

A Profile of Harm-reduction Practices and Co-use of Illicit and Licit Drugs Amongst Users of Dance Drugs

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ABSTRACT *This study aimed to identify harm-reduction practices that users of dance drugs applied in relation to their drug-taking behaviour and also the extent of co-use between dance drugs and prescribed/‘over the counter’ medication. Data were collected by a self-administered questionnaire from 125 respondents recruited by convenience sampling and the Key Informant Access method. The majority of respondents, especially females, indicated that they applied harm-reduction practices. The most popular of these were drinking water and ‘chilling out’. Just under half of all respondents had taken dance drugs with other prescribed or ‘over the counter’ medication. Females were significantly likely to mix the two. This study highlights areas where future policies on drugs education may have to be considered.*

Introduction

The use and abuse of illicit psychoactive drugs has become a cause for concern. National surveys investigating drug use amongst school children show that the use of so-called dance drugs Ecstasy, amphetamine and LSD is steadily rising (Balding, 1996; Barnard *et al.*, 1996; Miller & Plant, 1996; Parker *et al.*, 1995; Roberts *et al.*, 1995). With regards to older (>18 years) recreational non-dependent users of these drugs, published research is relatively scarce (Christophorou *et al.*, 1996; Forsyth, 1997; Henderson, 1993; Mullan *et al.*, 1997; Petridis & Sherlock, 1996; Release, 1997). However, it does appear that for many of today’s young adults, the recreational use of these drugs differs little from the sociable use of both tobacco and alcohol (Plant & Plant, 1992). Such increased usage and normalization of drug taking can possibly increase the potential for drug-related harm.

In the past, health promotion with regards to drug-taking behaviour has mainly been aimed at a young audience and centred on ‘Just saying No’. This type of primary prevention, it can be argued, is based on individualism and victim blaming (Wibberley & Whitelaw, 1990), where users are alienated and often taught to resist peer pressure. For older, recreational non-dependent users of dance drugs, this is unlikely to have much impact. A more realistic approach is ‘Harm Reduction Drugs Education’ (HRDE), a secondary, rather than primary,

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prevention health promotion concept (Cohen, 1994). HRDE accepts that the illicit use of drugs cannot be stopped or prevented *per se* and that it is naive to think it can. Therefore, its goal is to reduce or minimize any harm that can occur as a consequence of drug use. This harm can include a range of physical, psychosocial and/or financial problems. HRDE aims to give drug users accurate information which it is hoped will enable them to make a responsible and informed decision whereby they can reduce the risks associated with their drug use.

Drinking water and taking regular breaks from dancing were among the first wave of harm-reduction practices targeted at Ecstasy users developed by Mersey Regional Health Authority (McDermott *et al.*, 1992). Many drug agencies and services aimed at users of dance drugs tend to adopt strategies where harm reduction is their main objective (e.g. Lifeline, Release, Crew 2000). Night-club owners have also been urged to have 'safer dancing' facilities in their venues (Newcombe, 1995), including running water, a separate 'chill out' area where clubbers can take a rest from dancing, club staff trained in first aid and who are able to identify possible drug-related problems. Some Local Authorities (e.g. Mansfield District Council, 1997) are revoking or not granting licenses to those venues that do not provide these facilities.

Another area of potential harm, largely ignored in the literature, is that of clinical interactions. These can occur as a consequence of mixing illicit drugs with other prescribed or 'over the counter' medicines. For example, many cold and flu remedies contain the sympathiomimetics ephedrine and pseudoephedrine. These compounds have the effect of increasing the concentration of the neurotransmitter noradrenaline in the brain (Bowman & Rand, 1980; Rang & Dale, 1987) as do amphetamines and cocaine. If such medication is taken in conjunction with either amphetamines or cocaine, there is a subsequent increased concentration of noradrenaline released, which can have serious medical consequences.

Problems can also arise due to interactions of dance drugs with prescribed medication. Some of these interactions can be potentially fatal (Concar, 1997), particularly if the medication inhibits or potentiates hepatic enzymes, while some interactions may pass unnoticed. People suffering from certain chronic illness can also become affected. For example, the pharmacology of MDMA is such that it may induce epileptic fits in otherwise controlled epileptics. Vigorous dancing coupled with an elevated body temperature and sweating can alter and upset insulin levels of diabetics. People prone to liver problems (e.g. jaundice) may find that the use of MDMA in particular can exacerbate the condition, as can it affect kidney function. It is not known how many deaths have occurred as a consequence of interactions between prescribed medication and dance drugs or even how many people have developed a medical problem as a consequence of mixing the two. This is an under-researched area of illicit drug use.

It was therefore decided to conduct a study investigating such co-use of illicit and licit drugs amongst some users of dance drugs in the city of Nottingham, England. The other aim of the study was to ascertain the extent and type of harm-reduction practices that users of these drugs applied in relation to the drug-taking behaviour.

Method

An anonymous self-administered questionnaire, including both closed and open-ended questions, was used to collect data. The entry criterion required of

respondents was that they were users of dance drugs although usage of other drugs was also documented. The drugs alcohol, cannabis and nitrites ('poppers') were excluded as it was assumed that most respondents had used at least one of these drugs. Inclusion of these substances would divert the study away from harm reduction and interactions associated with the stimulant, hallucinogenic drugs.

Data were collected between March and May 1997 using two recruitment methods. Eighty-five respondents were recruited using convenience sampling at a licensed Nottingham cafe/bar. To preserve anonymity of the owner and the premises, it is not possible to divulge information about it other than it being centrally located and a popular 'pre-club' meeting place with young adults. In order to create a varied mix of respondents from the cafe, different types and social circles of people were deliberately approached, e.g. students, individuals at the bar, groups coming to the cafe for meals. The purpose of the study was explained and their participation encouraged. Data were collected on Thursday and Friday nights, which were identified as busy periods.

Forty respondents were recruited using a Key Informant Access method (Griffiths *et al.*, 1993). The Key Informant in this case was a regular visitor to the cafe and well known within the local underground Nottingham dance scene. Using 'snowball' recruitment methods, a number of local drug users were contacted over a short period of time. This method had the benefit of recruiting a range of subjects who shared the predetermined sample characteristics, i.e. regular users of dance drugs, but who were not part of the same social network in the sense that they all knew the Key Informant but not necessarily each other. Data were collected at the Key Informant's home with the author present and any individuals who wished to participate.

In both locations, respondents had a degree of privacy by which consultation was minimized. The importance of honest independent responses to questions was stressed at the outset.

Results

In total, 125 respondents were recruited. Seventy per cent of the sample were male and 29% female. (The gender of two respondents was unknown.) Thirty-nine per cent of respondents were aged between 21 and 25 years, 30% aged 26 years or over and 20% were 20 years or less. The majority (72%) were single or co-habiting (21%). Over half of all individuals (53%) were in paid (full or part) employment and 22% were students.

The demographic profiles of respondents recruited from the cafe and by the Key Informant did not differ to any great extent. Differences that did occur were: there were a greater number of females in the Key Informant's group (40% compared with 24%) and also a higher proportion of unemployed respondents (30%) compared to the cafe (18%).

Drugs Used by Respondents

Respondents were asked whether they had used any of the illicit drugs listed in the questionnaire and also to give details of 'other' drugs they had used. The results are given in Figure 1.

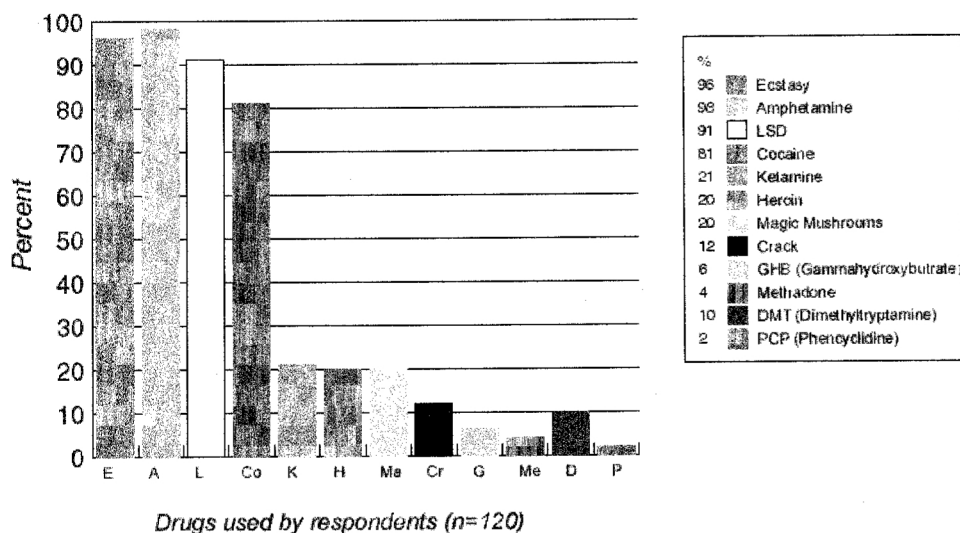


Figure 1. Respondents use of illicit drugs.

The most commonly used illicit drugs amongst this sample were amphetamine, Ecstasy and LSD. One in five respondents had also tried Ketamine, heroin and magic mushrooms. Other drugs mentioned include crack, DMT (dimethyltryptamine), GHB (gamma hydroxybutyrate acid), methadone and PCP (phencyclidine). The average duration of use for Ecstasy was 4 years, 3 months and for amphetamine 5 years, 3 months.

Poly Drug Use (mixing of illicit drugs) by Respondents

The potential for harm associated with poly drug use/drug mixing is illustrated in Table 1.

Three-quarters of all respondents were poly drug users in the sense that they took more than one drug at any one time. Eighty five per cent of these poly users only 'mixed' dance drugs.

Table 1. Extent of poly drug use (drug mixing) by respondents

Mixing of drugs	Sample response ^a n = 124	Male n = 86	Female n = 36
Do not mix drugs for health/safety reasons	19 (15)	15 (17)	4 (11)
Do not mix drugs for financial reasons	11 (9)	6 (7)	5 (14)
Do mix drugs but only dance drugs (Ecstasy/Speed)	80 (65)	55 (64)	24 (67)
Mix all kinds of drugs (dance and other)	14 (11)	10 (12)	3 (8)

^aOne non-response.

n = 124 contains two missing gender responses.

Percentages in parenthesis.

Harm-reduction Practices Applied by Respondents

Individuals were asked to select from a list of harm-reduction practices (recommended by the National Drugs Helpline and the Lifeline Agency) any that they used. Of the 102 respondents (82%) who reported taking any harm-reduction steps, drinking water to avoid heat-stroke was the most common, applied by 90%. Eighty-four respondents (82%) also claimed to 'chill out', and just over half (57%) of all respondents avoided getting 'too hot'. Ten individuals reported maintaining their salt balance by eating crisps or nuts. Four individuals claimed to keep back a small sample of the drug for possible analysis later. Females (50%, $n = 18/36$) were significantly more likely than males (34%, $n = 29/86$) to always take harm-reducing steps ($\chi^2 = 6.17$; $df = 2$; $p = 0.046$) such as those described.

One of the most frequently cited practices to reduce harm when taking Ecstasy is the drinking of sufficient water to avoid overheating and dehydration. Respondents were asked to state what they thought was the recommended amount of water to take. Both the National Drugs Helpline and the Lifeline Agency recommend one pint an hour if dancing strenuously or sweating. Forty-two per cent ($n = 52$) of all respondents claimed to know this amount, however only 31 males and eight females actually got it correct.

Information Required by Respondents

Respondents were asked what kind of information they would like regarding dance drugs. Eighty-one respondents (65%) wanted information about the long-term effects, 40% on general health risks and dangers, 45% on how to cope in emergencies, 41% on interactions with other drugs and seven individuals wanted information on how to stop taking them.

Respondents Use of Medication

Respondents were asked if they were currently taking any repeat prescribed medication. Significantly more females (47%, $n = 17/36$) than males (13%, $n = 13/87$) reported taking repeat medication ($\chi^2 = 12.69$; $df = 1$; $p = 0.0004$). This finding is explained by the use of oral contraceptives amongst females. Other repeat medication taken by respondents is shown in Table 2.

Table 2. Repeat medication taken
by respondents ($n = 30$)

Medication	<i>n</i>
Asthma inhalers	12
Oral anti-inflammatory tablets	4
Anti-depressants	2
Anti-histamines	2
Epilim (for epilepsy)	1
Oral contraceptive	12
Temazepam	1
Total	34 ^a

^aSome respondents took more than one type of medication.

Of the 47 respondents who reported suffering from chronic illnesses, 34% had asthma, 19% suffered migraines, 8% had kidney problems, 4% had liver problems and two individuals suffered from either diabetes or epilepsy. Twenty-five per cent of respondents suffered from a range of 'other' conditions which included hayfever, eczema, irritable bowel syndrome, lower back pain, psoriasis and depression. Some respondents had more than one condition.

Fifty-four respondents (44%) had taken dance drugs with other medication. The term other medication included prescription and 'over the counter' medicines. The most often combination, cited by 26 individuals, was that of dance drugs taken with antibiotics. Five individuals had taken dance drugs with anti-depressants and three individuals with painkillers, such as paracetamol and aspirin. Cold and flu remedies, including Lemsip, Sudafed, Contac 400, Night-nurse and cough medication were also mentioned. Females (61%, $n = 22/36$) were significantly more likely than males (37%, $n = 32/87$) to take dance drugs whilst on other medication ($\chi^2 = 4.72$; $df = 1$; $p = 0.029$).

When asked if they would volunteer information to a health care professional (doctor, nurse, pharmacist) about their drug-taking behaviour if they thought it would help the consultation, seven in 10 respondents (70%, $n = 88/125$) said they would. Of the 37 individuals who would not volunteer their drug use, only three males stated that they would still not divulge any information, even if asked specifically by the health care professional.

Intentions to Use Dance Drugs in the Future

Almost two-thirds of respondents (63%) foresee their drug usage staying at the current level, with 11% of respondents actually intending to increase their use. Twenty-six per cent of respondents intended to decrease or stop taking dance drugs altogether.

Discussion

Methodological Issues

Adult non-dependent recreational users of dance drugs are a difficult cohort to contact and study due to the illegal nature of their activity. Limitations include generalizability of the findings, as the study sample will not have been taken from a random sample of the general population or even the dance drug-taking population. Instead, this study will have provided an insight and understanding into the behaviour and practices of some existing local users of dance drugs. From it, tentative generalizations may be made about the behaviour of other similar groups of users. Convenience sampling of visitors to the cafe will have generated a heterogeneous group of individuals for reasons explained earlier. However, a mini snowball effect may also have been possible. It was generally found that as the study proceeded and the presence of the author became known, regular visitors to the cafe also brought with them friends or flat-mates who were also users of dance drugs. It is for this reason that a response rate for the study cannot be documented as many of the respondents included did not have to be approached to take part, it was they who approached the author. The Key Informant Access method also poses limitations on generalizability.

The study also has an excess of male respondents. This could be due to there

being a greater number of male visitors to the cafe or perhaps males are more interested in this subject matter and hence are more obliging to take part. It is also possible that this willingness to co-operate was due to the author being female. However, other studies investigating use of dance drugs have also had a similar gender bias, the proportion of males ranging from 59% (Release, 1997) to 67% (Mullan *et al.*, 1997). It would be erroneous, however, to conclude that female drug taking occurs to any lesser or greater degree than males. In fact, various self-report surveys (Balding, 1996; Barnard *et al.*, 1996; Parker *et al.*, 1995) amongst adolescents are increasingly showing a narrowing of the gender gap in drug use prevalence.

Before a discussion takes place regarding the main findings, it would be worthwhile to provide a brief profile of the study sample. The present study has shown that the use of dance drugs is not limited to young adolescent 'ravers' but rather, recreational drug taking is also a popular activity amongst local adults in their late teens and early 20s. This relative maturity of respondents and users of dance drugs is also reflected in other studies (Forsyth, 1997; Henderson, 1993) including one (Release, 1997) where 70% of all respondents were aged over 20 years. The average duration of use for both Ecstasy and amphetamine amongst our respondents was approximately 5 years. This and the fact that one-third of them were aged over 26 years, indicates that recreational drug taking is a somewhat established 'normalized' activity for otherwise 'normal' adults, as much as it is for adolescents (Measham *et al.*, 1994) in the UK.

It is also worth commenting that drug users are often perceived as inherently bad, lazy, depraved and socially disadvantaged individuals, whose drug-taking behaviour somehow poses a threat to society's *status quo* (Wibberley & Whitelaw, 1990). No evidence of this stereotype was found in this investigation. In fact, the majority of respondents were found to be in paid employment and well educated, some at least to degree level. Respondents recruited in another study investigating dance drugs (Forsyth, 1997) also exhibited a similar demographic profile. Recognizing this maturity and normality of the lives of many users of dance drugs may help to ensure the appropriate targeting and marketing of harm-reduction practices.

Respondents Knowledge of Harm-reduction Practices

A substantial majority (>80%) of the sample were found to apply some harm-reduction practices, with females significantly more likely than males. A study by Henderson (1993) also found females more likely to adopt a more cautious approach in their drug-taking behaviour than males in that they tend to take smaller initial amounts of Ecstasy and not to increase their dosages of the drug with the same frequency. There is likely to be a complex mixture of social and psychological factors which explain why males are less likely to adopt harm-reduction practices in relation to their drug-taking behaviour. Findings from this study suggest that if users are to identify with harm-reducing information, it should be tailored to reflect the attitudes and experiences of both genders and not assume that one message or one approach is sufficient.

Drinking water to avoid heat stroke was the most popular of the harm-reduction steps used by this sample. However, the number of individuals who actually knew the correct recommended amount was disappointingly low. This is unfortunate as drinking too much water can in some case, prove to be as fatal

as too little, as in the case of Leah Betts (*The Guardian*, 1995). Many more males than females knew the correct amount of water to take, even though it was the females who were more likely to adopt this practice. This suggests that they are putting themselves at risk, even though their intentions are sincere.

The options of 'chilling out' and 'not getting too hot' were also included as potential harm-reduction steps users could take. The similarity of the nature of both questions was intended as an internal measure of reliability. However, both questions produced different responses. Many more individuals identified with the practice 'chilling out', the object of which is to take a break from dancing and not allow the body to become overheated or exhausted. Few individuals would avoid 'getting too hot'. Yet it is the avoidance of 'getting too hot' which prevents the problems of hyperthermia. These results suggest that some users do not associate 'chilling out' with keeping themselves cool. It would be unfortunate if the message to avoid overheating became lost in the phrase 'chill out' associating it with just sitting down or taking a rest.

Very few individuals (9%) were found to replace essential salts that may be lost through passing urine and sweating. Eating salted crisps or peanuts is another basic step which can be used effectively to avoid the effects of hyponatraemia (lowered blood sodium levels) caused by Ecstasy use (Kessel, 1994; Maxwell, 1993) and one that is publicised in National Drugs Helpline and other similar literature (Lifeline, 1995). This is possibly another area that may have to be publicised more intensely in future local harm-reduction messages.

Another harm-reduction practice which is not widely publicised is keeping back a small sample of the drug which has been taken. In the event of an adverse reaction, the substance taken can be analysed and the information used to facilitate appropriate treatment. Only four individuals claimed to have done this, highlighting another area where harm-reduction information could be targeted. However, this would have to be weighed up against the argument by some users that they would not want to keep back any amount of a drug which had proved difficult to get hold of in the first place. It is also possible that some users would feel uneasy about having a quantity of drug, however small, in their pockets through fear of being searched by police or night-club personnel.

The results of the present study suggest that, although reducing the potential harm caused by dance drugs is a concern for many users, there is inadequate knowledge about the steps that can be taken. It may be that older users, in particular many of whom may have been using these drugs long before harm-reduction practices were introduced, do not associate themselves with these messages, which are mostly aimed at young, inexperienced users. Some may have started using these drugs in their mid 20s and much of the harm-reduction drugs education literature uses cartoons and similar devices to deliver the message. It may be considered inappropriate and hence dismissed by this older group of users. Nevertheless, they too are users of dance drugs and problems can occur in anyone regardless of their experience. Bearing this in mind harm-reduction messages may require more specific targeting.

Poly Drug Use/'Mixing' by Respondents

Over three-quarters of respondents in this study were poly drug users. This concurs with findings from other studies (Forsyth, 1997; Henderson, 1993; Mullan *et al.*, 1997; Petridis & Sherlock, 1996) which have shown that mixing of

dance drugs in particular is common, the most frequent combination is that of amphetamine and Ecstasy.

Findings from the present study also reveal that mixing of prescribed and illegal drugs is a fairly common occurrence, with four in 10 respondents claiming to have done so. There was also a considerable proportion of people who took repeat medication (24%) and who suffer from chronic illnesses (38%). There are many reasons why mixing or co-use occurs. It could be that users of dance drugs are ignorant of the potential dangers of co-use of drugs and so are basically unaware; users of dance drugs take risks anyway with regard to impurities and irregular doses so the risks of potential clinical interactions with legitimate medication may have little significance, users who also take regular prescribed medication, e.g. epileptics, asthmatics or those who suffer from chronic illnesses may not be in a position to opt out of co-use. For this group of users, there are only two options, not to take any illicit drugs, or to mix the two kinds. Finally, the physical/psychoactive effects of mixing dance drugs with some licit drugs can be pleasant and therefore desired by some users. Being aware of these possible reasons for co-use means that a realistic approach can be taken when warning against the dangers of co-use.

In fact, four in 10 of those investigated want more information regarding clinical interactions between dance drugs and some of the more commonly used medicines. Our knowledge of these drugs when used in an uncontrolled unregulated manner is limited. However, understanding the basic pharmacology of these drugs and their subsequent metabolism, it should not be too difficult for competent clinical pharmacists in particular, to collate such information and have it distributed via the relevant authorities. Perhaps, this is an area towards which future research and policy in relation to dance drugs could be directed.

Community pharmacists in particular are in a unique position as they are able to advise on the occurrence of such problems when dispensing prescribed medication or when advising on 'over the counter' sales. The legality of such an intervention by pharmacists would however have to be more closely investigated with the statutory governing body of the profession. Recent research (Sheridan, 1993), however, amongst pharmacy undergraduates and pre-registration pharmacists has shown they have a much more positive attitudes towards drug users than their peers. It is possible that this new wave of registering pharmacists, some themselves a part of 'Culture E' are an appropriate resource through which this information could be disseminated.

This information is required not only for users themselves but possibly other health professionals, who may be involved in the general welfare of users. For example, as important as it is for a diabetic user of dance drugs to be aware of the effects of these drugs on his or her blood glucose levels, it is equally important for his/her GP to be aware of any complications that can occur as a consequence of this co-use. It is, however, reassuring that 70% of respondents investigated said they would volunteer information about their drug use to a health professional if they thought it would help the consultation process. This shows that this sample at least, are aware of the possibility of complications arising and the need to be honest with the health care team.

Perhaps the real incentive to act quickly comes from findings that almost two-thirds of respondents do not foresee their drug-taking behaviour changing, with a further 10% intending to increase their use of dance drugs. For a

substantial majority, it seems the recreational use of dance drugs and hence the potential for harm will continue to be a part of their lives.

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