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Social media markets for prescription drugs. Platforms as virtual mortars for drug types and dealers

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Social media markets for prescription drugs: Platforms as virtual mortars for drug types and dealers

Introduction

The emergence of drug markets on the darknet since the ‘Silk Road’ phenomenon has prompted research on the processes involved in dealing specific drugs online (Barratt, 2012; Martin, 2013; Van Buskirk *et al.*, 2014; Aldridge and Décary-Héту, 2016; Demant *et al.*, 2018). Recent multi-methodological studies have suggested that the Internet – both the dark and surface Web – operates on the transnational level of production and supply as well as locally in end-user markets (Di Nicola *et al.*, 2015; Koenraadt, 2018; Hall and Antonopoulos, 2016). For example, Hall and Antonopoulos (2015, 2016) found that online pharmacies, email/spam advertising, cryptomarkets, and social media markets all play roles in the supply of prescription drugs to UK users. Social media markets often operate without a clear demarcation between sellers and users, and word-of-mouth advertising among virtual friends now seems to be integrated with everyday digital advertising on social media platforms such as Facebook and Twitter. In practice, sellers and buyers make use of social media friend lists, providing information and dealing via the personal messaging system. Furthermore, sellers use closed Facebook groups as a marginally more organized form of dealing.

In their research on surface-Web sellers of image- and performance-enhancing drugs (IPEDs) in the Netherlands and Belgium, van de Ven and Koenraadt (2017) found that online pharmacies play a role in dealing, but a more significant role is played by online suppliers on social media; suppliers invest in the customer relationships that sustain a social supply business model. Echoing these findings, two recent studies in Scandinavia (Demant *et al.*, 2019) and Australia (Moyle *et al.*, 2019) have addressed specific aspects of illicit drug distribution on social media. This research underlines the extent to which social media markets are tightly integrated with other types of drug markets but have had the effect of making these markets more fluid and reactive. Demant *et al.* (2019) also made the distinction between private and public social media markets for illicit drugs. This distinction is similar to that found in end-user drug dealing outside the digital realm, where the social supply of drugs (private) comprises an important part of the drug trade (Coomber, 2010) and where open street markets (public) operate at the other end of the spectrum (Moeller, 2018).

However, so far, little research has focused on the illicit trade in prescription drugs and its operational overlaps with other illicit drug markets online. Notable exceptions include UK-based studies that suggest versatile drug suppliers are involved in the distribution of various IPEDs, illegal drugs, and

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3 prescription drugs as part of multi-drug enterprises, whereas others specialize in the sale of specific
4 prescription drugs only (See Pearson and Hobbs, 2001; Antonopoulos and Hall, 2016; Salinas *et al.*, 2019).
5 Moreover, research conducted in the Netherlands on surface-Web consumers of lifestyle drugs highlights
6 the interconnectedness between different types of drug markets online and the difficulties in ‘filtering
7 out’ transactions that are distinctly illegal (Koenraadt, 2018). As many researchers have established, the
8 distinction between illicit drugs and prescription drugs has never been static. This discussion has often
9 been placed within science and technology studies-inspired literature (Latour, 2004; Duff, 2012; Demant,
10 2009; Keane, 2008), where the major finding has been that not only social context (e.g. Zinberg, 1984) but
11 also non-social actors play major parts in producing the concrete enactments on the body that give a drug
12 its functions. The classifications of some drugs (e.g. heroin, cocaine, and amphetamines) have historically
13 moved from prescription drugs to illicit drugs – and some back again (e.g. cannabis, some MDMA, and
14 LSD). Such moments can be perceived within the wider networks of how specific types of pleasures,
15 effects, and social situations historically shift their roles (Despret, 2004). Within the online environment,
16 these more fluid aspects of meanings and functions are further escalated as the interactions become
17 further disconnected from time and place (Latour, 2005). Specifically the global reach of the Internet
18 means it can be difficult to distinguish the legal status of a drug being traded because its legality is spatially
19 contingent on various regulatory frameworks in the global commodity chain.

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32 The aim of this paper is to add to this emerging body of work by exploring the illicit market for
33 prescription drugs on social media in Sweden to highlight the operational overlaps between the market
34 in prescription drugs and other illicit drugs. Sweden is an interesting case to consider because the Swedish
35 government has imposed quite stringent restrictions on the prescription of so-called ‘study drugs’ such as
36 tramadol, diazepam, and zolpidem (Tjäderborn *et al.*, 2016), which has also restricted the legal supply
37 chain. Yet, in a study based on toxicological analysis of hair samples, high rates of tramadol use were
38 found among young people seeking treatment in the south of Sweden (Olsson *et al.*, 2017). According to
39 Novak *et al.* (2016), after Spain, Sweden’s use of sedatives is the highest in Europe, and Cunliffe *et al.*
40 (2019) have identified Sweden as one of the fastest growing darknet markets for prescription drugs.

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47 By analysing advertisements (postings) on Facebook in Sweden and qualitative interviews with
48 Swedish sellers and buyers, this paper will consider how processes in the illicit trade of prescription drugs
49 and other illegal drugs overlap in these online markets by analysing data gathered from observation of
50 the Swedish Facebook drug market and its participants. The findings of the paper are presented in two
51 sections. The first addresses how the drugs are bought and sold, with the emphasis on data from
52 qualitative interviews. The second section outlines a broader perspective of the markets by means of a
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3 descriptive qualitative analysis of the sellers' advertisements on Facebook in combination with data
4 gathered in qualitative interviews with buyers and sellers.
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10 Method

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12 The data for this article consist of four months' online ethnography on drug dealing on Facebook and
13 Instagram in Sweden, combined with semi-structured interviews with market participants. This was part
14 of a larger Nordic project on social media drug dealing conducted between September and December
15 2017 in Sweden, Denmark, Finland, Iceland, and Norway. Eleven local social science students and one
16 research assistant collected the data by following a standard study protocol. Phase 1 was online
17 ethnography on various social media to discover where the dealing was taking place. This was then
18 supplemented with semi-structured interviews in Phase 2. Sweden was chosen as the focus of this article
19 due to the substantial findings made within both the observations and the interviews. All data were
20 collected with illegal drugs in mind, and prescription drugs became a subtopic within the collected data.
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28 The specific data analysed within this article consist of 184 screenshots of prescription drug sales (=154)
29 and buyer requests (=30), supplemented by 223 Swedish screen shots on illegal drugs to provide a broader
30 framework. In addition, 25 Swedish interviews (n=20 sellers, n=5 buyers) consisting of a minimum of 80%
31 males (n=5 gender unknown) aged from 18-37 with a mean age of 23 (n=7 age unknown). All interviewees
32 were involved in the trade of both prescription and illegal drugs.
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38 The field of social media drug dealing was unexplored as of the beginning of this study, which led to a
39 starting focus on online ethnography in the national language (Hine, 2015; Hine *et al.*, 2017). The data
40 collectors were provided a study protocol. Suggestions to search words, keywords, social media, and
41 various approaches were given as starting points. The protocol also included researcher protection tips
42 and pseudonym profiles given to them only, not interacting within the platforms, and conferring
43 continuously with the project team. They were instructed to lurk only, and only the research assistant and
44 project leader were provided with their real identities. After conducting general drug-related searches on
45 various social media platforms (e.g. Jodel, Grindr, Snapchat, Twitter), Facebook and Instagram were
46 identified as the main openly used platforms and became the main focus. Instagram results consisted of
47 profiles and posts, while Facebook searches mainly led to open drug posts, group invitations in other grey-
48 area groups (e.g. sharing groups and sales groups), and other people's group requests. Groups were either
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3 open or closed/hidden (demanding a request to enter). Entering these groups led to further group
4 invitations.
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7 Interviewees were recruited based on the criterion of participating in social media drug markets, and
8 were interviewed in their local languages. Assistants sent out requests in private messages, usually
9 either via Facebook Messenger or Wickr, an encrypted messaging application often listed in posts or
10 profiles as a secure point of contact. This included information about the study and aim of the interview.
11 All interviewees were given the choice of where to be interviewed. Of the Swedish interviews in this
12 article, one was made face-to-face and the other twenty-four on Wickr. Wickr provided an anonymous
13 context without revealing any physical characteristics. The interviews lasted about 1.5-2 hours in
14 effective interview time, and were semi-structured based on an interview guide providing topics and
15 questions on market characteristics, risk perceptions, motivation, and personal drug business and/or
16 drug use. The only personal questions concerned gender, age, and occupation. The guide had a general
17 focus on illicit drugs, which reflects the self-identification of the sellers and buyers.
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26 *Data analysis*

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28 The Facebook screenshot data were coded in NVivo using a content analysis strategy (Altheide *et al.*, 2008)
29 based on the following codes: drug types, demographics of the seller, size of group, type of group, and co-
30 occurrence of drugs. These codes provided the basis of a descriptive qualitative analysis. The qualitative
31 interviews were also coded in NVivo and based on the codes of modes of operation, gross purchasing
32 strategies, trust, and size/scale of operation.
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39 *Ethics*

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41 The Facebook groups were either hidden, closed, or fully open for a limited amount of time until they
42 were hidden by group administrators. Access was achieved by creating profiles with aliases that did not
43 reflect the research, which were necessary to provide security for the student assistants and to avoid the
44 mistrust research faces in this area. All observations were made through 'lurking', which might limit the
45 understanding of the field (Hine, 2008). However, it provided an entry into a field where anonymous
46 avatars are normal practices which, combined with interviews, became highly informative. All screenshots
47 were stored on high-security university servers accessible only by the research team. All identifiable
48 information was removed from the qualitative data before they were documented, and no real images
49 appear in any published form. All interviewees were informed about the study and the main goals of our
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3 research, and they had the choice to opt out whenever they wanted. The Academic Ethics Committee of
4 Copenhagen University approved this study in September 2017. Ethics committees in other Nordic
5 countries were consulted.
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11 Findings

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14 This section is organized to place the initial focus on the modus operandi for drug sellers on social media,
15 then explore the dynamics of the social media markets based on descriptive statistical analyses of the
16 screenshots.
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19 *How are drugs illegally bought and sold on social media?*

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21 Various social media sites are being used to deal and buy drugs, and the way people use them are reflected
22 in their specific socio-technological composition. For example, media that are open to the public are used
23 alongside others that are private and often used for one-on-one conversations. This became apparent
24 when asking the interviewees why they use specific media platforms. For example, when asked about
25 established Facebook markets, one seller (IP7) mentioned that 'I still use Snapchat a lot but also
26 Messenger, and I buy my products on Flugsvamp 2.0 [darknet]'. In the same manner, one buyer (IP25)
27 revealed that he makes specific use of Instagram: 'Instagram was perfect to establish contacts. One of the
28 people that I came into contact with at that time is now a very good friend of mine and I make the majority
29 of my purchases with him'. Various social media perform different market roles, and it was very common
30 to move between them for different purposes. The general distinction to be made is that between public
31 and private markets. In the more public type of dealing, sellers openly advertise their drugs on social
32 media such as Facebook, Instagram, or other media open to the larger public. On Facebook, the posts are
33 often published in groups for drug dealing or other similar topics, while on Instagram they use their
34 profiles to communicate their activities. On these open platforms the sellers present the drugs for sale,
35 then move on to organize further aspects of the deal via closed channels such as Wickr or Messenger.
36 Almost all further one-to-one contact after the public posts continued via a chosen application.
37 Occasionally, buyers also compose posts requesting various drugs or geographical locations, as one
38 interviewee revealed (IP18):
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53 Mostly, the posts are 'does anybody sell Subutex, marijuana, brown, amphetamine, etc.'... In
54 some of these groups, there have also been posts like, 'Where in [a location] in the city can one
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3 buy this and that drug?’ and like, asking about where it’s safest to sell, and people ask for advice
4 and stuff like that.
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7 In the private markets, we find that buyers and sellers have established relationships that are to some
8 extent dependent upon social media. The media were mainly used as a way to communicate directly
9 person to person, a simple method that resembles traditional telephone-based communication in
10 combination with drop-off deliveries (Friis Sjøgaard *et al.*, 2019). While such ring-and-bring or dial-a-deal
11 services mimic some of the private drug dealing on social media, there is an important distinction to be
12 made that concerns how the connection to the seller is established. This relates to how technology is
13 embedded into the drug deal, or what Powell *et al.* (2018) have termed a ‘technosociability’. This term
14 emphasizes that cultures and practices are inscribed with technology, and that a dial-a-deal service is not
15 just an expansion of a traditional social relation but inscribes technology into the social milieu itself. This
16 clearly exemplified in the quote from the buyer above, in which he makes use of social media (in this case
17 Snapchat) to scan and identify a seller with whom he can make a connection. This process of finding the
18 drugs on social media and then ordering them for pickup at an arranged place is described as a very
19 straightforward process; it is clear that the technology itself becomes transparent for him even though it
20 is central to his actions. This is described by IP2: ‘I just find something that’s interesting [on social media]
21 and then I send my partner [laughing]’. Public social media sites such as Facebook and Instagram act as
22 catalogues where buyers choose the product and the seller, and then make further contact. The one-on-
23 one contact mostly concerns agreeing on a place to meet to exchange the drugs and money, which is
24 necessary since the social media markets have developed the norm of delivering drugs in person for the
25 exchange of cash. Very occasionally, people pay electronically and receive the drugs by mail.
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40 It is important to note that although public social media marketplaces are by their very nature
41 more open than the private type of markets, they still rely on social media groups that are closed or
42 hidden. This means that although the postings within these groups are public for the group members, a
43 potential buyer or seller will need to identify the groups and obtain access to them to see the
44 advertisements or to use the group for sales. The sellers within the groups find themselves in what has
45 been termed a ‘transparency paradox’ (Tzanetakis *et al.*, 2016). On one side, they have an interest in a
46 large volume of potential buyers (and, as such, to open the drug trading groups as much as possible to
47 allow potential buyers in). On the other hand, they also want to keep the groups hidden from law
48 enforcement or users who morally denounce drug dealing and are likely to report the misuse of social
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3 media. Balancing their needs and risks has led to a certain routine in running the groups, as this Swedish
4 seller (IP18) describes:

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7 IP: The group got more established and became more organized with time [...]. The different
8 groups have developed different niches. [...] They change the Facebook groups from visible [*public*
9 or closed] to secret [*hidden*]. They then kick suspicious members out. And it's usually a clique of
10 people that are active in making new groups... [deciding the geographic] location [of sales] and
11 what kind of drugs are allowed.
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16 What we see from the quote is that there is both a formal organization (visibility and openness) but also,
17 more importantly, a constant moderation on the group's content and membership status. The content is
18 administered by one or more people, which is common in any type of online forum (Gillespie, 2018). For
19 users to get access, they must search for groups mentioned in other groups (e.g. groups for legalizing
20 cannabis or local sales groups) or be directed to them from their existing social networks. This means that
21 potential access to groups requires some searching and participation within other groups, given that the
22 invitations to the closed groups and acceptance into the groups are secured.
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31 *The Swedish Facebook market for prescription drugs*

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33 The public type of dealing on Swedish Facebook appeared to be a visible, public, and rather stable market.
34 Fifty-seven Swedish Facebook groups selling illegal substances were located over the three months of
35 ethnographic work compared to 30 in Iceland, 26 in Denmark, and none in Norway or Finland (Demant
36 and Bakken, 2019). The Swedish groups were normally relatively easy to identify, and the fake profiles
37 used for the research seemed to blend in with the other users' profiles. A seller (IP3) describes his way in
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44 I had no idea these kinds of groups even existed in social media [...] My friend had posted his ads
45 earlier and it had worked really well for her [Swedish gender-neutral personal pronoun]. I felt I
46 could do the same. It was a relatively safe way to reach people, but as more people were invited,
47 it became messier and more unsafe. So I don't post as many ads nowadays.
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51 Another seller helped IP3 into the group from where he could start to advertise his drugs. However, we
52 also see in the quote that this seller is concerned with content and member moderation, because he is
53 sceptical of groups that are too large. Such groups may be presumed unsafe. In a comparative analysis, it
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3 was found that the Swedish groups were significantly smaller than most of the other nations' groups, with
4 most containing between 0-100 (22 groups) and 500-1000 members (24 groups; Demant *et al.*, 2019).
5 Other countries had groups of up to several thousand members. One reason why the Swedish groups
6 were smaller might be their focus on specific geographic areas, often cities – they often included city
7 names in the group titles. The geographical area was then often used as an identifying mark that
8 distinguished a group from others with a brand-like name, such as 'Flea market Stockholm' and 'Flea
9 market Gothenburg'.

10
11 In these 57 Swedish Facebook groups, we identified and documented (with screenshots) 407 posts that
12 mentioned drugs as either seller posts or buyer requests (see Figure 1). In these posts, various drugs were
13 mentioned 813 times, often in the same posts. Cannabis was the most-mentioned drug, but prescription
14 drugs came in a close second place, followed by amphetamine, cocaine, and ecstasy.

15
16 [Figure 1 HERE]

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18 This shows that prescription drugs form a large part of the Swedish social media market for illicit drugs.
19 However, it should be noted that 'prescription drugs' is a broad category that includes many types of
20 drugs. The other categories of cannabis, amphetamine, cocaine, and ecstasy are specific and do not
21 include such a broad variation of goods. In the interviews, one of the more active sellers (IP18) argued
22 that he sees a change in the mode of selling within the groups, a move into what he describes as 'heavier'
23 drugs 'Prescription medicine, central stimulants, etc. ... Cocaine, benzo, medicine, amphetamine, and a
24 lot of research chemicals that have arrived on the market [...] tramadol...'. It is interesting to note that
25 while one would expect that drugs such as cocaine and amphetamine are regarded as 'heavier' drugs
26 compared to a normalised understanding of cannabis (Järvinen and Demant, 2011), IP18 also explicitly
27 mentions prescription drugs as a category but specifies tramadol and benzodiazepine. Compared with
28 other Nordic countries (Denmark and Iceland), the Swedish groups more often sold a variety of different
29 drugs within the same groups. Many of the Swedish groups also sold other illegal goods, such as stolen
30 merchandise and weapons. Only half of the groups were restricted to selling illegal or illegally obtained
31 drugs, compared to around 80% of the Danish and Icelandic groups (Demant *et al.*, 2019).

32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 *How are prescription drugs being sold?*

51 Prescription drugs were advertised in 184 out of the 407 posts concerned with the selling or buying of
52 drugs. The remaining 223 posts concerned illegal drugs, such as cannabis, amphetamines, cocaine, and
53 ecstasy. Fifty-four of the posts contained buyer requests for various drugs, while prescription drugs were
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3 mentioned in 30 of them. This indicates a large demand that is yet to be matched the supply side on social
4 media. The remaining 353 posts were from sellers who were advertising the drugs they had for sale. Of
5 the seller posts, 67 concerned prescription drugs only, whereas 87 posts mentioned prescription drugs
6 and other illegal drugs. The most common prescription drugs were alprazolam (60 posts) and tramadol
7 (31 posts). Others that were mentioned quite often include buprenorphine (10), clonazepam (Iktrovil and
8 Rivotril; 27), diazepam (10), medicine to treat erectile dysfunction (10), oxycodone (14), pregabalin (16),
9 and zopiclone (11). The top five prescription drugs sold in separate posts were alprazolam (17), tramadol
10 (13), oxycodone (8), diazepam (8), and pregabalin (7). The top five prescription drugs that were mentioned
11 alongside other illegal drugs were alprazolam (43), tramadol (18), pregabalin (9), clonazepam (Rivotril; 9),
12 and clonazepam (Iktrovil) (8). Thirty buyer posts requested prescription drugs, and these most commonly
13 concerned alprazolam (5), buprenorphine (5), methylphenidate (3), benzos (in general; 3), and pregabalin
14 (3).

25 *Intermixed markets*

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27 The number of drugs advertised in each post varied from a few pills to packages of more than 100 pills.
28 The sellers often offered various types of prescription drugs simultaneously. Cannabis and amphetamine
29 were the two drugs most commonly advertised alongside prescription drugs, and these were followed by
30 ecstasy/MDMA and cocaine (see Figure 2).
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41 In other words, the drugs advertised in the same posts as prescription drugs were the most
42 prevalent illicit drugs (amphetamine, cannabis, ecstasy/MDMA, and cocaine; Mounteney *et al.*, 2016; see
43 Figure 2) aside from heroin, which only accounted for a small proportion of the drugs advertised on social
44 media. This may be due to the fact that public social media markets are targeted mainly towards
45 recreational users and that they are targeted towards socially marginalised users who tend to use heroin
46 in tandem with other drugs to a lesser degree (e.g., Hughes, 2007). However, such differentiation between
47 more recreational, regular, and more dependent users is highly contested (Järvinen and Ravn, 2011),
48 which this drug seller and user makes clear (IP7): '[I use] cannabis and amphetamine. Cannabis is
49 recreational, amphetamine is on prescription. I also use cannabis as self-medication against nausea, loss
50 of appetite, and similar'. When pressed further about whether he regards the drugs as a big part of his
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3 life, he answered, 'I would not say that I identify myself with my drug use more than you identify yourself
4 with aspirin use ☺'. This user and seller shows an understanding of his own use as a complex mix of using
5 illicit drugs such as cannabis for self-medication while simultaneously using the prescribed amphetamine
6 (likely Ritalin) for unspecific purposes. This pattern of multidrug use is also found amongst some of the
7 other sellers, such as seller IP15, and again there was an overlap between illicit drugs and prescription
8 drugs:
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15 Now I use weed or hash; over the last six months, I have also been taking diazepam, ksalol
16 (alprazolam), ecstasy, rivo galenika, ocycontin, and a lot of benzo, but I sell a lot of it. I'm not
17 addicted to any of them, I just tried them.
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22 While this seller does not self-identify as having a 'drug problem', he exemplifies what we
23 generally see in the sample of sellers: namely, that most sellers are also drug users. This finding echoes
24 the findings of most other studies of drug seller practices and cultures (Coomber, 2010).
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29 *How are the prescription drugs advertised?*

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31 In the public mode of dealing prescription drugs, we found a continuum between amateur and
32 professional posts. This typological distinction reflects the way that products are advertised and often also
33 reflects the volume of sales. Below are two examples of typical illustrations found on Facebook posts from
34 sellers of prescription drugs:
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40 [INSET Illustration 1]
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45 [INSET Illustration 2]
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48 Illustration 1 is an example of an amateur post in which a male or female seller seems to have a real name
49 and profile picture. The text itself is less developed and includes no information other than the name of
50 the drug. There are also one or more spelling mistakes, and the Wickr message here will not be received
51 until the seller is contacted on Facebook Messenger, which adds an unnecessary step. Illustration 2
52 appears to be a more professional post. It gives the impression that the seller has spent more time
53 planning the information that is presented and planning how to use emojis to make the post stand out.
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3 The post includes information such as prices, location, contact information, discount possibilities, and a
4 direct link to Wickr. The professional sellers also listed various drugs to which they had access as well as
5 different amounts, while the amateur sellers often seemed content with selling the few drugs they had
6 on hand. The professionals also used fake profile pictures (e.g., a neutral picture or a picture of an iconic
7 celebrity or even celebrity criminal) and a profile name that reflected drug selling, such as John Xanaxian,
8 which indicates Xanax sales. Other professional sellers use profile names such as 'blueberries' for
9 alprazolam or 'tram' for tramadol.

10
11 In the interviews, some of the more professional sellers claimed to have significant turnover in their
12 businesses; seller IP18 claims that his business has an '...estimated income [of] around 40,000 SEK per
13 month'. This seller describes himself as self-employed and claims that in some other months, he generates
14 far more revenue. At the other end of the spectrum are the sellers who deal in smaller amounts, such as
15 IP7, who claims to deal '...about 10–20 times a month, give or take. That amounts to one or two thousand
16 [Swedish kroner] in extra income a month'. He earns only one or two hundred British pounds per month,
17 but he is still quite active and has many sales. Other low-end sellers only sell when they have something
18 available, such as seller IP10, who deals in multiple drugs: 'I deal with prescription drugs, ecstasy, and
19 some psychedelics when the opportunity is given or I get a good price'. This seller is flexible and sells
20 whatever he can source in his locale. The Swedish sellers also tended to source their prescription drugs
21 on the darknet in so-called cryptomarkets (Martin, 2013; Demant *et al.*, 2018b). One seller (IP3) regards
22 this as normal: 'Of course, all my products are bought from the darknet'. Seller IP1 also buys from the
23 darknet, but hesitates to resell the goods in the same market:

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25 I have thought about selling there [the darknet], but it would be too much pressure and stress
26 because it requires a lot, more than you think. You need a place (local). And to get ahold of a post
27 box. If you do that with your real name, then you are fucking stupid. People usually buy fake or
28 stolen passports and stuff like that. That could cost you, like, up to 25000 SEK [approx. 2500 GBP]
29 to get a post box. Then you need to have your own space and to package it. To package it, you
30 need to drop it in solproposal (?) or alcohol and stuff like that to get it totally sterile. Then you
31 have to drive around and drop the mail. That's too much pressure and stress. I know how it works,
32 and, yeah.

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34 The social media sellers interviewed during the project regarded darknet selling as too complex. Even
35 though many of the sellers bought drugs in that market, they could not imagine selling there. They
36 preferred social media because it was much easier and involved a mode of communication with which
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3 they were already familiar. Their only concern with dealing on social media was that they were often
4 compelled to meet the buyers in person. It can be hypothesized that the low threshold of digital capital is
5 marked by the differentiation between those who source drugs locally and those who buy on
6 cryptomarkets (Bakken and Demant, 2019). This phenomenon of dealers buying their products on darknet
7 markets before reselling on the surface Web, a practice in which the surface Web acts as a 'retail' portal
8 for goods obtained in 'wholesale' markets on the Dark Web, is an interesting avenue for further research.
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13 Discussion

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18 Prescription drugs are more often sold in separate Facebook posts rather than alongside illicit drugs.
19 However, the posts are buried in the sales groups of other illegal drugs, which shows only a small degree
20 of integration in this 'retail' market. In advertisements, mentions of the originality/copy status of the
21 products are rare. In contrast, social media prescription drug sales in Sweden were fully integrated into
22 the markets for illegal drugs. Swedish social media markets primarily sold alprazolam, tramadol,
23 pregabalin, and clonazepam, which have been described as 'abusable' prescription medicines (McCabe
24 and Boyd, 2005). These were the most common drug types found in Thäderborn et al.'s (2016) register
25 study of driving under the influence – the most frequent was diazepam, followed by flunitrazepam,
26 tramadol, zolpidem, and zopiclone. This study was exceptional in its identification and separation of
27 specific drugs in the analysis. Drugs sold on social media are seldom described with official names; in
28 general, they are sold under nicknames. However, our findings show that the market for prescription
29 drugs in Sweden is focused on sedatives, which seems plausible, given that Sweden (together with Spain)
30 had the most prevalent use of sedatives in the EU (Novak *et al.*, 2016). This Swedish trend echoes the
31 escalating use of prescription sedatives used by youth in the US, and it accompanies a shift towards
32 addictive illegal drugs such as cocaine and cannabis (Martins *et al.*, 2017).
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44 The bulk of prescription drugs sold on Swedish social media, especially those sold by large-scale
45 retail sellers, are sourced from darknet drug markets known as cryptomarkets (Martin, 2014; Demant *et*
46 *al.*, 2018b). Recent studies on prescription medicine sales in cryptomarkets revealed that hypnotics and
47 anxiolytics comprise a 20.6% share of Swedish cryptomarkets, which amounts to 2,800 specific
48 prescription drug trades (Cunliffe *et al.*, 2019). The tendency of the prescription and illegal drug markets
49 to overlap has also been identified in IPED markets, in which both licit and illicit drugs are used and
50 supplied within the same networks (Salinas *et al.*, 2019). Salinas et al.'s description of such markets as a
51 polypharmacy is an accurate depiction of the current state of affairs in Swedish social media markets.
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3 Finally, this research project found that the public markets on social media with open and semi-open
4 platforms function as both a rendezvous and a multipurpose retail mall for all types of licit and illicit drugs
5 sold by amateur and professional sellers (Hayes *et al.*, 2016).
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9 The easy availability of multiple drugs in the same market may suggest two points related to policy
10 and prevention. First, the intermixing of markets may lead drug users to change to new (illicit) drugs or to
11 more users combining prescription and illegal drugs. Barrett *et al.* (2016) have described the tendency for
12 new buyers in cryptomarkets who are tempted by the large variety of drugs for sale to start using more
13 and using new types of drugs. There is no literature that discusses the effects of social media drug markets
14 on both harm and harm reduction. Informed regulatory practices are virtually non-existent. It has been
15 suggested that sellers in digital markets could provide harm reduction information to the buyers so they
16 can have a safer drug practice (Aldridge *et al.*, 2018). Though some safe drug use information is given in
17 cryptomarkets, no such information is provided in the sellers' social media posts. The sellers' services
18 were more related to delivery time and drug purity. Second, the intermixing of the markets for
19 prescription and illicit drugs may also take part in the reconfiguration of the very idea of licit and illicit
20 drugs. While the science and technology drug scholarship has pointed towards such a conclusion in
21 relation to the *use* of drugs, it has not, besides a more general 'regulation induces harms to users'
22 framework, been discussed how the markets take part in such an enactment (Houborg, 2012). The findings
23 from our study of social media drug dealing have not made it possible to follow all the multiple relations
24 between the drugs and the actors (that is, sellers, buyers, drugs, policies, regulation, technology etc.).
25 However, our findings indicate that market regulation (policies and law enforcement) has a relatively low
26 influence on how drugs are sold and purchased. If market regulation had a larger impact, we would likely
27 have seen a larger split between the prescription drug markets and the illicit drug markets, which would
28 have ensured that prescription drug buyers did not see their 'legal-medical' products alongside drugs
29 classified as illicit. These digital markets are in this way further jeopardising the Swedish government's
30 dream of a drug-free society (Tham, 1995), which has manifested in a national drug control project and
31 their attempts to establish a cultural norm of drugs as 'alien to society' (Bjerge *et al.*, 2016). While Sweden
32 still prohibits illicit drugs, including cannabis, there are now calls for policy change in online and printed
33 media (Månsson and Ekendahl, 2015; Månsson and Ekendahl, 2013). When combined with the easier
34 availability of prescription drugs, the tendency to push back against national policy could provide a further
35 expansion of the already active prescription drug market in Sweden. Further efforts in influencing how
36 users of prescription drugs decide to buy their drugs online may need to influence other matters than the
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3 perceived legality/illegality. We could speculate that such matters, in line with a harm reduction
4 perspective, relate more to drug quality and concerns related to one's own body.
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8 Limitations

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11 The data collection followed a process specifically designed for studies evaluating illicit drugs in Nordic
12 social media markets, and it did not follow a process designed specifically for prescription drugs.
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15 Conclusion

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18 The social media markets in Sweden traffic prescription drugs alongside non-prescription illicit drugs.
19 Facebook and other social media platforms provide a suitable low-entry threshold for anyone to sell or
20 buy prescription drugs in large quantities or for personal use. Social media platforms convenient and user-
21 friendly and provide a platform primarily servicing groups that use drugs for pleasure or performance
22 optimization (abusable prescription medicines). We find that drug sellers also use and/or abuse drugs to
23 a large degree. The social media markets for drugs can be perceived as a continuation of existing pathways
24 into drug selling. However, it is important to stress that because more amateur and professional sellers
25 can be observed operating side by side, amateur sellers may be tempted to move into more large-scale
26 retail operations. This situation may escalate further because of the ease of access and breadth of
27 available drugs to amateur sellers who source drugs from darknet markets and are thus no longer
28 dependent upon their ability to establish local networks with mid-level dealers. Given the easy access to
29 prescription drugs on social media and the easy supply from cryptomarkets, monitoring the development
30 of prescription drug markets on social media is becoming increasingly important.
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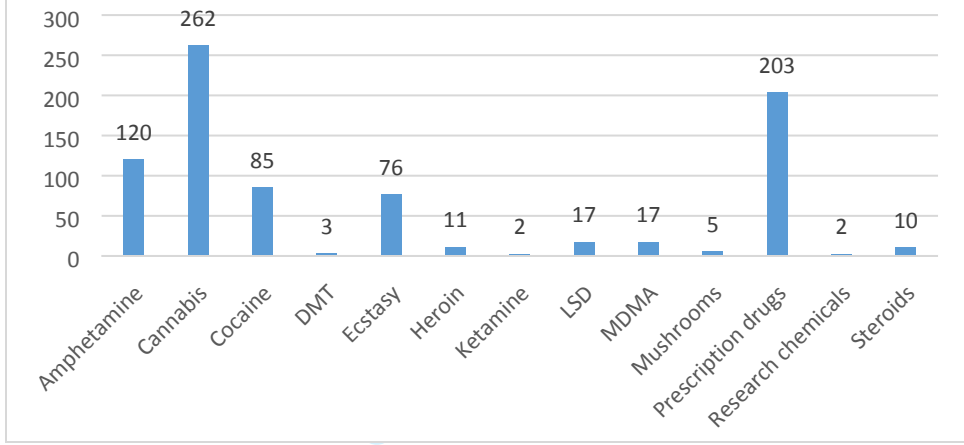
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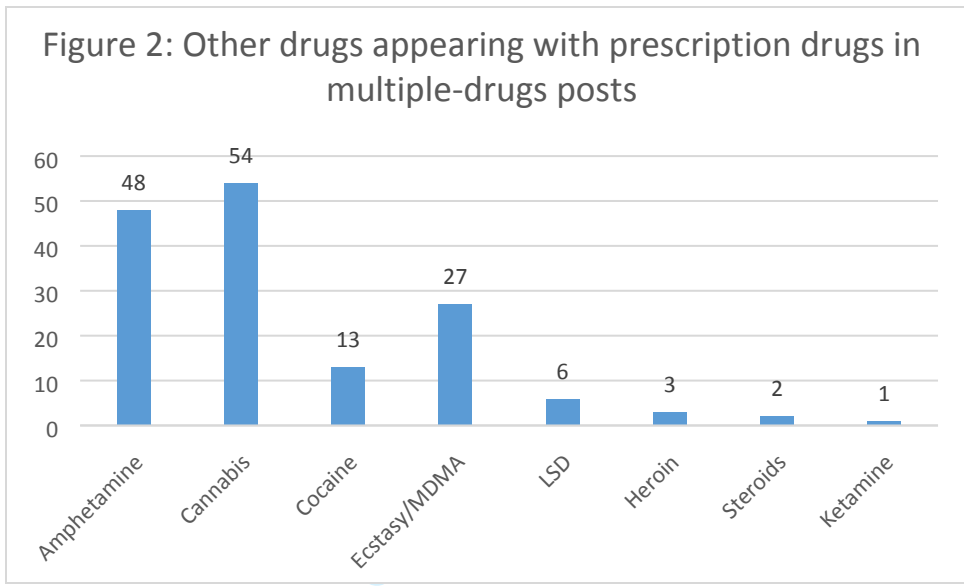
Figure 1: Number of seller and buyer postings in Facebook groups



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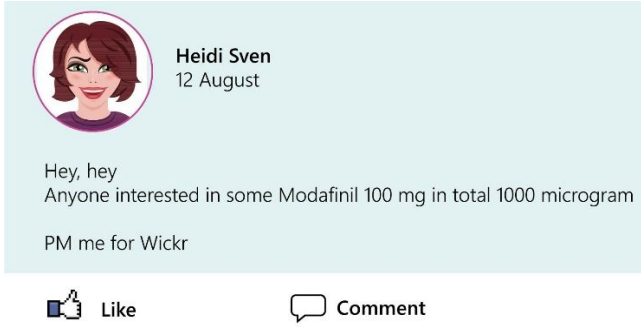


Illustration 1: An amateur seller post

Drugs and Alcohol Today

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Paulo String
August

1 Euro
Stockholm

Find me on Wickr@StockDeal

🚚 Delivery in Stockholm 🚚

bullet-proof vest €530

- ❄ Cocaine €100. 5unit €400
- 🔹 Hash 5g €50 25g €200 100g €700
- 😄 Xanor €3pice 100piece €100
- 🍏 XTC red Apple €20 10piece €120
- 🍷 Amphetamine €25 5units €120 10units €200

👉 Discounts with larger volumes

👍 Like 💬 Comment

Illustration 2: A professional seller post

Drugs and Alcohol Today