

Distorted? a quantitative exploration of drug fatality reports in the popular press

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Abstract

It has long been accepted that newspaper reporting of drug issues may be prone to amplification. However, to date there has been little empirical confirmation of this view. This paper aims to examine the representativeness of newspaper reports of deaths attributed to illegal drug use. This was achieved by the comparing 'official' toxicological statistics for a single country (Scotland) with the reporting of drug deaths in that country's most popular newspapers over a given time period (the 1990s). The amount of press coverage given to different (types of) drug deaths was also compared. It was found that some drugs were more likely to be mentioned in newspaper stories concerning drug deaths than others. Moreover, atypical drug fatalities, such as those involving teenage females or 'recreational' drugs, especially 'ecstasy' received a disproportionate amount of press attention. It is concluded from these findings that the news media can present an unrepresentative and somewhat distorted view of illegal drug deaths. These biases may have serious implications for public opinion, social policy and drug education. © 2001 Elsevier Science B.V. All rights reserved.

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Introduction

It has been contended that the reporting of illegal drug use by the printed media is prone to amplification and over-simplification (Young, 1973; Levine and Reinerman, 1988; Kohn, 1992). One particular area is that of the reporting of drug related harm, particularly fatalities. Indeed, some commentators

have stated that the amount of attention a drug death receives is inversely proportional to the number of such deaths that actually occurs (Young, 1972; Kohn, 1987; Davies, 1992). In other words, comparatively rare illegal drug deaths may be reported more often and in greater detail than more commonplace substance use deaths, such as those caused by alcohol and tobacco. Even within illegal drugs, amplified reporting of certain types of deaths over others may occur. This could take place when the circumstances of

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death are characterised by issues relating to gender, age, ethnicity, social class and location (Reinarmann and Levine, 1989; Gould, 1996; Murji, 1998). For example, the deaths of middle class, teenage, females may attract a disproportionate amount of media attention relative to their incidence in the real world. (Dillon et al., 1996; Kohn, 1997; Collin, 1997). To date these claims have suffered from a lack of empirical conformation.

In their defence, the media can maintain that if such distortion does occur, this is because of the very unusual nature of (some) illegal drug deaths, which in itself makes them truly newsworthy. Conversely, the press can argue that the public would hardly need to read a newspaper to be made aware of more commonplace substance abuse deaths, such as middle-aged men dying from lung cancer or cirrhosis, let alone be interested in reading about them. Nevertheless, there remains the possibility that such over or under-representation may influence public opinion and hence drug policy.

By focusing on certain drugs or certain types of death, the media may inadvertently over simplify complicated issues. This may be especially the case when new or exotic substances are given an easy to remember 'tag' name such as 'ecstasy' or 'alcopops' (Edwards, 1989; Farrell, 1989; Forsyth et al., 1997). For example, many 'rave' deaths have been reduced to a message of "one pill, that's enough to kill" (e.g. Boag, 1996; Sunday Mail, 1999). In this 'worst case' scenario, it is implied that such deaths occur following a single dose and first use of an illegal substance by previously innocent teenagers (e.g. Daily Record, 1999; Daniels, 1999). This message may be promoted in favour of representations of more typical drug deaths.

This paper compares media reporting of drug deaths with 'official' (toxicologically confirmed) statistics, both of which may not

be entirely accurate. This was done for Scotland during the whole the 1990s, providing an easily recognisable geographically and temporally defined sampling frame, thus minimising any potential for experimental error (i.e. ensuring the same population was in both data sets).

Background

Deaths related to illicit drug use were uncommon in Scotland until recent years (Haw, 1985; Haw and Liddel, 1988). In the late 1980s for example, fewer than 10 deaths per annum were recorded as being as a result of drug dependence (Registrar General for Scotland, 1988 and 1989). This situation changed dramatically during the 1990s. The reasons behind this increase may be in part due to an increasing and ageing population of illegal drug users, particularly 'problem' drug users 'bottoming out' after many years of use. However, this increase in the number of deaths has appeared so dramatic that other factors must have also been involved. In the 1980s Scotland had a comparatively large drug injecting population, yet relatively few drug 'addict' deaths. Frischer, (1992) estimated that in 1989 there were 9424 drug injectors in the city of Glasgow alone (95% CI, ± 2460). From this the mortality rate among drug injectors in the city from all causes was estimated at 0.54% per annum and at 0.25% from drugs use (Frischer et al., 1993). These figures are well below the 1.0–2.0%, which might have been expected from the 'multiplier projection' method of estimating user population (Hartnoll and Mitcheson, 1985; Ghodse et al., 1998). It is thought that this artificially low mortality rate was as a result of buprenorphine (Temgesic[®]) being the drug of choice among Scottish intravenous drug users (Sakol et al., 1989; Grey et al., 1989; Lavelle et al., 1991) rather than

opioid agonists, such as heroin or methadone. Indeed, the increase in Scottish drug user mortality seems to have followed a series of voluntary bans on the prescribing of Temgesic (Stewart, 1991; Forsyth et al., 1993; Hammersley et al., 1995). Another potential reason for the increase in deaths appears to have been a greater propensity for Scottish users to mix (simultaneously use) an ever increasing range of substances, particularly opioid/benzodiazepine ‘cocktails’ (Forsyth et al., 1993; Hammersley et al., 1995). One final possibility for this increase may be the advent of new drugs such as ecstasy (Davies and Ditton, 1990; Green et al., 1995).

During the 1990s the Scottish media became aware of this apparent increase in drug deaths. In the 1980s a single drug death may have been considered a newsworthy story. However, with the increase in drug deaths during the 1990s, it would be impossible for equivalent column inches to be given over to each death. In other words, more drug deaths must mean more selective reporting by the press, in terms of which deaths appear in their pages and in how much detail. This study examines the characteristics of drug-related deaths which receive extensive newspaper coverage relative to those which do not.

Method

‘Official’ statistics

To gauge the representativeness of the substances reported as being responsible for illegal drug fatalities in the Scottish press, toxicological data were extracted from the Registrar General for Scotland’s annual reports covering the whole of the 1990s (Registrar General for Scotland, 1990–1999). The Registrar General records all deaths from poisoning for each calendar year. This is

broken down by sex and into 6 categories of fatality according to the International Classification of Diseases (ICD) system. These are “accidental”, “suicidal”, “undetermined whether accidental or suicidal”, “homicidal”, “dependence” and “adverse effects in therapeutic use”. In this study 3 categories — suicidal, homicidal and adverse effects in therapeutic use — are excluded. The remaining 3 categories (ICD codes E850 to E858, E980 and 304) are those which are likely to contain avoidable illicit drug deaths. This is the method used by the Scottish government to calculate illegal drug deaths each year (Jackson and Kole, 2000). Also excluded for the purposes of this research, are any deaths in these ICD categories related (only) to volatile hydrocarbons (solvent abuse) blood contamination, venom, food allergy, asbestos, weed-killer, cyanide and alcohol(s). These exclusions were conducted to make these data directly comparable to illegal drugs as reported in the Scottish press.

Newspaper sample

Since November 1st 1988 continuous newspaper sampling has been achieved with four Scottish based publications. These are, a national Scottish morning daily tabloid (*Daily Record*), a regional weekday evening paper (Glasgow’s *Evening Times*) and a local weekly broadsheet (*Falkirk Herald, incorporating the Scottish Midland Journal*). On Sundays the *Daily Record* is printed as the *Sunday Mail* which was also continuously sampled. These publications are Scotland’s biggest sellers in their respective markets (national daily, regional evening, local weekly and Sunday). Also, the *Evening Times* is the ‘sister paper’ of the best selling Scottish daily broadsheet *the (Glasgow) Herald* and as such both of these publications tend to carry the same stories. Throughout the whole of the

1990s, every issue of each of these 4 publications was sampled and cuttings related to illegal drug use were taken. Coverage was complete other than on days when full editions were not published (various December 25ths, January 1sts and 2nds) and where a newspaper published more than 1 edition on a single day. All Scottish cases (individuals) named in any drug-related stories in these newspapers were entered into a database. To be comparable with official drug statistics, non-Scottish cases were excluded. However, it should be noted that there is a likelihood of some overlap cases. These cases can occur if the newspapers report the death of a Scot who may have died after using drugs outside Scotland, or name a non-Scot who died after using drugs inside Scotland.

By this method, 5,436 named individuals, allegedly involved in illegal drugs, were identified from all newspaper cuttings taken. Of these 750 concerned fatalities. To be comparable with 'official' toxicology statistics (detailed above) 204 drug-related fatalities were excluded. These exclusions comprised 56 assassinated drug dealers, 45 murdered drug users, 40 deaths attributable to medical drugs (mainly suicidal overdoses) 32 drug offender deaths in prison (mainly suicide by hanging) and 31 other drug-related deaths (including persons killed by blood contamination, by deliberate homicidal poisoning and during police raids). The remaining 546 deaths were all directly attributed to illicit drug use and constitute the individual cases of the final newspaper sample to be used in all subsequent analyses.

The amount of press coverage afforded to each of these cases (deaths) varied considerably. This was also measured by weighing the total mass of clippings. By this method, 1 tabloid sheet (i.e. 2 pages single side or 1 broadsheet) approximates to 9 grams of newsprint or a surface area of 14 × 23 inches.

It was clear that many of the deceased already had extensive newspaper histories prior to their death (e.g. as criminals). To account for this, only cuttings taken posthumously were included. This produced a measure of newsworthiness (in grams of newsprint) for each fatality.

This database of newspaper cuttings, including number of cases, mass of newsprint, types of drugs and other printed information (e.g. age, gender) was then compared with the 'official' drug death statistics compiled each year by the office of the Registrar General for Scotland.

Results

Trends in drug deaths compared

Over the whole of the 1990s 2255 toxicologically confirmed drug deaths (as defined above) were recorded by the office of Registrar General. According to these records, there was a steady increase in the number of drug deaths over the decade. This increase was greatest in the drug dependence category (ICD 304) as is indicated in Table 1.

Drug deaths classified as undetermined and accidental increased throughout the first half of the decade, but reduced during the second. Indeed, 1999 had the lowest recorded number of accidental drug deaths. This was despite a substantial increase in overall drug deaths at this time. It is possible that these trends may reflect real changes in drug deaths over this time period, but it is also possible that they are a function of changes in the classifiers' motives or perceptions (e.g. in terms of which ICD code). For example, changes to the protocol in 1994 may have increased the number of deaths classified as dependent. This may account for the peak in drug deaths classified as undetermined in 1993 (see Table 1). After

this date very few deaths involving heroin, morphine, methadone, temazepam or diazepam were classified as undetermined. The overall increase in drug deaths at this time, in the official statistics, was caused by an increase in the numbers of deaths involving these 5 drugs (see Appendix A), regardless of how they were classified.

Drug deaths reported in the newspaper sample also increased substantially. Table 2 shows the total number of named individuals reported in all drug related stories for each year during the 1990s (the most common reasons being drug-related crime, $n = 1602$, and possession, $n = 1541$) and those relating to drug deaths (fatalities indirectly related to drug use, e.g. homicides, are listed separately as “Other Deaths”). The reporting of drug deaths in the newspaper sample increased more erratically than was the case with the Registrar General’s reports, perhaps reflecting constraints of space (newspaper sizes are unlikely to expand over time to accommodate extra drug stories). This may also account for the apparent dip in non-fatal drug cases reported in 1999, despite a rise in reported deaths at that time.

From Table 2, the numbers of newspaper reported drug deaths were comparatively low at the start of the decade. In line with the ‘official’ statistics, the numbers of these deaths then rose rapidly to a peak in 1995,

followed by a sharp fall in 1996. This fall was despite a continued rise in drug deaths according to the Registrar General’s records (see Table 1) and a continued increase in other (non-fatal) drug cases reported in the newspaper sample in that year. The number of reported deaths peaked again in 1998 and 1999. In other words, although both data sets showed an overall increase in the incidence of drug deaths across the decade as a whole, on a year to year basis the numbers of deaths reported in the press diverged somewhat from the ‘official’ statistics.

Further inspection of the newspaper cases revealed that midway through the 1990s the Scottish press had adopted a new strategy when reporting drug deaths. This involved the totalling of the number of deaths, each year so far, in the Strathclyde region (which includes Glasgow city). This was done by both the *Evening Times* (in 1996 and 1998) and the *Daily Record* (in 1999). Each culminated in the printing of long lists of deaths, some anonymous, either at the end of the year or when a ‘significant’ toll, such as 100 deaths, had been reached (McLean, 1996; Wilson, 1998; Griffiths and Beaton, 1999). Some of these totals involved deaths which had already been reported earlier in greater detail, but many constituted discrete cases in the newspaper sample. This strategy had the effect of inflating the total number of drug

Table 1
Drug deaths by toxicology categories over the 1990s

Year	Category									
	90	91	92	93	94	95	96	97	98	99
Accidental	17	14	21	26	28	16	17	16	17	13
Undetermined	96	89	114	150	82	77	81	101	79	100
Dependence	13 ^a	21 ^a	18	33	137	155	175	142	180	227
Total	126	124	153	209	247	248	273	259	276	340

^a Includes one case recorded as “non-dependent abuse of drugs” (ICD 205).

Table 2
Newspaper reports of drug deaths over the 1990s

Year	Category										Total
	90	91	92	93	94	95	96	97	98	99	
Drug Deaths	14	2	32	35	51	108	32	37	113	122	546
Other Deaths	5	12	19	16	12	30	26	14	35	36	205
Other Cases	303	350	413	424	450	502	526	547	612	558	4685
Total Cases	322	364	464	475	513	640	584	598	760	716	5436

deaths reported in 1998, 1999 and in particular 1996, where it influenced the trend in total cases (including non-fatalities). The other effect of this procedure was that a large proportion of these newspaper cases carried very little supplementary information about the circumstances of death, such as which drugs were involved.

Drugs involved in fatalities compared

The individual drugs mentioned in each of the 2255 deaths recorded in the Registrar General's statistics were then compared to individual drugs mentioned in each of the 546 deaths reported in the newspaper sample. Table 3 compares the total number of times each drug appeared in both data sets.

The column totals in Table 3 do not add up to the total number of deaths in each data set as many deaths mentioned more than one drug. Another complication, in comparing these data sets involves the detection of metabolites in the toxicological statistics. For example, desmethyldiazepam, a metabolite of diazepam, is recorded as detected in many deaths. Such cases are entered in Table 3 as "Other Benzodiazepine". Similarly heroin (diamorphine) is rapidly metabolised to morphine. In some instances, both these substances may be detected in significant amounts and if so both these drugs are entered in Table 3. This differs from the press

reporting, in the second column, which refers to drugs used before death rather than those detected afterwards. In Table 3, the "Other Drug" category includes a wide range of substances, in particular a large variety of antidepressants, anticonvulsants, antipsychotics and antihistamines. None of the substances in this category are controlled drugs under the Misuse of Drugs Act.

It can be seen from Table 3 that nearly three quarters (74.2%) of the newspaper sample drug deaths did not specify any particular substance. This compares with only 17.8% of deaths in the toxicological statistics. Differences in the reporting of individual drugs between the 2 data sets must be a function of this discrepancy. In other words, if there is a systematic bias in the specific drugs which the newspapers choose to report, or not report, then these are likely to be accounted for by the 405 cases simply reported as "drugs" deaths.

Of the drugs which were named by the press, heroin was the most often mentioned (13.7% of cases) followed by methadone (5.3%) ecstasy (4.8%) temazepam (4.7%) and cannabis (2.8%). This differs markedly from the toxicological records which mention diazepam most often (21.3%) followed by methadone (20.4%) morphine (19.1%) temazepam (16.4%) and heroin (15.2%). This difference was amplified when the (rounded) ratios of toxicologically confirmed deaths to

newspaper reported deaths were examined. Some drugs (e.g. diazepam 48:1) were far more likely to be recorded in the ‘official’ statistics, than reported in the newspaper sample, compared to others (e.g. heroin 5:1). Though crude, this measure clearly illustrates an apparent bias in press reporting of some drugs over others. Indeed, some drugs toxicologically confirmed in many fatalities, were

not mentioned at all in the newspaper sample. These included codeine, dextropropoxyphene, opium and benzodiazepines other than temazepam (‘jellies’) or diazepam (Valium®). Only ‘ecstasy’ (a composite of several generic substances) approached a 1:1 ratio. However, as we will see, this does not mean that reporting of fatalities involving this drug was particularly representative either.

Table 3
Drugs involved in fatalities

Drug	Toxicological statistics (n)	Newspaper reports (n)	Toxicology to newspaper ratio
Amphetamines	36	13	3 1
Aspirin/Salicylate	12	0	–
Barbiturates	15	0	–
Buprenorphine	3	2	2 1
Cannabis	34	15	2 1
Cocaine	30	4	8 1
Codeine	54	0	–
Dextropropoxyphene	105	0	–
Dihydrocodeine	161	2	80 1
Diazepam	481	10	48 1
Dipipanone	19	0	–
Ecstasy/MDMA ^a	28	26	1 1
GHB	1	0	–
Heroin/Diamorphine	342	75	5 1
Ketamine	1	0	–
LSD	1	0	–
Methadone	460	29	16 1
Morphine	431	6	72 1
Opium	43	0	–
Paracetamol	265	1	265 1
Temazepam	369	25	15 1
Triazolam	4	0	–
Other Opioid	28	1	28 1
Other Benzodiazepine	106	0	–
Other Hypnotic	35	1	35 1
Other drug	300	14	21 1
Unspecified drug	402	405	N/A
All cases	2255	546	4 1

^a Includes ‘eve’, MDA and methythioamphetamine.

Table 4
Ecstasy toxicology fatalities

Drugs	Description	Year	Sex
Methylenedioxyamphetamine	Undetermined	1993	F
Ecstasy	Accidental	1994	M
Ecstasy	Accidental	1994	M
Ecstasy	Accidental	1994	M
Ecstasy	Accidental	1994	M
Ecstasy	Accidental	1995	M
Ecstasy	Dependence	1995	M
Ecstasy, Temazepam, Heroin	Dependence	1995	M
Diazepam, Methadone, Eve, Ecstasy	Accidental	1996	M
Eve, Temazepam	Accidental	1996	M
Heroin, Ecstasy, Cocaine	Dependence	1996	F
Methadone, Amphetamine, Ecstasy	Dependence	1996	F
Methadone, Amphetamine, MDMA, Dihydrocodeine	Dependence	1996	F
Methadone, Ecstasy	Dependence	1996	M
Methadone, Methylenedioxymethamphetamine, alcohol	Dependence	1996	M
Ecstasy, Diazepam	Dependence	1996	M
Ecstasy, Amphetamine, Methadone, Paracetamol, Alcohol	Accidental	1997	F
Ecstasy, MDMA, Desmethyldiazepam, Diazepam	Accidental	1997	M
Trimipramine, Ecstasy, Methylenedioxyamphetamine, Alcohol	Accidental	1998	F
Dothiepin, Ecstasy	Dependence	1998	M
Ecstasy, Amphetamine, Diazepam, Alcohol	Dependence	1998	F
Heroin, Morphine, Ecstasy	Accidental	1999	M
Methylthioamphetamine, Ecstasy	Accidental	1999	M
Methylenedioxymethamphetamine	Undetermined	1999	M
Opium, Morphine, Diamorphine, Heroin, Diazepam, Ecstasy, MDMA, Cannabis	Dependence	1999	F
Ecstasy, Amphetamine, Methylenedioxyamphetamine	Dependence	1999	F
Ecstasy, Methadone, Diazepam	Dependence	1999	M
Methylenedioxymethamphetamine, Ecstasy, Diazepam	Dependence	1999	M

Note: Not included in the above are cases in ICD codes not applicable to this research, including two deaths recorded as Carbon Monoxide poisoning (both in 1998) and one case of suicide (1999) where “**Ecstasy**” was also detected.

Individual fatalities compared

When drugs involved in individual fatalities were examined, a complex pattern of poly-substance use was found. This was further complicated by differences in recording procedure and nomenclature apparent in the Registrar General’s statistics. For example, some drugs, including compound drugs (e.g. Diconal®) could be listed either as their trade name or constituents (e.g. dipipanone

and cyclizine). Other drugs could be recorded by more than 1 name (e.g. diamorphine and heroin). Particularly problematic were entries recorded as “ecstasy”, without any generic substance being listed. These difficulties are illustrated by Table 4, which lists (verbatim) all 28 cases counted as ecstasy deaths in this research, taken from the Registrar General’s toxicology records in Table 3. For the purposes of this research “ecstasy” deaths include those involving

methylenedioxymethamphetamine (MDMA) related drugs which are included in the book *PIHKAL* (Shulgin and Shulgin, 1991) and the substance 4-methylthioamphetamine or 4-MTA (each of which are marked in bold on Table 4). Although ketamine is often found in ecstasy tablets, the death involving ketamine (see Table 3) is not included in Table 4, as ecstasy, because this substance exists in many other forms. Indeed, the detection of lignocaine (plus diazepam, temazepam and morphine) in this fatality indicates an anaesthetic ketamine source, rather than an ecstasy one. Similarly the death involving the supposed ‘dance drug’ GHB (plus morphine and chlordiazepoxide) is also excluded.

From Table 4, it can be seen that Scottish ecstasy deaths (like those for all generic substances) tended to also involve a large range of different substances, including opioids, benzodiazepines, stimulants, cannabis, alcohol (not included elsewhere in this research) and other drugs (e.g. antidepressants) as well as entries simply termed as “ecstasy” or “eve”. The stereotypical ecstasy death, of one first time use of only one pure MDMA pill is not supported by these findings. In fact only one (undetermined whether suicidal or accidental) death involved MDMA (stated as such) alone.

Similar difficulties were encountered when examining which individual drugs were involved in newspaper reported drug deaths. As a comparison to the data presented for ecstasy deaths extracted from the toxicological statistics (Table 4) a similar breakdown for ecstasy deaths from the newspaper sample is shown in Table 5.

Perhaps the most striking thing about Table 5 is that the 26 cases listed do not seem to be a subset of the 28 ecstasy deaths in Table 4. Not only do the other drugs involved appear to be different but the number of ecstasy deaths in each year differs. In some

years more ecstasy deaths were reported in the press, in others more cases were recorded in the ‘official’ statistics. For example, the 1st ecstasy death reported in the press occurred in 1992, followed by 3 more in 1993. In contrast, no ecstasy deaths appeared in the Registrar General’s statistics until the 1 (MDA) death in 1993. This discrepancy is despite the fact that the newspaper reports of these tragedies were quite detailed. For example, the 1992 death allegedly involved only 1

Table 5
Ecstasy newspaper fatalities

Content	Year	Sex (Age)
Ecstasy	1992	M (19)
Ecstasy	1993	F (17)
Amphetamine, Ecstasy	1993	F (19)
Ecstasy	1993	M (22)
Ecstasy, Amphetamine, Temazepam	1994	M (18)
Ecstasy	1994	M (19)
Ecstasy	1994	M (20)
Ecstasy, Cocaine	1994	M (21)
Heroin, Temazepam, Diazepam, Ecstasy, Amphetamine	1994	F (34)
Amphetamine, Ecstasy	1995	F (20)
Ecstasy	1995	M (16)
Ecstasy, Temazepam	1995	M (21)
Tablets, Pills, Amphetamine, Ecstasy, Paracetamol, Methadone, Powders	1996	F (24)
Ecstasy	1996	M (23)
Ecstasy, Heroin	1996	M (24)
Ecstasy, Cannabis, Temazepam	1997	F (15)
Ecstasy	1997	M (13)
Ecstasy	1998	F (23)
Ecstasy, Heroin	1998	M (20)
Ecstasy	1998	F (18)
Ecstasy	1998	F (36)
Ecstasy	1998	F (21)
Ecstasy	1999	M (-)
Ecstasy, Amphetamine, Cannabis	1999	F (16)
Ecstasy	1999	M (21)
Ecstasy	1999	M (23)

Table 6
Most newsworthy drug fatalities

Case	Drugs	Mass (grams)	Year	Sex (Age)
#001	Ecstasy	123	1997	M (13)
#002	Heroin, Cannabis	102	1998	M (13)
#003	Ecstasy, Temazepam, Cannabis	56 (168 /3) ^a	1994	M (18)
#004	Ecstasy	56 (168 /3) ^a	1994	M (19)
#005	Ecstasy	56 (168 /3) ^a	1994	M (20)
#006	Ecstasy	54	1998	F (18)
#007	Ecstasy, Amphetamine, Cannabis	51	1999	F (16)
#008	Methadone	42	1999	F (15)
#009	Ecstasy, Cocaine	34	1994	M (21)
#010	Cocaine	25	1994	M (23)
#011	Ecstasy, Heroin	21	1998	M (20)
#012	Heroin	18	1999	F (16)
#013	Amphetamine, Ecstasy	15	1993	F (18)
#014	Ecstasy, Temazepam, Cannabis	14	1997	F (15)
#015	Painkillers	11	1994	F (19)
#016	Ecstasy	11	1998	F (21)

^a Single news story involving three fatalities in same location.

tablet, while one of the 1993 deaths involved 5 tablets and another was in a drug ‘cocktail’ with ‘speed’ (McWhinnie, 1992; Daily Record, 1994; Smith, 1993). All 4 deaths occurred in Scotland and all of the deceased were Scots, so if the newspaper reports were accurate, these individuals should have appeared in the Registrar General’s statistics as well. In only 2 years, 1995 and 1997, did the number of cases in both data sets correspond. On closer inspection, 1 of the fatalities attributed to “ecstasy” in 1995 involved a female (allegedly a first time use of drugs by a Scottish teenager at a Scottish rave party, Rafferty, 1995). No female drug deaths involving any ecstasy type drug were recorded in the toxicological statistics for that year. In other words, on this evidence there seems to be little correspondence between individual drug deaths reported in the newspapers and those recorded by the Registrar General for Scotland.

Amount of reporting of individual drug deaths

The total weight of newsprint produced from all cuttings about the 546 drug deaths in the sample was 1.23 kilos. When these were divided up by individual case, it was clear that some fatalities received much more coverage than others. As detailed above, many cases only existed as one of a long list of names of persons who had allegedly died from drugs over a given time period. Others were included on these lists but were also the sole case mentioned in an article. Some individual deaths had several articles printed about them alone. Of these, 16 cases produced more than 9 grams of newsprint (the equivalent to 2 pages tabloid or 1 broadsheet). These 16 fatalities will be termed as the ‘most newsworthy cases’ in subsequent analyses and are detailed in Table 6.

There was no systematic bias between publications in terms of the amount of column inches (weight of newsprint) given over to the cases shown in Table 6, though one case was only reported in the local newspaper (case #011). Three of the ‘most newsworthy cases’ involved fatalities which occurred in the same location (2 on the same occasion). These 3 deaths comprised a single story, centred on the rave club where these fatalities had happened. This is indicated on Table 6 by subdividing the total mass of coverage given over to this ongoing story to account for the 3 individual cases involved. Between them, the 16 ‘most newsworthy cases’ produced 689 grams of newsprint, compared with only 440 grams from all 530 remaining drug deaths reported in the newspaper sample combined.

As might be expected from the amount of coverage each of these fatalities received, quite detailed information about the individual drugs concerned was provided (see Table 6). However, proportionally these drugs differ greatly from what might be expected, given the data extracted from *both* the Registrar General’s records and the newspaper sample (see Table 3). Strikingly, a majority of these ‘most newsworthy cases’ involved the drug ecstasy. In fact, it is the presence, in Table 6, of the 5 cases which do not involve ecstasy that require the most explanation. Of these 5, 3 may have been deemed newsworthy because of their youth (#002, #008 and #012) including “Scotland’s youngest drug victim” and a 16 year old girl who died while under local authority care. Only 5 of the deceased in the newspaper sample were aged under 16, only one of whom did not feature amongst these ‘most newsworthy cases’. Of the two older deaths which did not involve ecstasy, one involved a mother who died leaving her young baby unattended (#015) the other (the eldest of these cases) involved a young man who had

been orphaned as a child in a famous mass murder (#010). In each of these two cases other (childhood) factors, rather than drugs alone, contributed to their newsworthiness. The majority of the eleven ‘most newsworthy cases’ involving ecstasy deaths were simply that (though two were aged 16 or under and one of these two cases also involved a debate surrounding organ transplants). Interestingly, none of the seven ecstasy deaths reported involving persons aged over 21 years featured in these ‘most newsworthy cases’ (see Table 5).

The second thing apparent about these ‘most newsworthy cases’ was their young age. In only one case (that of the 23 year old orphan) was the deceased aged above 21. This compares with a mean age of 26.2 years for the newspaper sample deaths overall. The Registrar General’s office subdivides drug deaths into 3 age categories. Consistently, in each year this information has been published, a majority of toxicologically confirmed drug deaths have been in the 25–44 years age band (Jackson and Kole, 2000). In other words, all of the ‘most newsworthy cases’ were much younger than the majority of Scottish drug deaths.

Similarly, there appears to be a gender bias in these ‘most newsworthy cases’. Half of the deceased listed in Table 6 were female, compared with only 17.9% of all fatalities in the newspaper sample and 28.9% in the Registrar General’s records. With this bias in mind, it is perhaps surprising that the newspaper sample contained proportionally fewer females than the ‘official’ statistics. This may be because fewer females have their details (name) released to the press by the police. For example, 1 other ecstasy death was reported in the press during data collection, which concerned a young mother, but the police refused to release her name and so she is not included as a named case in the newspaper data set. If this fatality is representative of a wider pattern, it is even more remarkable that females should constitute so many of the ‘most newsworthy cases’.

These results appear to indicate a tendency for the press to devote more column inches of newsprint to deaths characterised by teenage, female, ecstasy use, rather than to those of older, opioid/benzodiazepine using, males, which predominate in the toxicological statistics.

Discussion

Interpreting toxicological statistics

Before we can explain why drug deaths in the press should differ from those recorded in the 'official' toxicological statistics we must first consider the likely relative accuracy of each. Intuitively it might seem that the Registrar General's records are accurate, whereas the press reports are subject to rumour and conjecture. In some respects, this may indeed be true, however this need not always be the case. The newspaper stories often referred to quite specific drug using actions. In some cases these may have gone undetected or unreported by the toxicologist. This may have been the case with some of the deaths where "ecstasy" was the only drug recorded in the Registrar General's statistics (e.g. in 1994 and 1995, see Tables 4 and 5). In one American example, 'official' (State of Florida) "ecstasy" deaths were found by a newspaper journalist to have been artificially inflated by irregular reporting practices (Curtis, 2000). Although it is not suggested that any such practices have taken place in Scotland, this example illustrates that it would be over simplistic to regard all press reports as inaccurate and all 'official' toxicological records as providing the complete truth. Ultimately, as with press reports, toxicology statistics are also prone to human error. For example, in some cases, the forensic pathologist may decide that the cause of death was

not drugs and so no toxicological analysis takes place, in others the forensic toxicologist may fail to detect any drugs where the pathologist had decided that drugs were involved.

Whether or not a fatality is recorded as a drug death and if so as which kind of drug death may also be subject to variation. For example, some pathologists may certify some drug deaths as pulmonary congestion and oedema. Sometimes similar drug deaths may be classified as either accidental, undetermined or dependence. These certifications and classifications are subject to both the personal choice of the pathologist and changes in the protocol used by all pathologists. Protocol changes which took place in Scotland, during the late 1980s and early 1990s, are thought to have increased the likelihood of death being attributed to drugs and this may also have contributed to the overall increase in drug fatalities between the two decades.

One inevitable problem with toxicological data lies in the detection of metabolites. In some cases a drug may not be detected in significant quantities, though one or more of its metabolites may be. For example, in a case where morphine was detected, the deceased may have only used heroin. A newspaper report stating that this death involved a heroin user may therefore be the more accurate. In such a case the toxicologist would not be able to ascertain whether the deceased had used heroin, morphine or both. Many agencies collapse heroin and morphine deaths unto a single unitary category. Doing this requires caution, as some deceased may actually have used morphine, either alone or in combination with heroin (surely increasing overdose risk in itself). If this is done for the whole the 1990s then the number of heroin deaths recorded in the official statistics rises to 634, reducing the press reporting ratio to 9

to 1 (139 cases recorded both heroin and morphine). Similarly if all cases in which desmethyldiazepam was detected, without diazepam, were added together, the respective figures for diazepam are 493 and 49 to 1.

If most morphine fatalities in the Registrar General's reports were in fact as a result of the deceased's heroin use, then heroin would be the drug involved in the most illegal drug deaths in Scotland during the 1990s. Furthermore, many drug deaths are likely to involve heroin users who had actually used other drugs (e.g. methadone, temazepam, diazepam or alcohol) on the occasion they died. However, even if heroin users are involved in the largest number of drug-related deaths, this does not account for all the discrepancies between the two data sets.

Biases in newspaper reports

With the exception of heroin, the drugs which were responsible for relatively few deaths tended to receive more attention by the press than those which were responsible for the most deaths (according to toxicology records). There are several possible explanations why this might be the case. Firstly, because deaths involving ecstasy, cannabis, cocaine and amphetamine are comparatively rare, they make more interesting news. Secondly, these drugs, along with heroin, are rarely prescribed (if at all) and, apart from amphetamine, are highly illegal, either as Schedule 1 or Class A controlled substances. This degree of illegality may translate to high levels of newsworthiness, through implied levels of deviance or even glamour. However, the Misuse of Drugs Act's classifications are not at all related to the relative danger of death represented by these or other substances (Young, 1973; Davies, 1992). Conversely, the press may not wish to over-play the dangers of the, albeit illicit, use of phar-

maceutical drugs which many of their readers may use on legitimate prescription for 'beneficial' medical reasons. Thirdly, drugs with easy to remember pseudonyms, such as "ecstasy", "speed", "jellies" and "heroin" may make better stories than if these substances were known only by their generic names as methylenedioxymethamphetamine, amphetamine, temazepam and diamorphine (Edwards, 1989; Farrell, 1989; Beck, 1990). Names such as diazepam, dihydrocodeine, dextropropoxyphene and dipipanone may be less easy for journalists to glamorise or spell and for readers to understand or pronounce. Fourthly, the more 'public' nature of so-called 'recreational' drugs may increase their newsworthiness, especially when they are related to a fatality. In this way, the public deaths at raves of 'ordinary' young people (perhaps resembling the children of readers) allegedly from types of drugs used by a large segment of the population, would be more newsworthy than the more commonplace deaths of deviant 'junkie' criminals, which happen in a 'private' world, one which few readers would be familiar with. Finally, one has to consider the social context in which these deaths took place. The dominant drug scare story of the 1990s in Scotland concerned ecstasy and the rave scene. This story began in November 1988 (see Davies and Ditton, 1990) and has continued ever since. When ecstasy related deaths began occurring in the early 1990s, this ongoing story in itself increased the newsworthiness of these deaths. Had this research been done during the 1980s this drug would have been absent from the data set even though the scare story had started. During the 1990s several other (smaller) drug scares took place, including stories concerning methamphetamine (Antonwicz, 1990), ketamine (Silvester, 1992) and LSD (Murphy, 1996). However, despite this recurring publicity, deaths attributable to

these substances failed to materialise in the press (see Table 3).

The findings of this study clearly indicate a tendency for deaths relating to the drug ecstasy and also those of young teenagers to receive a disproportionate amount of press coverage in Scotland. Indeed, the degree of distortion, indicated by Table 6, may only be an underestimate. Many of the deceased in the 'most newsworthy cases' had their photographs, or those of their parents, placed within other types of drug story, often years later, not measured under the scope of this research. This tendency is illustrated by the 1998 100 deaths toll article, which is included and detailed above (Wilson, 1998). There were only 2 pictures printed from the 100 deceased listed. These were a small black and white photograph of a youth who was reported as Scotland's youngest drugs victim (case #002) and a larger coloured photograph of an alleged female ecstasy user (#016). This could easily give the casual reader the impression that these two deaths were typical of the other 98 not pictured.

The tendency to show bias towards teenage, female, ecstasy deaths, was further inflated by the importation of non-Scottish drug deaths (e.g. Daily Record, 1999; Daniels, 1999). The death of one English girl, allegedly from a single ecstasy tablet, on her eighteenth birthday in 1995 generated 73 grams of newsprint from the Scottish newspapers sampled, including coverage in the local paper. In 1996, an article concerning a 19 year old English girl who became ill (i.e. a non-fatality) after allegedly using a single ecstasy tablet at a New Year party was printed, complete with pictures, in the regional evening paper. Her story received more than twice the number of column inches as an adjacent side panel reporting both the first drug user death in the region that year (a 26 year old male) and the final total of 101 drug

deaths in the region during the whole of the previous year (Boag, 1996). The article began with the statement "ECSTASY is the new hard killer now alongside heroin, cocaine and temazepam." This illustrates another way in which the lethal potential of some drugs, particularly ecstasy, can be reinforced by the press detailing drug-using incidents which *may* prove fatal (especially by placing such articles beside those concerning other unspecified drug incidents which have proven fatal). One interesting Scottish example combined this theme with that of drug use by young teenagers. It involved a front-page story which reported the hospitalisation of 3 boys, aged between 13 and 15 years, after allegedly using ecstasy (Thomson, 1998). The reporting of this incident was quite detailed, stating that this potential tragedy was down to a new type of diamond-shaped ecstasy which may contain the "horse anaesthetic" ketamine. These concerns were confirmed by the head of the local drug squad on television that evening (by both BBC Scotland and Scottish Television). These stories focused on the fact that the 'killer drug ecstasy' was now available in the middle-class retirement town where the boys lived, but ignored the fact that the incident took place in the town's 'sink estate', in a street classified as within the worst ten percent of deprivation in Scotland, in a Social Inclusion Partnership (SIP) area. The story was retracted the following day, when it transpired the youths had taken one of their parent's prescription pills (Evening Times, 1998). This example does imply that the press can get it wrong in some drug stories. This may in part explain the discrepancies between Tables 4 and 5. Indeed, during data collection there were 5 instances where a sampled newspaper printed a small retraction of statements made about a reported drug death. However, it could be argued that most readers will be more likely to

remember messages such as the front page headline “RACE TO FIND DEADLY DRUG: Kids rushed to hospital after taking new Ecstasy” (Thomson, 1998) than smaller anonymous retracting articles on inside pages, perhaps only headed by the deceased name. In their defence journalists can only report these incidents from information released to them by the police, researchers and others, who may also be subject to error and ulterior motives (Forsyth, 2001). This may also help explain the apparent differences in the ecstasy cases detailed in Tables 4 and 5. However, any biases or errors emanating from press sources cannot explain the imbalances in levels of reporting between drugs.

Even if the individual deaths concerned are different, it was quite remarkable that there was a one to one ratio of ecstasy cases between the newspaper sample and the Registrar General’s toxicological statistics. On the other hand, it is quite alarming that diazepam, the drug mentioned most often in the official statistics, was mentioned in only one fatality per year in the newspaper sample. This apparent under-reporting may be only the tip of the iceberg of the ‘drug death news paradox’. For example, if a similar ratio to those in Table 3 was calculated for alcohol, responsible for thousands of deaths in Scotland each year, this would undoubtedly be very high, especially after articles on alcohol related accidents and homicides were excluded. In the extreme, only 1 death due to the health effects of tobacco could be found in an equivalent newspaper sample for smoking. This case, involving the death of a man who was attempting to sue the tobacco companies, represents a reporting ratio of 1: 130,000 deaths in Scotland (from government health statistics, Callum, 1995). Comparing the newsworthiness of ecstasy and tobacco deaths brings to mind Joseph Stalin’s famous quote — “a single death is a tragedy, a

million deaths is a statistic”. Perhaps this explains why other sections of the media, especially televised drama, have taken up the first use, single pill, middle class, teenage, female scenario in their story lines (e.g. *Casualty*, *Brookside*, *The Knock*). During the 1990s it was almost certainly the case that more such incidents happened on Scotland’s TV screens than actually happened in reality.

Implications and future research

As well as providing a source of material for TV fiction, there are a number of more serious implications from newspaper bias in reporting drug deaths. If the media portrayal of drugs influences public opinion, then this in turn must have an effect on policy makers, ranging from national politicians to research funding bodies. The consequences may include agency funds being reallocated, the focus of drug education being redirected and the wrong drugs being targeting by law enforcement. For example, of the 4th of October 2000, the Chief Constable of Scotland’s largest police force (where the bulk of drug fatalities detailed in this paper occurred) stated that “Cannabis is not my priority. We have a significant amount of drug deaths in Strathclyde every year and the drugs that are killing them are heroin and cocaine” (Daly, 2000). Clearly (at least half of) this statement is not supported by the official statistics derived from the police’s own notifications (see Table 3). A further consequence of this lies in drug offender sentencing policy. Throughout the 1990s drug workers have become concerned about the severity of custodial sentences received by users/dealers of recreational drugs such as ecstasy (Gilman, 1991). Particularly severe sentences appear to have occurred following highly publicised alleged ecstasy deaths (Meikle, 2000). The most difficult question is, does

bias in the reporting of drug deaths have any impact on patterns of illegal drug use or risk taking by young people?

The main limitation of this paper is that it cannot measure the extent to which the public and policy makers rely upon newspapers as a source of drug information. There is a clear need to assess the extent to which 'expert' and public opinion is influenced by the press. On the one hand it can be argued that the public are more sophisticated than in the past (see Cohen, 1972) and no longer accept such scare stories at face value (Murji, 1998). On the other, less sophisticated, gullible or vulnerable individuals may be influenced by the kind of distortion detailed in this paper. There has been some evidence recently that many young people in Britain may now regard ecstasy as the most dangerous drug in common usage (Hettiaratchy and Baines, 1999; Wright and Peral, 2000). If children see other drugs as relatively less harmful then they may be more inclined to use them instead. This would be particularly alarming if drugs such as alcohol, opioids and benzodiazepines were chosen in preference to ecstasy (see Plant and Millar, 2000). By focusing on the drugs that were not responsible for the large increase in drug deaths in Scotland during the 1990s, the press may be increasing

the risk that young people may turn to the drugs that were.

Conclusion

This research has found that the Scottish newspapers' reporting of drug deaths may be biased towards cases involving certain drugs or types of user. Specifically, this involved greater representation of 'recreational' drug deaths, particularly ecstasy. Pharmaceutical drugs, such as diazepam and methadone, which according to toxicological confirmation, were responsible for much larger numbers of drug deaths in Scotland, were relatively under-reported. Furthermore, there was a tendency for the press to give the greatest attention to unusual cases, such as deaths involving young teenagers. Though it may be argued that these deaths only receive the greatest attention because they are so rare, and therefore literally newsworthy, it must be contended that there is a danger that this creates an unrealistic perception of drug problems. Such unbalanced representations may be transmitted to the minds of the public, policy makers and novice drug users, with potentially harmful consequences.

Appendix A. Registrar General's toxicology deaths

Year	90	91	92	93	94	95	96	97	98	99	Total
<i>Drug</i>											
Amphetamines	1	3	0	4	3	3	4	5	7	6	36
Aspirin/Salicylate	1	1	2	2	4	0	1	1	0	0	12
Barbiturates	2	0	3	3	3	1	1	1	0	1	15
Buprenorphine	0	1	0	0	0	2	0	0	0	0	3
Cannabis	0	1	0	1	0	6	3	7	6	10	34
Cocaine	0	0	0	2	1	3	3	4	6	11	30
Codeine	2	2	1	2	2	2	3	5	32	3	54
Dextropropoxyphene	12	11	8	12	12	8	13	8	12	9	105

Dihydrocodeine	4	10	9	10	18	7	17	9	28	39	161
Diazepam	7	15	14	13	23	31	69	72	102	135	481
Dipipanone	4	2	0	0	2	1	0	7	1	2	19
'Ecstasy'/MDMA ^a	0	0	0	1	4	3	8	2	3	7	28
GHB	0	0	0	0	0	0	0	0	0	1	1
Heroin/Diamorphine	5	12	3	13	17	53	34	32	61	112	342
Ketamine	0	0	0	0	0	0	0	1	0	0	1
LSD	0	0	0	0	1	0	0	0	0	0	1
Methadone	8	7	19	23	55	56	91	76	63	62	460
Morphine	8	7	15	12	37	21	48	51	100	132	431
Opium	0	0	0	0	0	0	0	1	17	25	43
Paracetamol	22	27	23	35	32	23	32	23	28	20	265
Temazepam	10	22	19	35	69	53	36	25	47	53	369
Triazolam	2	2	0	0	0	0	0	0	0	0	4
Other Opioid	0	2	3	5	2	4	4	5	3	0	28
Other Benzodiazepine	2	4	4	8	8	10	17	28	13	12	106
Other Hypnotic	3	5	2	5	2	3	6	5	3	1	35
Other Drug	32	21	22	25	20	35	23	52	33	37	300
Unspecified Drug	25	20	51	58	38	42	43	39	39	47	402
Males	76	81	10	13	168	180	21	18	20	25	1604
Females	50	43	53	73	79	68	62	70	70	83	651
All cases	126	124	153	209	247	248	273	259	276	340	2255

^aIncludes 'eve', MDA and Methythioamphetamine.

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