alcoholism.about.com/cs/alerts/l/blnaa18.htm>

<http://alcoholism.about.com/cs/genetics/a/aa990517.htm>

http://alcoholism.about.com/od/genetics/a/genome_map.htm