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Chemical Highs

This chapter is written in the midst of the US opioid crisis, which is an extreme challenge for families and policymakers there, and causing astounding numbers of deaths across the country. In the wake of the crisis, anthropologists are revisiting themes of structural violence and pharmaceutical malpractice, both of which fuel the addiction crisis (Hansen 2017). Talking to colleagues at the 2019 conference of the American Anthropological Association, I had a hard time explaining why, in the Netherlands, levels of opioid addiction are very low, despite widespread use of recreational drugs. Young people in my country seem to be able to regulate their drug use to achieve relatively “hassle-free highs.” Part of the reason for fewer drug-related deaths and drug-related problems in the Netherlands is the government’s decision, in the late 1970s, to make a distinction between “hard” drugs like heroin that are highly addictive and criminalized, and “soft” drugs such as cannabis, the recreational use of which is permitted. As a result, Amsterdam youth have tended to stay away from the hard stuff.

But this is not the full answer. Much has to do with a more subtle regulation of drug use by governmental health programs in Amsterdam. This is a city that annually hosts the world’s most extensive electronic

dance festival, the five-day Amsterdam Dance Event; attendees of these events widely use ecstasy and amphetamines for their stimulating effects. This is also a city that appointed the world's very first "Night Ambassador" to monitor drug use during this citywide festival and conference, in order to intervene if substandard drugs are found on the dancefloor. In doing so, the city authorities have presented themselves as pragmatic harm reduction agents, who have earned the trust of partying youth. They provide the youth information, and they also call on youth to take responsibility for their drug use and for one another.

This chapter describes how young people in current-day Amsterdam self-regulate to achieve hassle-free highs, using strategies that elsewhere we have referred to as "harm reduction from below" (Hardon and Hymans 2016; Van Schipstal et al. 2016). In our research in Amsterdam, we found that our interlocutors came to trust harm reduction workers as sources of accurate information on drugs, even as such workers sought to support youth in self-regulation and keep track of new trends in drug use. We contrast these harm reduction dynamics in Amsterdam with the drug-use situation in Indonesia, where a draconian drug war has been raging over the past decade. Like their peers in Amsterdam, Indonesian youth self-regulated their substance use to avoid harm. But, in contrast, they fear the authorities, which means they did so with limited information on the potential harmful effects of the drugs they used (Idrus and Hardon 2019).

"At Risk Youth"

There is a large body of social and behavioral research, briefly discussed in the introduction, that aims to understand why young people take drugs and what determines addiction trajectories. In such studies, youth are usually approached as individuals who are affected by "risk factors," such as having experienced adverse childhood events or growing up in low-income neighborhoods where they may be seduced into taking drugs. Researchers then propose to intervene at the level of these risk factors to prevent drug use problems. This youth-at-risk paradigm is being challenged by social scientists who point to the ever-changing nature of drug

use, and to the social—not just individual—pleasure that young people experience when taking drugs with their friends (Duff 2004).

Drug use indeed shapes friendship groups, which Pilkington (2007) refers to as “bonds of emotionality and mutual accountability about acceptable and unacceptable drug use and a secure and supportive environment in which to enact the ensuing drug decisions” (Pilkington 2007, p. 222). Because of these shared norms, being surrounded by friends can reduce the risks of taking drugs while at the same time increasing pleasure (Hunt et al. 2007). Risks can further be mitigated when the group shares a value that Riley and colleagues (2010) call the “duty of care” (Riley et al. 2010, p. 43).

The duty to care found within friendship groups who take drugs together often involves a strong social etiquette in which clubbers regulate each other’s behavior on the dancefloor or smoking room, and this also happens between strangers at house parties (Moore and Miles 2004). An example of this etiquette is young women refusing drinks from strangers. If they do, their friends will chastise them, as doing so puts one at risk of being drugged and raped. When we were doing fieldwork in Amsterdam there were several stories circulating of young women who had ended up in intensive care after being drugged with what became known as the “rape drug,” formally called flunitrazepam or Rohypnol.

Our fieldwork in Amsterdam sought to understand how the city’s harm reduction policies intersected with young people’s strategies to achieve hassle-free highs. A team of youth ethnographers conducted fieldwork at festivals, clubs, and private after-parties (Van Schipstal et al. 2016). We identified four ways that our respondents sought to achieve hassle-free highs, all of which were acknowledged and reinforced by the city’s harm reduction workers: (1) testing the content of substances, (2) cautious consumption, (3) peer support, and (4) balancing acts. In the second half of this chapter we contrast these self-regulation practices with those observed in our Indonesian field sites, where the government has been imprisoning people caught with drugs.

Self-Regulation in Amsterdam

Our interlocutors in Amsterdam confronted uncertainty about the contents of recreational pills and powders, by acquiring them from friends and trusted connections. Generally, more experienced users were responsible for buying drugs and sharing them at parties, clubs, and festivals (Hardon et al. forthcoming, 2020). Often youth consulted online drug forums, such as Pill Report (www.pillreports.net), a user-driven site that reports the quality of the wide range of ecstasy pills found in the market.

Amsterdam's harm reduction initiatives recognize these youth-led quality assurance mechanisms and offered help in the form of drug-testing facilities. Young people can bring their purchased drugs to testing sites throughout the Netherlands, where they are asked a few questions on the source of the drugs and past experiences. During the visit, a simple test is done to determine the MDMA (3,4-methylenedioxyamphetamine, the active ingredient) content of ecstasy pills. Other drugs, such as lysergic acid diethylamide (LSD) or gamma hydroxybutyrate (GHB or G), which require more detailed equipment, are sent to a laboratory for further testing. Young people often post the test results on the Pill Reports website, along with pictures of the drugs for identification (see Fig. 2.1).



Fig. 2.1 A compilation of pictures of ecstasy pills posted online, prepared by the Utrecht Data School for the ChemicalYouth project, November 2017

The government-sponsored harm reduction programs do not endorse pillreports.net, as they cannot guarantee the quality of the posts. They warn that drug content can change with each new batch of pills and online reports may therefore be inaccurate. To meet the need for information, they have developed a smartphone application called Red Alert, through which they can instantaneously inform drug users of substandard pills when these are identified in the pill-testing facilities. Alongside notes of caution about risky substances entering the Dutch drug market, the Red Alert app also provides information, for example, on the increasingly high dosages of MDMA found in ecstasy pills, noting that high dosages can cause adverse effects such as anxiety and insomnia (Hardon et al. forthcoming, 2020).

Sometimes, the city also uses billboards to alert youth. For example, in December 2014, after several tourists died after consuming cocaine cut with heroin, purchased from street dealers, the municipality placed billboards in the center of the tourist district warning tourists about contaminated cocaine (see Fig. 2.2). Harm reduction workers had realized that tourists would not have received Red Alerts on their phones.

A similar situation occurred during the festivities of 2016's Amsterdam Dance Event, where an ecstasy pill that someone brought into one of the



Fig. 2.2 Warnings on billboard in a popular nightlife area (Photo taken by Anita Hardon, December 2014, Amsterdam)


several testing sites turned out to be adulterated with PMMA, which is toxic at high levels. Attendees were alerted via several media: push notifications went out to users of the RedAlert app, posts were shared via several harm reduction organizations via their Facebook pages, and warning signs were posted at the entrance of clubs and bars (Fig. 2.3).

GGD
Amsterdam
Public Health Service

Jellinek

20 October 2016

XTC WARNING 2016



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**PINK XTC PILL with SUPERMAN LOGO
on both sides**

**This pill does NOT contain XTC but a
LETHAL DOSE OF PMMA!
PMMA can lead to OVERHEATING, HEART, LIVER
AND KIDNEY FAILURE**

DON'T USE THIS PILL!

**You will not be arrested for using drugs in
Amsterdam. CALL 112 for medical assistance
& ambulance.**

Fig. 2.3 Government released “Superman” warning during Amsterdam Dance Event 2016 (Photo taken by Hayley Murray, October 2016, Amsterdam)

In addition to making sure drugs are of good quality by buying from trusted sources, and in turn having the substances tested, our interlocutors sought to achieve hassle-free highs by taking the right dosage of drugs. However, different drugs require different dosing techniques. MDMA, the active component of ecstasy pills, can be purchased as a powder; because of this, it is weighed. Dennis, an experienced user, who was responsible for giving out MDMA at a party told his friends: “So, here we go! I am going to measure the exact dose of MDMA for everybody. One by one you can tell me how much you guys weigh and the rule of thumb basically is 1.5 times the bodyweight” (Van Schipstal et al. 2016, p. 204). GHB, on the other hand, comes as a fluid and is dosed with a syringe, see Fig. 2.4.

At one party we observed Heleen, also known as “Mama G,” keeping a logbook (see Fig. 2.5) listing the number of milliliters of GHB that she had given to the attendees of an after-party and the time of ingestion (Van Schipstal et al. 2016). This detailed approach helped the partiers feel safer in their GHB use, as this substance is notoriously difficult to dose.



Fig. 2.4 Dosing GHB with a syringe (Photo taken by Romy Kaa, July 2014, Amsterdam)

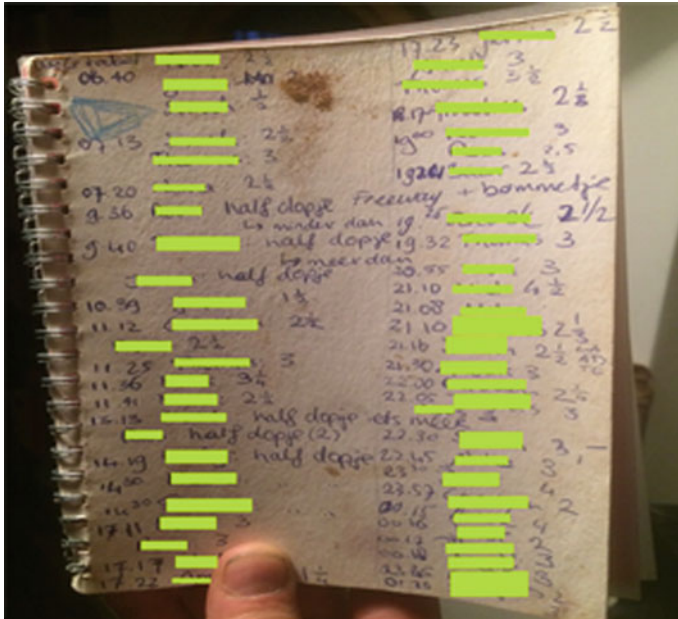


Fig. 2.5 Heleen’s GHB logbook. The notebook lists the time of intake very precisely and the volume of GHB used, measured in “dopjes,” or bottlecaps (Photo taken by Inge van Schipstal, 2015, Amsterdam)

Our researchers identified a third technique from our online fieldwork among young people taking new kinds of drugs, also known as “designer drugs,” for which the optimal dose remains unknown. This technique for dosing these new psychoactive substances is called “allergy dosing.” The idea is to begin with a very small amount to avoid adverse events (Hofmann et al. 2009). The online drug forum we examined gives the following instructions:

Measure out approximately 5 mg of your material. ... Dissolve your 5 mg in 1 litre of distilled water and allow to go into solution. Your solution should now have a concentration of approximately 5 µg./ml. Measure out 1 ml of water and hold it in your mouth for 5-10 minutes to see if any reaction occurs. If not, swallow and wait 1 hour to see if any reaction occurs. If no reaction has occurred, repeat the same operation with 2 ml of water. At the end of that hour repeat with 5 ml of water.

This can continue along until you reach a level where you are satisfied that you will not have an extreme anaphylactic reaction. Ideally you probably would want to go up to about 1/10th of an active dose or so. The amount required to do this will of course depend on the compound in question and its presumed active dose. (Baloo on Forum Y, retrieved 3 April 2015, in Berning and Hardon 2016, p. 284)

These cautious dosing strategies are reinforced by educational materials circulated by Amsterdam-based harm reduction programs. Unity, a nonprofit peer-run organization funded by the government of Amsterdam, created a five-year campaign called “Celebrate Safe.” Their mandate was to be present at Dutch music events to encourage young partiers to take care of each other and to educate them on the risks involved with partying. Their website for example states: Be warned that ‘less is more.’ Better to take one less than one more. One too much can



Fig. 2.6 Celebrate Safe’s 10 commandments banner found at one of the entrances to an event at Amsterdam Dance Event (Photo taken by Hayley Murray, October 2016 Amsterdam)

make you feel bad, and ruin the party. That would be a shame. Realize that when you take too much you will also ruin the evening for your friends who are partying with you (Celebrate Safe 2017).

Self-regulation, as seen in the strategies outlined above, is all about taking care, by buying good quality drugs and using appropriate dosages together with friends. This includes not accepting drinks from strangers. Young people are assertive in enacting and requesting this social support. For example, Nina told us how she asked for support from a friend, saying to her:

Tonight I want to test my limit of sanity. I want to try and go crazy and come back, and see what this world looks like. I am going to try at least double the dose of LSD I have taken [before], and maybe a little bit more. And then come down with MDMA. You be here with me, OK?
(Van Schipstal et al. 2016, p. 208)

Others say they look for online advice, which we also observed in our ethnography of online drug forums (Berning and Hardon 2016). We for example found this post by Blanka, in which she asked for advice on a new kind of drug she was researching:

I am getting ready to research allylescaline ... and will write up a Trip Report afterwards but does anybody know if I can research [use] allylescaline while still having residual kratom under the microscope [under the influence of kratom]? I can't find anything on these two interacting and really don't want some chemical reaction from researching too close together. Also does anyone know of other substances interacting with allylescaline? And yes I have tried Google and looking here for the answer.
(Van Schipstal et al. 2016, p. 210)

Blanka, in this case, is engaging in “edgework,” a concept introduced by Lyng (1990) and applied by Quintero and Nichter (2011) to young people’s recreational use of psychoactive drugs. Quintero and Nichter (2011) explain that an edgeworker, “is at once attracted by the sensation of being on the edge as an intense form of pleasure, and the accomplishment of being able to avoid a bad or disastrous effect” (p. 347; cf. Hunt

et al. 2007). In trying out new substances, edgeworkers face the “pharmacological uncertainty” (Berning and Hardon 2016) of ingesting novel substances for which there is still little information on their efficacies and adverse effects. Our use of the concept of “pharmacological uncertainty” is inspired by Zinn (2008), who argues that people “working on the edge” cope with high levels of uncertainty and risk in different ways. When youth try out new chemicals, with advice from their online peers, they trust in the testimonials of others and in the suppliers of chemicals, while also doing online research and carefully weighing and dosing, together comprising what Zinn (2008) refers to as an “in-between strategy” of risk-mitigation.

Our interlocutors both on- and offline further sought to achieve hassle-free highs by using “balancing” techniques. For example, users know that they should drink water when taking ecstasy, but not too much. In addition to water, some of our interlocutors took magnesium pills before ingesting ecstasy to reduce the uncontrolled jaw movements caused by the drug. And they also paid attention to the spaces in which they used drugs. MDMA can be used at dance parties or at home; one person explained it was best to do so:

...in a nice comfy environment with people you love. If you like other types of trips you can also go to the countryside, out in nature. There you can mediate or take a walk to calm yourself before it begins. (Van Schipstal et al. 2016, p. 207)

Sunday and Monday tend to be recovery days, designated to recharge for the coming work or study week. Young people who worked in the nightlife industry reported difficulties with the transition. They used stimulants such as amphetamines or cocaine to stay up very late, and then came home “hyped up,” exhausted, yet unable to sleep. Smoking cannabis was a balancing act for them, which they did to prepare their bodies for sleep, sometimes along with melatonin to reset their biological clocks. Many of our respondents also took food supplements, vitamins, and serotonin boosters such as 5-HTP, sometimes combined in fruit and vegetable smoothies, to recuperate (Van Schipstal et al. 2016).

Dutch harm reduction programs highlight this need for self-regulation. Celebrate Safe advises youth to drink enough water, use earplugs, wear comfortable shoes, avoid the sun, keep an eye on each other, and help peers who don't feel well (Hardon and Hymans 2016). Their materials give the following advice: "Pace Yourself: Eat, Sleep, Rave." The campaign also emphasizes the need to recuperate: "Sleeping is also great and needed. Catch up with sleep so you are ready for the next party: eat a good breakfast. You deserve it after the party" (Celebrate Safe 2017).

These self-regulation techniques are not static but evolve through collaborative experimentation with substances and shared evaluation of results. When self-regulation is encouraged and reinforced by local harm reduction programs, it can contribute to a highly informed drug use culture that is oriented toward the prevention of adverse events and overdoses, while jointly crafting "hassle-free" highs. This culture has been referred to as "calculated hedonism" (Measham 2004), an apt concept for the strategies used in Amsterdam. The calculation is literal in young people's tailoring of dosages to users' body weight and in the method of allergy dosing unknown substances. The city's harm reduction workers support these strategies by providing pill-testing services, which allow users to determine the exact content of their drugs. The city thus supports sensible self-regulation by being alert to new trends and responding rapidly when problems occur.

Such a pragmatic approach to harm reduction generates trust in the government-sponsored testing facilities and information sources, enabling rational strategies to confront the uncertainty of consuming illegal drugs. In Amsterdam, young people know that they will not be arrested if they turn to the police or security officers for drug-related help, and they value the "red alerts" that help them take drugs more safely. They also trust each other and the techniques that they have developed to avoid bad trips. Perhaps most surprising of all, they trust online drug forums, where they consult and follow the advice of complete strangers. In the eyes of the harm reduction programs, this trust in strangers and online reports is unsettling. The Dutch Trimbos Institute, a government-sponsored agency responsible for testing services and the Red Alert App, advises against using information from Pillreports.net to check drug

quality because of the anonymous nature of the website (Hardon et al. forthcoming, 2020).

Self-Regulation in a Drugs War

When I present this case of Amsterdam at panels and conference, my audience is often surprised and puzzled, yet they quickly assert that this co-production of safer drug use cannot work in their country, where young people are less responsible and authorities don't have a history of pragmatic harm reduction. We turn now to self-regulation in Indonesia, where young people are experiencing an intensification of the ongoing drug war. Across our field sites, we observed that young people were turning away from illegal narcotic drugs and toward psychoactive prescription drugs (PPDs), which they were able to access easily through street dealers and pharmacies. They were not aware that some of the PPDs they were taking can cause addictions.

President Jokowi, shortly after being elected in 2014, reinvigorated the drug war. He reintroduced the death penalty for drug traffickers, which soon after led to the execution of the Dutch citizen Ang Kiem Soei for his alleged involvement in producing ecstasy. The drug authorities also clamped down on the trafficking of methamphetamines (locally known as *shabu*), reporting nearly every day on raids on meth laboratories and seizures by the police (United Nations Office on Drugs and Crime 2018).

Amphetamines, ecstasy, cocaine, and marijuana are all classified as Group 1 narcotics in Indonesia on the basis that they are therapeutically useless and have a high potential for addiction. Since 2015, possession of these drugs can lead to life imprisonment and the death penalty for drug traffickers and users. Group 2 drugs include opioids such as morphine, oxycodone, and the opioid-replacement drug methadone. These drugs, according to the 2009 narcotics law, have some therapeutic value as well as a potential for addiction. Street sellers and users caught taking these drugs can also end up in prison.¹

Our fieldwork in Indonesia revealed that many of our drug-using respondents were struggling to make a living and had a limited education. Needing to work in the informal sector, they turned to drugs to induce confidence and increase stamina, selecting combinations that did not make them feel too disoriented. On other occasions, they sought to escape from the stresses of daily life by taking extreme dosages that made them “fly.” They sought to achieve hassle-free highs by using psychoactive prescription drugs, which they viewed as “legal” and safe because they can be bought in pharmacies.

PPD use in Indonesia is facilitated by processes of “pharmaceutical leakage,” a term Lovell (2006, p. 146) uses to refer to the circulation of PPDs outside of therapeutic settings. Such leakage occurs in many settings in the global South where drug regulations are weak and/or not fully implemented (Ecks and Basu 2009). It is also facilitated by physicians, who like their colleagues in the United States, prescribe PPDs without sufficiently recognizing the capacity of the substances to cause dependence.

The Indonesian health and drug authorities are only recently beginning to realize how widespread the off-label use of PPDs is. In 2018, the nation’s child protection agency reported that one out of every 15 children—a staggering 5.9 million children—are using drugs; prominent among them are the opioid painkiller tramadol and the cough medication dextromethorphan (Rakhmat and Tarahita 2018). Our ethnographic studies confirm the popularity of these PPDs.

Our informants in Indonesia, whose friend and acquaintance groups regularly take drugs, told us that PPDs were cheaper and easier to obtain than the Group 1 narcotic substances. They encouraged each other to try out different kinds of PPDs in order to find out which (combinations) worked best for them. See Table 2.1 for a list of commonly used PPDs and their medical indications.

In our focus group discussions, respondents noted that PPDs have different, sometimes contradictory, effects on individuals. Tramadol, for example, made Zaky sleepy, while it made Amir awake and alert. For Mamat, the drugs did not work well at all, as they made him itch and gave him ulcers. To achieve these stronger highs, our respondents mixed different PPDs, mixed PPDs with alcohol, and combined PPDs

Table 2.1 Commonly used PPDs and their medical indications

	Content	Indication
Methadone	Methadone	Heroin substitution
Subutex	Buprenorphine	Heroin substitution
Suboxone	Buprenorphine with naloxone	Heroin substitution
Alprazolam	Alprazolam	Sleeping problems, anxiety
Calmllet	Alprazolam	Sleeping problems, anxiety
Dextromethorphan	Dextromethorphan	Cough
Kode-15	Dextromethorphan	Cough
Tramadol	Tramadol	Pain
Somadril	Carisoprodol	Pain

with hot food or drinks, and also experimented with diverse ways of administration (oral, injection, inhalation of crushed oral tablets).

Much of the discussion in our interviews and focus groups with young people revolved around their experiences in finding the best PPDs, by which they meant drugs that generate a good high without unwanted effects such as dizziness or nausea. For example, one of our informants in Gowa, Broken, a 17-year-old, said that he first relied on the painkiller tramadol, an opioid pain killer, to feel high. But after trying Somadril, another pain killer, it became his drug of choice. He liked Somadril better because it not only made him feel high, it also made him feel more confident and increased his appetite. When we spoke, he was taking Somadril every day. If he wanted the effect to kick in rapidly, he combined it with spicy food. He usually did this when informally performing music on Saturday nights (Idrus and Hardon 2019). In Maros, Romo, a 14-year-old, named Somadril and tramadol as his favorite PPDs. Taken on its own, the former can produce a strong effect, so Romo did not combine Somadril with other drugs. He felt that Tramadol had a more pleasant, mellow effect on him.

Much of the discussion revolved around whether the (combinations of) PPDs are *cocok* (compatible) with their bodies. Finding a *cocok* substance involved trying out and combining drugs for different purposes. Dirham, a 23-year-old, took Riklona and/or Calmllet to feel strong while at work, and when he was done for the day, he combined

marijuana with beer to make him feel happy. Yayan, an 18-year-old street singer in Yogyakarta who previously favored marijuana and heroin, subsequently tried out two different brands of cough tablets to replace these illegal drugs. He had begun taking 50 tablets of dextromethorphan and 40 tablets of Kode-15 together to achieve a strong effect. He had tried combining 20 tablets of Kode-15 and 10 tablets of trihexyphenidyl, but this combination made him feel sleepy; it was not *cocok*. Once, he mixed tramadol, Calmlet, and a local traditional drink, but this combination made him vomit and cough up blood.

The dosages depended on the costs of the pills and young people's financial resources. Dextromethorphan is a cheap drug and is generally taken in large quantities. It also does not have euphoric effects in lower dosages. Depending on whether one bought it in the pharmacy or from a street dealer, tramadol, the cheapest of the PPDs, cost around Rp 2000–3000 per tablet (US \$0.13–0.19), while Xanax, Calmlet, and Somadril cost much more. Jono, a 13-year-old, told us he had been using PPDs since his first year of high school. He became a dealer so he could use the profits to buy school supplies, snacks, clothes, and more PPDs, which he and his friends sold. He bought tramadol for Rp 1500–2000 per tablet and then resold it for Rp 3000–5000 per tablet. The money earned was shared among his friends, and used to buy drugs again.

We found PPD use patterns to be temporally structured. In Gowa, we encountered intense PPD use by high school students on Saturday nights. One group of friends drank and popped extreme quantities of PPDs to get high and feel courageous for motorbike races, a popular activity among Indonesia youth. Zaky, a 17-year-old, told us that he took up to 10 tramadol tablets per day on a weekday, but increased his dose to 40 tablets on Saturday nights. Similarly, Mamat, a 16-year-old, took 15 tablets of tramadol on weekdays, but to prepare for the motorbike racing, he took 7 tablets in the morning, 15 tablets in the afternoon, and 7 tablets or more in the evening. Harianto, a 16-year-old, combined 10 tramadol tablets with five bottles of Topee Rioja beer. When racing, the boys often bumped into curbs and cars, but they didn't feel it as tramadol is a strong pain medication.

Another focused ethnography was conducted in high-end clubs in Makassar (Amelia 2019). There, cocaine and ecstasy had been the drugs

of choice, but the young partygoers had turned to the use of poppers, which they claimed were not (yet) illegal; see Fig. 2.7 for some of the more popular brands. Note that one of the brands is named “The Real Amsterdam,” suggesting that partying in Amsterdam is a source of inspiration for Makassar clubbers.

Nightclub visitors found it safer to bring poppers when clubbing than other club drugs (such as ecstasy, meth, and marijuana) because poppers had not yet been included by the National Narcotics Agency (BNN) on its list of narcotics, psychotropics, and addictive substances. Rani, who



Fig. 2.7 Popular brands of poppers. Note the Real Amsterdam brand, which reflects the circulation of imaginations globally (Photos taken by Lia Amelia, 2018, Indonesia)

sold poppers in a club, said she preferred to use poppers because of its immediate effects: “You use it and right away you get high ... no need to wait. Inhale it, get high, and dance, really perfect” (Amelia 2019, p. 7). Like Rani, Cindy preferred to use poppers rather than other drugs for clubbing, even though she had previously used ecstasy. This was because poppers also brought her an immediate “high,” and also she felt it was safer because it was rather new and was not being policed.

Rani and her friends did not immediately use poppers on arriving at the club. They usually sat on the couch and ordered a few bottles of vodka, Jägermeister, whiskey, and cognac, all of which are expensive in Makassar. When the DJ started, it was time to use the poppers. The dance beats made them excited and poppers were especially complementary for such moments. Moreover, the substance gave them confidence to connect with others on the dance floor.

Cindy and Rani are referred to as “experimental women” in Indonesia. These are highly educated women, who have careers of their own, and who don’t see their future primarily as an *ibu* (the mother of the household) responsible for housekeeping while supporting a husband who operates in the outside world (Hardon and Idrus 2015; Yeom et al. 2002). Rather, they experiment with sexual enjoyment with multiple partners. Cindy explained:

You could say it’s cheating, that’s true. ... I am not divorced yet. But I do not feel anything when doing it with my husband. Well, it’s like my obligation. I enjoy it more with my date, especially with poppers, they understand more what I want. ... When I do it with my husband, it is flat. (Amelia 2019, p. 12)

Cindy and her friends worried that taking poppers was not healthy. When using them, Cindy suffered from insomnia, and others reported experiencing dizziness and headaches. To combat this fear, they eat healthily, go to the gym, and do yoga during the week. The small 10 ml bottles of poppers used by clubbers did not list any contents. They were labeled as cleaners, with warnings that they should not be swallowed. Mina, one of our informants at the Makassar health office, said that it

was hard to check the contents of poppers, but once, when she had one of the liquids sent for lab testing, she was told that it contained morphine.

Risks of PPDs are bigger when they are used daily, as was the case for a group of sex workers who worked along Losari Beach. They told us they used Somadril every day to bolster their confidence when approaching prospective clients. The three male and three female sex workers filled out four-day recalls for us, in which they reported using between 6 and 24 pills a day, far above the recommended daily maximum. (See Table 2.2 for more details on the dosages and the effects of Somadril.) They explained that they craved Somadril if they take it, suffering all kinds of aches and pains, anxiety, and insomnia, and they acknowledged that they had become dependent on the drug. While they initially took the drug to enable their work, they said that they now had to work to be able to buy the drug (Hardon and Ihsan 2014).

Across our Indonesian field sites, we encountered young people who felt that they had become addicted to PPDs. Jack, a 21-year-old student in Makassar, for example, told us that he had been taking tramadol since high school:

Initially it was because of my friends. ... Later on I got hooked and addicted. ... It's difficult to kick the habit, just like cigarettes. ... It depends, usually I take one strip a day, but if I am really upset I could take five strips. (Idrus and Hardon 2019, p. 83)

In Maros, Aco told us that he started using PPDs in order to be accepted by his peers, but he came to need the drugs daily, just like food. Similarly, Romo told us:

It's hard. It's very difficult to stop. Even if I were paid any amount I would not stop. I just have a different feeling if I don't take the drugs. If the drug is no longer available, I would maybe make it myself. (Idrus and Hardon 2019, p. 84)

Harm reduction programs in Indonesia have only recently acknowledged that young people are at risk of becoming addicted to PPDs, and that they might be facing an epidemic similar to the opioid crisis in the

Table 2.2 Somadril daily dosages and reported effects among sex workers

Informant	Pills per day	Reported beneficial effects	Reported adverse effects	Reported withdrawal effects
Mira female, 24	3–10, average 7	Confidence, increased sexual desire	Dizziness, falls asleep with too many pills, headache	Neck and shoulder pain
Naimah female, 22	3–10, average 5	Feels comforted, less shy, more happy, less resistance to sex with clients	None reported	Throbbing eyes, crying, bad mood, insomnia
Rina female, 20	8–16, average 10	Confident, less shy, happy, stays awake and flies high	Dizziness	None reported
Hasan male, 22	7–23, average 16	Confident, more talkative, can stay up late; fly high; feels less stress, enjoys himself more and has more sex; weight loss	Nausea, makes you stupid, thinking too much, hard to move; insomnia or sleepy (depending on dose)	Headache and bad mood
Udin male, 24	5–10, average 8	Confident, less shy, happy, stronger	Feels sick and hungry, vomiting, if too much: angry, delirious, cannot walk, stomach problems	Sleepy, anxious, sad, crying
Rudi male, 23	21–31 average 24	Confident, calm, sleepy	Diarrhea, trembling	Headache, thinks a lot

United States. Local-level health officials and drug policymakers have responded to problematic PPD use by limiting access to these drugs, but our ethnography suggests that young people can easily find pharmacies or street dealers who are willing to sell them the drugs, or psychiatrists who are willing to prescribe them (Idrus and Hardon 2019).

This contrasting analysis shows that youths' self-regulation efforts in Amsterdam and our Indonesian field sites were remarkably similar. They involved cautious dosing and careful assessments of effects. However, in Amsterdam, young drug users turned to the government to check the quality of the drugs that they were taking, and they were regularly provided up-to-date information on substandard drugs that were circulating on the market. They also received medical advice on possible adverse effects and how to prevent them. For youth in Amsterdam, "balancing" involves taking a rest after party weekends, eating good foods, and taking vitamins and supplements.

Self-regulation for our Indonesian respondents, in contrast, meant refraining from illegal drugs to avoid being incarcerated, and relying on the use of prescription drugs, which were seen to be safe. It also involved mixing drugs to get desired effects, while ensuring that such effects were also compatible with other elements, like needing to approach clients to earn a living as sex worker, or singing on the streets, or specificities of individual bodies. A key framework for our interlocutors was compatibility, which each drug user sought to achieve by observing effects, mixing PPDs with food and drinks, and finding the right combination of PPDs and the right dosage. Such balancing involved moderating use to not feel too high, and, for some of our financially better-off interlocutors, taking vitamins and eating good food. For others, balancing also involved using more PPDs to ease the withdrawal effects from not using other drugs. However, despite their caution and these balancing acts, many of our interlocutors became addicted to PPDs. While they initially experimented with PPDs for pleasure, over time they came to crave the drugs and suffer withdrawal effects. Finally, the number of pills taken per day increased, which could also become an economic problem.

Changing Regulatory Regimes

Thus far, our discussion of self-regulation has focused on the most common recreational chemicals found in the field. In this section we now turn to the history, regulatory status, and adverse effects of commonly used drugs and chemicals, highlighting how new understandings of efficacies emerge over time (Hardon and Sanabria 2017). Specifically, we do this for MDMA and GHB in the Netherlands, and the commonly used PPDs in Indonesia, showing how the regulatory status of both legal and illegal drugs is ever-changing in relation to dynamic safety and efficacy profiles, and in response to how young people appropriate and experience the substances.

Perhaps surprisingly, in light of the above ethnographic descriptions of drug use, MDMA is still classified as a hard drug in Amsterdam while cannabis or magic mushrooms, are classified as soft drugs and sold in small quantities in coffeeshops (Uitermark and Cohen 2005). Our fieldwork revealed that while bars and festival organizers are expected to prevent MDMA from entering their sites, young people could consume these drugs without repercussions at festivals and in bars. MDMA use is very common in the Netherlands; a 2016 Trimbos Study on recreational drug use ($N = 4,905$ respondents, recruited online), reveals that 37% of young adults (15–35 years old) had used MDMA in the past year (Monshouwer et al. 2016). In response to this widespread use, Dutch politicians, especially younger ones, regularly call for the legalization of MDMA. Often cited is an analysis conducted by a team of researchers in the United Kingdom that found MDMA safer than nicotine and alcohol (Nutt et al. 2010). But to date, the policy has not changed. In the meantime, clinical trials have shown that MDMA has beneficial effects in the treatment of trauma in clinical trials (Feduccia et al. 2019; Mithoefer et al. 2018), which may lead to its legalization as a prescription drug.

But MDMA can be used in many ways. Reports from pill-testing facilities show that the MDMA content of ecstasy pills used by young people has been increasing, which seems to be leading to increased rates of adverse events, more specifically, increased heartbeat, difficulty sleeping, and panic attacks. Brain imaging studies suggest that ecstasy depletes serotonin in the brain and increases the stress hormone cortisol, which

causes disruptions in sleep patterns (Reneman et al. 2001; Parrott et al. 2002).

While studying parties and festivals in Amsterdam, we became concerned that the culture of calculated hedonism, in which self-regulation and responsible drug use is the norm, may suppress narratives on adverse drug-related events. Our worries increased after reading a 2017 report by the Trimbos Institute that analyzed the clinical reports of 116 patients who had reported to an addiction care center with strange neurological symptoms. Given the huge number of MDMA users in the Netherlands, the number may be small, but is it perhaps the tip of an iceberg?

The report describes the neurological problems as hallucinogen persisting perception disorders (HPPD) and as depersonalization syndrome (DPS) (Croes et al. 2017), and points out that the symptoms started to appear after using ecstasy, often following a “bad trip.” The researchers considered that the adverse events were perhaps being reported by relatively naïve users, that is users who had only ever used a few pills of the drug. The problem with the symptoms reported to the addiction center is that they don’t go away. It’s hard to draw conclusions from these case reports, because the patients often had also used other drugs, but it does make one wonder how safe MDMA really is. Adverse effects of substances often only become known when large populations use them.

In the above description of self-regulation in Amsterdam, we also mentioned the use of GHB. This drug is a relative newcomer to the party scene. A *Vice* blog notes its emergence in Amsterdam nightlife in 2009, describing its efficacy as a combination of ecstasy and beer: “Lately when someone is puking in a club in Amsterdam, the relevant question is no longer ‘Too much booze?’ but ‘Too much G?’” While MDMA is produced in illegal laboratories all over the country, a key characteristic of GHB is that it can be made at home by mixing typical cleaning products found in the kitchen. The *Vice* blogger interviewed an anonymous GHB user who explains that the most important ingredient is gamma butyrolactone (GBL), which is a chemical used as a paint thinner and floor stripper, which can easily be bought in hardware stores. GBL is then mixed with drain cleaner, which, the anonymous GHB

user clarifies, is done to adjust the pH of the mixture. Other ingredients are demineralized water and concentrated acetic acid. The anonymous source stresses,

Proportion is very important, that's why a decent measuring cup and balance are crucial. Adding too much water, for instance, might result in very poor GHB, and you don't want that. Anyway, with pH level test strips I check the acidity of the substance, depending on which I add a little more GBL or sodium hydroxide. After that, I always take half a dose to test the effects myself. (Vice 2009)

Adverse events emerged quite soon after GHB became a popular party drug. It became clear that the substance is easily overdosed and, if that happens, people become unconscious and can end up in coma (Trimbos-Instituut 2020). Responding to many young people ending up in ICUs after a night out, the harm reduction programs in Amsterdam tried to discourage GHB use through a campaign warning that it can cause you to pass out, and advising friends to bring an unconscious person to the hospital as soon as possible.

It also became clear very quickly that some young people who use GHB frequently become seriously addicted to the substance, and that this is an addiction that is very hard to overcome. Because of the severe adverse effects and addiction risk, the national drug authorities decided in 2012 to include GHB in the list of hard drugs, alongside MDMA and heroin. Many establishments in Amsterdam now have a zero-tolerance policy on GHB. While MDMA use is accepted, GHB use is not.

In Indonesia, we found a limited number of psychoactive prescription drugs to be used commonly across our field sites; interestingly, PPDs did not figure in the drug use narratives of our recreational drug users in Amsterdam, probably because it's hard to obtain them over the counter in the city. The PPDs used by our informants in Indonesia have diverse efficacies and regulatory statuses. They include heroin substitution drugs, potent painkillers containing tramadol or carisoprodol (the active ingredient of Somadril), sleeping pills and anti-anxiety drugs (containing alprozalam), and cough medicines (containing dextromethorphan), see Table 2.1.

While the heroin substitution drugs methadone and buprenorphine were developed to counter addiction, we observed that in Indonesia these drugs have become part of the pharmacopeia for drug users. Sometimes these drugs are bought on the streets or obtained over the counter at “naughty” pharmacies. But we also found that some doctors were willing to prescribe them, along with other PPDs, to ease users’ mental health problems, many of which are related to their dependence on the drugs.

PPDs containing the anti-anxiety medicine alprazolam were also popular among our respondents. This drug is not primarily used to feel high; indeed it does not cause euphoria according to the pharmacological handbooks. Rather, it is used to self-medicate panic attacks or general malaise caused by the other PPDs used, or to dampen the pain that comes with not using drugs one has come to depend on. What our respondents didn’t realize is that these drugs are also known to cause dependence.

The Indonesian authorities have forbidden sales of single-ingredient dextromethorphan pills to prevent misuse by youth. But the active ingredient is still on the market, in the form of syrups and combination drugs, which can thus be used as substitution drugs for those who want to continue taking the drug to feel high. PPDs are manufactured by large pharmaceutical companies that set the parameter of efficacy used in clinical trials. Independent studies are rare in the field of pharmaceuticals, if only because they are very expensive. What’s more, these trials often have skewed study populations, favoring healthy white men and women. When problems occur, they are often only noticed once the products have been out on the market for a long time, and post-market surveillance picks them up, or when addiction problems become hard to ignore, as in the opioid crisis.

Aware that potent pain killers can cause addiction, following a ban of carisoprodol by the European Medicine Authority (EMA) and responding to reports of overuse of Somadril for recreational use, the Indonesian Food and Drug Authority canceled the distribution permit for the drug.² At the time, Somadril was registered in Indonesia as a “strong medicine” (*golongan keras*). When we asked about the drug in pharmacies, we were referred to the 2010 Indonesian pharmaceutical compendium *Informasi Specialite Obat*, which lists Somadril for

all kinds of aches and pains: lower back pain, muscle spasms, tension headache, painful menstruation, and other ailments such as chronic arthritis (Ikatan Sarjana Farmasi Indonesia 2010). The guide does not warn of the risk of addiction.

Carisoprodol entered the global market in the 1960s. Wallace Laboratories (the US company that still produces the Soma brand), claimed that Carisoprodol had superior muscle-relaxing properties and less potential for misuse than meprobamate, the tranquilizer that it replaced (Berger et al. 1960). Marketed as Miltown, Meprobamate was the first tranquilizer to appear on the American market. It was prescribed as treatment for mental disorder, and was used off-label in the 1960s Hollywood party scene, mixed in a dry martini cocktail that people called a “Miltini”. But, Meprobamate turned out to be habit-forming (Tone 2009; Herzberg 2011).

It later became apparent that carisoprodol did so too, because it metabolized into meprobamate in the body (Olsen et al. 1995), leading to the same withdrawal effects (Reeves and Burke 2010). When Soma started being prescribed to increasing numbers of patients, US doctors encountered withdrawal symptoms—including insomnia, vomiting, muscle twitching, anxiety, and hallucinations—among patients who stopped taking the drug (DEA 2011; Substance Abuse & Mental Health Data Archive 2003). Nevertheless, it is still on the market in the United States as a Class IV drug, meaning that it is accepted for prescribed medical use but its use can lead to physical or psychological dependence. In Europe, a post-market study (Bramness et al. 2007) found that 14% of carisoprodol users in Norway had been prescribed more than 75 times the recommended daily dose, suggesting that it was overused for non-medical reasons. Carisoprodol was subsequently taken off the market. In the European Union, the EMEA recommended member states suspend carisoprodol’s authorization for the treatment of acute (but not chronic) back pain.

Drug regulation in Indonesia, as elsewhere, is based on an evaluation of a drug’s therapeutic benefits versus its potential harms. The PPDs used by our Indonesian respondents are legal because they are seen to have therapeutic use in the treatment of pain, anxiety, heroin addiction, and insomnia. But this does not mean that they are safe. Pharmaceutical drugs are tested in clinical trials before they come on the market;

however, in such trials the parameters of safety and efficacy tend to be determined by the companies that sponsor the trials. Evidence of adverse effects often only emerges once the drugs are on the market (Healy 2012; Medawar and Hardon 2004). Norwegian post-market surveillance for example revealed that carisoprodol causes dependence (as do tramadol and alprazolam). In contrast, MDMA is not a legal drug in the Netherlands, because it is seen to be a dangerous drug with no therapeutic indications. But this assessment is being questioned by studies that suggest that MDMA is safer than nicotine and alcohol and by new clinical trials that show that the substance can have therapeutic use. At the same time, addiction clinics are reporting rare adverse effects among MDMA users that need to be taken into consideration in future use of the substance.

Co-Creating Harm Reduction

How to reduce the harm caused by the ever-changing drug use practices of youth? The Amsterdam approach, as we have seen, has made recreational drug use safer by providing services to test drugs and observing drug-use patterns at festivals, with an aim of supporting self-regulation and providing users up-to-date information. In doing so, Dutch government-sponsored health programs co-produce a drug-use scene in which addiction is rare and adverse events quickly addressed.

In thinking through what drug-related harm can be prevented, the ChemicalYouth collaborative proposed a more radical, deliberative approach (Wardman 2008). Such an approach would go further in co-producing knowledge on safety and efficacy of commonly used recreational chemicals, by using the tools of artificial intelligence to generate evidence from drug experimentation forums on the effects of chemicals. When we proposed this approach to the European Union's Research Area on Illicit Drugs (ERANID) program, we were denied funding in favor of studies that instrumentally seek to identify risk factors for heavy drug use. We still are convinced that those contributing to such forums could be productive collaborators, and are working to demonstrate how this

might be done. In Chapter 8 we present some results from our ethnographies of online knowledge production, reflecting more on how virtual spaces could be used as sites for joint learning.

In Conclusion

Focusing on chemical practices generates insights into how youth appropriate diverse chemicals to feel good and how they seek to mitigate harm. In Amsterdam, young people manage risks by frequenting government-sponsored testing facilities to assess the quality of illegal drugs, while in Indonesia they reduce harm by substituting illegal drugs with psychoactive prescription drugs to limit the risk of being incarcerated. Government regulators respond to shifting drug use patterns by changing the regulatory status of drugs and curtailing drug supply. In the Netherlands, for example, GHB was classified as a hard drug, following reports that young people were becoming heavily addicted to the drug, while in Indonesia the government discontinued the sale of cough tablets when they found that young people were using them to get high.

Youth drug use practices are highly dynamic. New ways of using drugs are tried out and effects evaluated. Self-experimenting online communities exchange information on new kinds of drugs and rapidly adapt to the challenges posed by new compounds, for instance, through substance warnings and immediate, practical peer support for members experiencing problems. The international character of such forums and the large number of participants means that there are always people online to help.

One of the central arguments of this book is that the collaborative experiments of young people lead to shared understandings of chemical efficacy; as a corollary, we argue that closely examining how young people manage uncertainty and risks can contribute to novel ways to reduce harm “from below” (Hardon and Hymans 2016; Van Schipstal et al. 2016). Harm reduction from below builds on young people’s existing interest in mitigating the risks of chemicals, the hybrid nature of the networks in which they experiment with chemicals, and the protective nature of the social networks in which they experiment with

drugs. It amplifies the cautionary tales shared by young people online and supports their modes of self-regulation. But it cannot prevent harm on its own. As exemplified by the Amsterdam case study presented in this chapter, harm reduction from below needs to be enabled by harm reduction from above, which facilitates young people's search for hassle-free highs. How this co-production of safer drug use can take place is further elaborated in the concluding chapter of this book, "Chemical Futures."

ChemicalYouth Ethnographers

Inge van Schipstal was a junior researcher and former coordinator for ChemicalYouth project. Trained as an urban sociologist with a liking for ethnography, she studied the social aspects of drug use among young adults. Her focus was on processes of social bonding, collective action, and the intention that precedes drug use. She observed a gradual transformation from recreational, hedonistic intentions toward more profound goals of self-realization and collective evolution, wherein socialities continue to play a major role (Fig. 2.8).



Fig. 2.8 Inge van Schipstal

Moritz Berning focused on mixing classical and virtual ethnographies, trying to balance the limitations that come with each approach. For the ChemicalYouth project, he explored ways that risk is approached and dealt with, in regard to old and new psychoactive substances. These could be situational practices at festivals or clubs, as well as refined social mechanisms of testing substances in virtual spaces (Fig. 2.9).



Fig. 2.9 Moritz Berning

Swasti Mishra is an anthropologist with an interest in the intersection of health, drugs, biomedicine, and society. She completed her PhD under the ChemicalYouth project. Her doctoral research focused on the generation and circulation of knowledge regarding psychedelic drugs, ranging from clinical trials, psychiatric practices, and public health centers, and non-medical use in office spaces or festival venues, primarily situated in the United States and the Netherlands. She is currently part of a research project on the assessment of public health emergency preparedness across the European Union Framework contract with European Centre for Disease Prevention and Control (Fig. 2.10).



Fig. 2.10 Swasti Mishra

Hayley Murray is a medical anthropologist, drug researcher, and project coordinator of the ChemicalYouth project. She is energized by talking to young people about their substance use and has had the privilege to do so with recreational drug users in the Netherlands, Germany, Poland, and the United Kingdom. Her contribution to the ChemicalYouth project was her fieldwork in the Dutch music festival scene, where she explored how recreational drug users perceive, manage, and legitimize the risks and harms related to their drug use in a festival setting. This project reflects her interests in harm reduction and risk practices (Fig. 2.11).



Fig. 2.11 Hayley Murray

Lia Amelia was a researcher for the ChemicalYouth project who conducted research on alkyl nitrites (poppers) use among middle-class teenagers in Makassar. She is a student at Hasanuddin University.

Notes

1. See Law Number 35 of 2009 concerning narcotics (hereinafter referred to as the Narcotics Law).
2. Decree of the Head of the Republic of Indonesia Food and Drug Supervisory Agency Number HK.04.1.35.06.13. 3535, 2013.

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