

Part Two: Social implications of drug abuse

Lecture 2: Health

Objectives

By the end of this lecture, the students should be able to:

1. **Assess the Impact of Drug Abuse on Health and Society:** Highlight how health issues stemming from drug abuse affect various aspects of life, including family dynamics, employment opportunities, and overall quality of life.
2. **Analyze Global Health Data Gaps:** Present the current state of global health data regarding drug abuse, acknowledging the scarcity of comprehensive information while recognizing the availability of significant data from specific countries and international sources.
3. **Explore the Nature of Addictive Substances:** Discuss the characteristics and effects of various addictive substances, such as tobacco, alcohol, and solvents, focusing on their ability to alter brain function and behavior.
4. **Evaluate the Societal and Economic Costs:** Examine the social and economic burdens associated with addictive substance use, including their impact on productivity and the strain on government services and resources.

Health

Health issues can disrupt family dynamics and hinder productive work, reduce overall quality of life, and may even pose a risk to survival. While a complete global overview of the health effects of drug abuse is lacking; there is substantial data available at both national and international levels. The following discussion addresses the effects of addictive substances on health in both developed and developing nations.

Addictive substances encompass a broader range, including tobacco, alcohol, and solvents (such as glues, thinners, and gasoline). These substances share several key traits: they affect brain function and behavior, are widely consumed around the globe, and impose societal burdens by escalating social and economic costs for businesses and straining limited government resources. Alcohol and tobacco, the most commonly used addictive substances, inflict significant harm, causing extensive damage to individuals, families, and communities.

Tobacco and alcohol consumption account for nearly 5 million deaths annually worldwide. As levels of GNP per capita rise, third-world populations age, and noxious substances are more widely marketed and distributed in developing countries, the number of deaths can only be expected to increase (1, p. 5).

The estimate provided in the box clearly does not account for disease, disability, and dysfunction, which would undoubtedly lead to a significant rise in the overall human costs associated with substance abuse.

The issue of deaths resulting from drug abuse is a significant concern. Recent informal estimates suggest that around 200,000 deaths related to drug injection may occur annually, based on the estimated global population of approximately 5.3 million injecting drug users (2, p. 4). The World Health Organization (WHO) has reported that "existing data indicated a several-fold increase in drug-related deaths over the past decade. The annual mortality rates (or 'lethality') among intravenous drug users or those in treatment programs ranged from one to two percent in Europe and the United States" (3, p. 1).

WHO's analysis revealed that between 1980 and 1988, drug-related mortality increased in some countries while it decreased in others. Specifically, Japan and Thailand saw declines, while Austria, New Zealand, and the former Yugoslavia experienced minimal changes. Slight increases were observed in the former Czechoslovakia, the predecessor states of Germany, the Netherlands, and Spain. More significant rises in mortality were noted in Australia, Canada, France, Italy, Poland, the United Kingdom, and the United States. However, there was considerable variability in mortality rates both within countries and from year to year.

Substances frequently linked to deaths from drug abuse include cocaine, heroin (and other opioids), barbiturates, and amphetamines (along with their derivatives). Less commonly involved are benzodiazepines, hallucinogens, cannabis, and other substances. Instances of drug and alcohol combinations are often reported. The term "overdose" can be misleading, as in some cases, the cause of death may be due to hypersensitivity rather than simply an acute effect from consuming excessive amounts of drugs. Factors such as availability, cost, the chemical composition of the drugs (including adulterants), preexisting health issues that could be life-threatening, and usage patterns can significantly influence whether harmful effects manifest in specific cases. Although cannabis is the most widely used controlled substance, it can still be linked to fatal accidents despite its relatively low acute toxicity. In terms of long-term use, smoking cannabis may pose a higher risk of lung damage compared to tobacco. A significant health report highlights the societal implications of addictive substance use, stating: "Collective decisions regarding the regulation of tobacco and other addictive substances are among the most crucial health-related choices societies can make. In many communities, long-term cigarette smoking is already the leading cause of premature death. Alcohol and other drugs also play a role in disease and disability. The repercussions of substance abuse extend beyond the individuals directly involved; others are affected indirectly through drunk driving, fires, secondhand smoke, and drug-related crime and violence."(5, pp. 86 and 87).

The exact percentage of drug users and abusers who develop serious health and social issues remains unclear. Regardless of this percentage, the use of illicit drugs tends to lead to health problems or diseases more often than to fatalities. Since substance abuse is not uniformly distributed across the population, it is important to identify the characteristics of specific groups to effectively plan interventions. Factors influencing drug abuse may include the socio-cultural environment, the level of structure in a person's life, individual traits, the types of drugs used, and the context of their use. The early stages of life are particularly susceptible to these issues. A study conducted in four Danish cities revealed that maternal drug abuse is linked to obstetric complications and developmental issues in the fetus. The repercussions of an unstable fetal environment can extend into childhood, but with appropriate care, many of these effects can be mitigated. One of the most noticeable consequences of harmful drug use is the impact of cocaine on newborns. Research indicates that pregnant women who use cocaine experience higher rates of spontaneous abortion. Additionally, mothers who carry their pregnancies to term often have infants exhibiting depressed behavior and poor reactions to stimuli. Other studies suggest that infants exposed to sedatives, stimulants, or pentachlorophenol (PCP) may show significant deficits. The use of PCP and cocaine by mothers can also disrupt the crucial bonding process that occurs between mother and child at birth. Other researchers support these findings. A commentator highlights that "maternal drug use is a significant and seemingly increasing factor in the issues faced by unhealthy newborns." While the child is the direct victim of such passive drug exposure, there are also indirect victims. Children affected by drug use place additional strain on already overburdened pediatric healthcare and public education systems. Damage to cognitive function and impulse control in these children may contribute to higher crime rates as they grow into adolescents and young adults, impacting their future peers, colleagues, and neighbors. Beyond the immediate effects, caring for children abandoned by or removed from addicted parents incurs substantial social costs. One of the most prevalent patterns of substance abuse in this context is fetal alcohol syndrome, which results in both physical and mental impairments that are expensive to treat, often necessitating intensive initial and long-term care.

The human immunodeficiency virus (HIV) leads to the clinical condition known as acquired immunodeficiency syndrome (AIDS). Previously unidentified until the 1980s, it has since become an epidemic with no available cure or vaccine. The virus is transmitted through sexual activity, infected blood (such as during transfusions), transmission from mother to child during the perinatal phase, and the use of contaminated syringes and injection tools. The significance of each transmission method differs across various regions globally. The severe impact of AIDS is most prominently observed in developing countries.

When... estimates of AIDS cases are considered along with available data on the distribution and spread of HIV infections worldwide, it is estimated that as of late 1993, over 14 million adults and over 1 million children have been infected with 1-HV since the start of the pandemic (10).

Approximately two-thirds of AIDS cases, affecting both adults and children, are located in Africa, where the main mode of transmission is through heterosexual intercourse. Men can contract the virus by using contaminated injection equipment and subsequently pass it on to their female or male sexual partners. The only effective way to reduce the spread of this virus is through primary prevention. Initial efforts to curb transmission among drug users sharing unclean needles relied on educational programs that recommended, "Avoid sharing needles, or at the very least, disinfect the syringe with bleach before using it again." However, recent findings indicate that using bleach to clean injection equipment is not entirely effective. Some health officials report positive outcomes from certain needle exchange programs, despite them being less widely endorsed. Peer outreach strategies have been implemented in India, the United States, and other regions.

Alongside the rise in mortality rates, the swift proliferation of AIDS, especially in Africa, is creating a new demographic of impoverished individuals, including orphans under the age of 10, who are projected to exceed 10 million by the end of the century (11, p. xi). The repercussions are anticipated to extend beyond mortality, affecting life expectancy, increasing rates of sexually transmitted infections, and exacerbating endemic diseases like tuberculosis. Weakened immune systems also heightens susceptibility to other illnesses. Projections indicate that by the year 2000,

there will be 2.5 million new HIV infections, with HIV prevalence reaching 26 million and AIDS-related deaths totaling 1.8 million (reported in 5, p. 33). The effects of AIDS will also be influenced by factors such as fertility and mortality rates. For instance, in regions like Thailand, where both fertility and mortality rates are significantly lower than in sub-Saharan Africa, AIDS could potentially lead to actual population declines over a span of 30 years or more (5, p. 33).

An expert has reported that drug injection has been recognized in 80 countries, with HIV infections occurring in 52 of those. He emphasizes that "HIV prevention must ... take into account strategies that help deter drug injecting." Countries particularly vulnerable to this issue include those involved in drug production and those along drug trafficking routes in South East and South West Asia, Africa, and South America. The spread of injecting practices can happen much more swiftly than the implementation of HIV prevention measures (12, p. 2). This expert points out that drug injecting is a relatively new occurrence in many regions, with its recent spread taking place primarily in impoverished countries that are either drug-producing or situated along trafficking routes. In numerous nations, this rapid increase in injecting has led to significant HIV outbreaks, as seen in urban, rural, and hill tribe areas of Thailand, Manipur in northeastern India, Ruili in southern China, and Myanmar (12, p. 8). Manipur, which shares a lengthy border with Myanmar, and Madras, India, are examples of locations experiencing swift rises in heroin injection. Among individuals who inject drugs, the estimated percentage infected with HIV varies significantly, ranging from 1 to 5 percent in the United Kingdom to 20 percent in Germany, 30 percent in the Netherlands, 30-80 percent in Italy, 40-60 percent in Spain, and 58 percent in France (13, p. 3). As the number of HIV-positive injecting drug users rises and more of them travel, the potential for the virus to spread may also increase. As noted by one expert, "the most conservative forecasts from public health organizations predict a rise in the use of illegal drugs through injection in many countries,

along with increased HIV transmission among those who use drugs in this manner" (14, p. 82).

The link between drug injection and HIV transmission has raised significant concerns globally. However, a WHO report highlights that a less recognized yet statistically and medically more impactful relationship exists between substance abuse and various health issues, including hepatitis, tuberculosis, cardiovascular diseases, cirrhosis, and neuropsychiatric disorders; as well as disinhibition leading to sexually transmitted infections, unwanted pregnancies, pregnancy complications such as fetal distress, and increased rates of violence and suicide (15, p. 1).

Effective treatment and rehabilitation are crucial for reducing demand for drugs. These approaches should be viewed as supportive measures to assist individuals in overcoming addiction rather than as punitive actions. Research has shown that when treatment is conducted in appropriate settings, it can lead to positive behavioral changes.

Hundreds of psychotherapy outcome studies have demonstrated that people successfully change with the help of professional treatment. Similar results are found in the literature on addictive behaviours. These studies demonstrate that intentional modification of addictive behaviours occurs both with and without expert assistance (16, p. 1102).

Treatment serves as a crucial basis for rehabilitation and reintegration into the community. The environment in which treatment takes place—whether it be community-based, in a clinic, at a workplace, in prison, or elsewhere—may be less significant than the expertise of the individuals involved, the methods employed, and the nature of the treatment itself. To effectively prevent relapse, a variety of services are essential, including rehabilitation, community support, and proactive follow-up. Successful programs depend on skilled personnel, ongoing management, sufficient resources, and the ability to adapt to evolving situations.

In many countries, specialized support for individuals with substance use issues is often lacking, necessitating the adaptation of existing primary health care

systems and networks to cater to drug users. Most individuals in rural areas face challenges in accessing specialized health care; however, primary health care networks can serve as a point of contact and a means for intervention. One expert has suggested that general health workers should be trained to address alcohol and drug-related issues, focusing on areas such as rapid assessment, counseling, and crisis management during the initial stages of substance use disorders.

Comprehensive data on the costs of drug abuse across multiple countries is lacking. However, in the United States, where this issue has been analyzed, drug abuse was determined to have a \$44.1 billion economic impact in 1985, with an anticipated increase to \$58.3 billion by 1988. These figures were derived using the human capital approach, which assesses productivity in terms of market earnings and the imputed value of household services (18, p. 5). When compared to alcohol abuse and mental health issues, drug abuse incurred relatively lower direct and indirect costs but was associated with higher expenses in other areas, including crime, traffic accidents, administrative costs of social welfare programs, and property damage due to fire. The study also factored in productivity losses for crime victims. The costs for men were found to be double those for women, reflecting their higher rates of drug use, greater participation in the labor force, and higher earnings compared to women. Notably, the estimates did not account for the costs associated with crack cocaine addiction and its severe impacts, as this issue arose after the 1985 research was conducted (18, p. 23). In the United Kingdom, the total identifiable costs linked to drug abuse in 1988 were conservatively estimated at £1,821 million, with 80 percent attributed to the replacement value of stolen items. Other significant costs included investigation, legal proceedings, and sentencing, while preventive and medical expenses were relatively minor (19, p. 95). In Australia, researchers have explored different models for estimating costs, cautioning that any estimates could be misinterpreted. Referencing earlier studies (20, p. 23), they estimate that the annual avoidable tangible costs of drug abuse in Australia for 1994 will reach \$A1 38 million, suggesting the potential benefits of effective intervention programs. Clearly, developing estimates of social and economic costs are becoming increasingly important.

No national estimates comparing the costs associated with the care and treatment of substance abuse issues have been developed. Many policymakers are largely unaware of the financial impact of addictive disorders on their countries or the expenditures related to these issues. In the United States, an analysis of hospital records reveal a surprisingly high number of admissions and expenses linked to substance abuse treatment. The study indicated that in 1991, there were 2.2 million Medicare admissions related to tobacco, alcohol, or drugs which constituted 20 percent of all Medicare hospitalizations. Because treating this substance abuse-related cases is generally more costly than the average hospital case, the actual amount paid by Medicare for such care was even greater, making up 23 percent, or nearly one-fourth of total Medicare hospital care payments. The higher costs associated with substance abuse cases stem from the need for approximately 26 percent more hospital staff and resources compared to Medicare discharges not related to substance abuse. Additionally, Medicare allocated over \$13 billion of its \$57 billion inpatient short-stay hospital budget to substance-abuse-related care, surpassing the one in five dollars spent in the Medicaid program for similar conditions. While the scale of these figures may not reflect that of other countries, the same study noted that relying solely on diagnoses that explicitly mention alcohol or drugs in medical records significantly underrepresent the true prevalence and costs associated with substance abuse in hospitals. Cases where alcohol and drug treatment were the primary diagnoses, accounting for less than 3 percent of the total costs related to substance abuse. The conclusion drawn is that the costs associated with substance abuse, may represent a significant yet overlooked burden on national income; this is often due to the fact that drugs or alcohol may not be directly listed in diagnoses and classifications, even though they can be major risk factors contributing to other diseases and expensive social issues.

Funding assistance for individuals with substance abuse issues raises numerous questions, particularly regarding the roles of both public and private sectors. Many individuals struggling with drug addiction cannot afford treatment on their own and lack insurance or other financial resources, especially when healthcare is predominantly offered

by private entities. Public policy should focus on two key considerations. First, it is essential to prioritize critical aspects of the drug abuse issue, such as the inability of compulsive heroin or cocaine users to finance their treatment. Including these individuals in public treatment programs could decrease the demand for these substances and enhance the effectiveness of supply reduction initiatives, as compulsive users tend to consume significantly more drugs than casual users. Secondly, the topic of preventive care must be addressed. If preventive measures consistently fall victim to stronger market forces, whether political or commercial, government intervention may be necessary to ensure sufficient support for prevention efforts.

The complexity of the cost landscape is influenced by the characteristics of the current health care system. Is there a national or comprehensive health care system in place? If so, do drug treatment services fall under its coverage? A significant policy concern is whether the available information on costs is adequate to inform decisions regarding resource distribution. Furthermore, it is essential to estimate the costs of various alternative policy measures, including the potential outcomes of minimal or no intervention by authorities. The distribution of limited resources may be influenced not only by costs related to illness, death, and associated social issues, but also by other considerations, such as public perceptions of safety and security.

While this discussion focuses on the effects of illegal drugs, it is important to remember that numerous regions around the globe do not have sufficient access to legal medications, lacking both essential drugs and basic healthcare services. Addressing the misuse of addictive substances does not lessen the severity of issues stemming from the lack of available legal narcotics or psychotropic medications necessary for treating health conditions. Initiatives aimed at curbing the illegal use of drugs can be developed to reinforce pharmaceutical regulations that are crucial for the distribution of legal medications.

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Teacher: Dr. Hanane RABAHI – Specialty: Language Contact and Sociolinguistics Variation- English Language.

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Teacher: Dr. Hanane RABAHI – Specialty: Language Contact and Sociolinguistics Variation- English Language.