

The cost of drug use in adolescence: Young people, money and substance abuse

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Abstract

It is now common for young people in full-time compulsory education to hold part-time jobs. However, while the 1990s experienced a rise in illicit drug use particularly among young people and an increase in the level of interest in identifying factors associated with drug use, little attention has been paid to the influence of the money young people have to spend and its potential links with drug use. Four thousand five hundred and twenty-four young people living in Northern Ireland completed a questionnaire in school year 10 (aged 13/14 years). The findings suggested that there was a positive association between the amount of money young people received (and its source) and higher rates of drug use. The study concludes that money, and how it is spent by young people, may be an important factor for consideration when investigating drug use during adolescence. The findings may help inform drug prevention strategies, particularly through advice on money management, and taking responsibility for their own money.

Keywords: *Drug use, money, young people*

Introduction

Research on adolescent development has operated under the assumption that the primary socialization agents of the family, school and peer group are the key social contexts (Mortimer, Finch, Ryu, Shanahan, & Call, 1996). One aspect of adolescent life that has received less attention in the literature is part-time work during school years and the potential influence of money received by young people (regardless of the source) on substance use. Greenberger (1988) suggested that this was because ‘adolescent jobs are peripheral to their lives or because of the pervasive belief that there is no problem, as such, to study’ (p. 106).

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Many studies of adolescent risk behaviour have not even asked if the participants had worked (Mortimer & Johnson, 1998). A body of literature did develop on this issue during the 1970s and 1980s but diminished during the 1990s, a period that witnessed a sharp rise in adolescent drug use in the UK and beyond (Beinart, Anderson, Lee, & Utting, 2002; European Monitoring Center for Drugs and Drug Addiction, 2003; Hibell, Anderson, Bjarnason, Kokkevi, Morgan, & Narusk, 1997; McCrystal, Higgins, Percy, & Thornton, 2003; Measham, Parker, & Aldridge, 1998; Miller & Plant, 2001). This paper examines the experience of young people in school year 10 (aged 13/14 years), their income and its source within the context of reported licit and illicit substance abuse. The young people were all attending schools in three towns in Northern Ireland, a mainly urban sample in Belfast, and an urban rural mixed sample in two small towns 25 miles north of Belfast (Ballymena) and 25 miles south (Downpatrick) of Belfast.

It is now common for young people in full-time secondary education in the UK to hold part-time jobs (Dustman, Mickleworth, Rajah, & Smith, 1996; Hodgson & Spours, 2000; Payne, 2003; Sly, 1993; Taylor, 1992). In the United States, almost all adolescents have been in paid jobs at sometime during the school years (Manning, 1990). The relationship between work and substance use during adolescence is of particular interest as a marker of adulthood. For example, earned money is an important marker of increased autonomy by introducing young people to important social roles (Greenberger & Steinberg, 1986). Part-time work during school years may, however, have costs as well as benefits. The benefits include the promotion of self-confidence, responsibility, a feeling of usefulness, positive values, and appreciation of the value of both money and education (Mortimer, Finch, Shanahan, & Ryu, 1992), as well as socializing them into positive adult values perhaps even hastening the transition to adulthood (Allen & Van de Vliert, 1984).

However, part-time employment can have a detrimental impact on school performance (Davies, 1999; Dustman et al., 1996). Paid employment can take up an inordinate amount of time that could be spent more constructively—on homework, in extracurricular activities at school, with their family, developing friendships, exploring personal interests and identities, and serving the community (Greenberger & Steinberg, 1986). Other undesirable correlates associated with part-time work during school years included higher rates of substance use and delinquency (Bachman, Bare, & Frankie, 1986; Kouven & Lintonen, 2002; Mihalic & Elliot, 1997; Steinberg & Dornbusch, 1991). Young people with part-time jobs in Canada were more likely to use alcohol (Tanner & Krahn, 1991). Stress associated with part-time work was reported by young people in the USA, which Greenberger, Steinberg and Vaux (1981) suggested was linked to higher levels of alcohol and drug use. Steinberg and Avenevoli (1998) expanded this theme when demonstrating that extensive part-time employment in adolescence increased the probability of illicit drug use and delinquency. Based on this research some commentators have suggested that part-time work during school years placed young people at an increased risk of drug use and

delinquency and should therefore be limited in scope (e.g. Steinberg, Fegley, & Dornbusch, 1993; Mortimer & Johnson, 1998).

Much of the existing literature on adolescent paid employment dates to the 1970s and 1980s. Comparatively little attention has been paid to the potential links between working, the level of financial or spending power of young people and drug use more recently. This is of particular contemporary interest as increasing numbers of young people now work part-time and may be in receipt of more money than previous generations. The present paper forms part of the Belfast Youth Development Study (BYDS), an investigation of the onset and development of adolescent substance abuse (McCrystal et al., 2003). The study is following a group of approximately 4500 young people who began secondary school in the autumn of 2000. The aim of the present paper is to investigate the relationship between their money, its source, and drug-using behaviours in adolescence.

Methodology

The sample

Four thousand five hundred and twenty-four young people participated in the research. They were participating in the Belfast Youth Development Study and attending schools in Belfast, Ballymena and Downpatrick in Northern Ireland at year 10 (aged 13/14 years). All schools in these towns were invited to participate in the study, 43 (75%) agreed. Data was obtained from 88% of all young people at year 10 in these schools, 5% of parents/guardians refused permission for their child to participate, and a further 7% were absent on the day of data collection. Three quarters of participants lived at home with both biological parents, 17% lived with a reconstituted family (i.e. one natural parent and one other adult such as a step-parent) and 8% lived with one parent. Fifty-two percent of participants were female.

The measuring instrument

A questionnaire was developed for the study of adolescent drug use at school year 10. It contained a range of established measures and items developed by the research team to investigate drug-use behaviours. These measures included drug use (tobacco, alcohol intoxication, volatile substance abuse, cannabis and ecstasy), socioeconomic status, family relationships, personality, delinquency and antisocial behaviour, and engagement in education. Drug-use behaviour was measured at two levels, first lifetime use (i.e. 'Have you ever?') and recent use (i.e. 'Have you used in the last 12 months?'). Socioeconomic status was assessed from responses to a range of financial measures including parental employment, receipt of free school meals, number of family cars, number of family holidays and type of house. These produced five categories of socioeconomic status where class 1 corresponds to lower status and 5 to higher status. Stattin and Kerr's (2000) Parental Monitoring Instrument was used to measure parental supervision

with personality traits measured using the International Personality Item Pool (Goldberg, 1999). Delinquency and antisocial behaviour was assessed from responses to a 14-item scale of offences during the 12 months prior to the survey. These offences were grouped into three categories of no offences, minor offences (i.e. behaving badly in public) and serious offences (i.e. burglary). Engagement in education was assessed from responses to 13 questions on current attitudes towards education with three categories of 'attitudes to school' (i.e. 'I think going to school is a waste of time'), 'positive school behaviour' ('I am always willing to help the teacher'), and 'educational aspirations' (i.e. 'I would like to go to university after school'). Three specific questions on the source and level of income were asked. The first question was, 'How much pocket money do you usually get each week from your parents or whoever looks after you most of the time?' For earned income the question was, 'How much money do you usually get each week from work such as paper rounds or babysitting or some other work?' The third question asked, 'How much pocket money do you usually get each week from somewhere else, such as selling things or stealing?' This source will be referred to as 'other' in the text.

Data collection

A process of passive consent was utilized for this study. The parents of all young people received an information pack posted by schools on behalf of the researchers with a request for their child to participate in the study. Each pack included a reply slip and freepost envelope if they wished to withdraw their child's participation. Data were collected via a self-completion questionnaire from all those for whom permission was granted. The young people were informed of the purpose of the study in advance of its administration by the researchers. All data collection was supervised by the researchers. It took approximately 45 minutes to complete the questionnaire.

Data analysis

All completed questionnaires were coded and input onto the SPSS software for analysis. Initial analysis examined the trends between drug-use behaviours, the source and amount of money received by young people on a weekly basis. A logistic regression analysis was undertaken to examine the covariates of drug use, money and its source and the range of variables included in the measuring instrument.

Results

The young people participating in the study obtained income on a weekly basis from three potential sources: pocket money, earned income, and 'other' sources. Nearly all received pocket money (90%), over half (55%) received money from part-time work with just over one tenth (11%) receiving money from 'other' sources. Similar proportions of boys (90%) and girls (89%) received

pocket money; more girls (59%) received earned income (boys, 53%), but boys (17%) were more likely to obtain money from ‘other’ sources (girls, 6%). The mean weekly income for all young people was £18.99, for boys this was £21.40 (median £13.00; mode £10) and for girls £14.90 (median £10.00; mode £10). Table I summarizes the amount of money received from each source by gender.

Access to their own money appears to be associated with higher levels of drunkenness, and for those with money from ‘other’ sources increased levels of solvent abuse (30% of those with money from ‘other’ sources reported solvent abuse compared with 15% of those with pocket money), cannabis (58% with ‘other’ income, 35% with pocket money) and ecstasy use (18% ‘other’ income, 7% pocket money). These findings were statistically significant using Fishers Exact Test ($p > 0.001$). Lifetime drug use of the young people by source of income is presented in Table II. More girls smoked cigarettes but boys were more likely to report use of illicit drugs like ecstasy. The patterns for source of income and alcohol use were less clear than for other substances listed in Table II.

Those in receipt of income regardless of its source reported higher levels of lifetime use for both licit and illicit substances. This finding was significant using Fishers Exact Test ($p > 0.001$). However, those who received income from

Table I. Weekly income by gender.

Source of income	Gender	Mean (SD) (£)	Median (£)	Mode (£)
Pocket money	Boys	10.72 (24.31)	10.00	5.00
	Girls	9.22 (22.60)	10.00	10.00
Earned income	Boys	14.61 (36.56)	10.00	5.00
	Girls	10.46 (9.92)	7.00	5.00
Other	Boys	17.52 (53.51)	5.00	5.00
	Girls	9.99 (17.26)	5.00	5.00
Total	Boys	18.99 (25.33)	13.00	10.00
	Girls	14.90 (12.44)	10.00	10.00

Note: (SD) = Standard Deviation.

Table II. Income status by lifetime substance use.

Drug	Get pocket*	Don't get pocket		Doesn't	Other***	No other	School
	money (n = 4024) (%)	money (n = 466) (%)	Has a job** (n = 2438) (%)	have a job (n = 1998) (%)	money (n = 475) (%)	money (n = 3937) (%)	survey (n = 4524) (%)
Tobacco	65	49	71	53	76	61	63
Alcohol	88	82	89	85	94	86	87
Been drunk	48	33	54	37	69	44	47
VSA	15	9	17	12	30	13	14
Cannabis	35	20	39	25	58	30	33
Ecstasy	7	2	8	4	18	5	6

Notes: *34 Young people did not answer this question; **88 young people did not answer this question; ***112 young people did not answer this question.

'other' sources reported higher levels of illicit drug use, followed by those in receipt of earned income. These young people also reported higher rates of use of 'hard' drugs such as ecstasy (18%). Girls who received money from 'other' sources were more likely to use ecstasy (32%, compared with 20% of boys). The most popular location for ecstasy use was at a party.

The total money received by each young person regardless of its source on a weekly basis was summed and then divided into five categories (the first four were in bands of £20) for the purposes of further analysis. These categories were no money ($n = 232$), £20 or less ($n = 3167$), £20–40 ($n = 729$), £40–60 ($n = 152$) and £60+ ($n = 110$). Two hundred and forty-four young people provided the details needed to calculate their income.

The amount of money each young person received appeared to be positively associated with levels of lifetime use for both licit and illicit drug use. For example, two-thirds of those who reported more than £60 income on a weekly basis had used cannabis and more than one-third (36%) had used ecstasy. This compared with just one-third of all those participating in the study who reported cannabis use and just 6% who had used ecstasy. For those who received less than £20 per week substance use, particularly illicit drug use, was much less prevalent (see Figure 1).

The covariates of sources of income were examined through a series of logistical regression analyses (Table III). Regressions were undertaken in Mplus (Muthen & Muthen, 1998–2004). A maximum likelihood estimator (MLR) was used to adjust standard errors for non-normality and non-independence of observation due to the clustering of pupils at the school level via the TYPE = COMPLEX procedure. Separate models were run for 'last year use' of tobacco, alcohol intoxication, cannabis use, use of solvents (volatile substance abuse) and ecstasy. Table III presents the significance level and odds ratios for covariates included within the models. The level of pocket money was associated with the odds of smoking, getting drunk, using cannabis, and using ecstasy, even after controlling for socioeconomic status and other known drug use covariates such as gender, delinquency, parental supervision and having

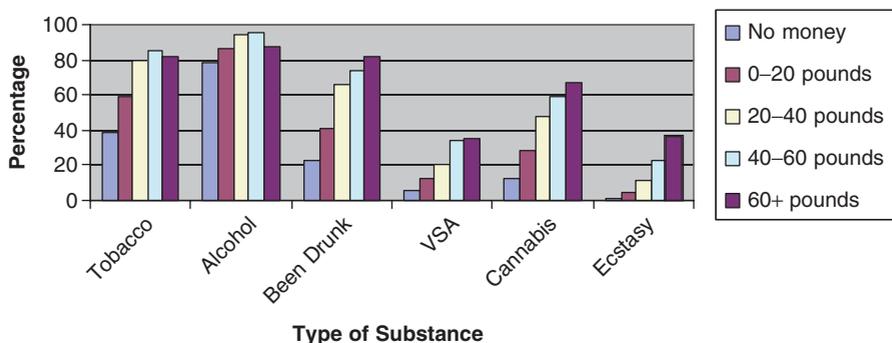


Figure 1. Total money by substance use prevalence rates.

Table III. Predictors associated with last year substance use: Logistic regression.

	Smoking		Alcohol intoxication		Cannabis		VSA		Ecstasy	
	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
<i>Money</i>										
Pocket money	1.31	**	1.56	**	1.34	**	1.14		1.35	**
Jobs	1.28	**	1.34	**	1.11		0.96		1.09	
Other sources	0.99		1.11		0.89		0.96		1.30	**
<i>Gender</i>										
Male	1.00		1.00		1.00		1.00		1.00	
Female	2.88	**	1.74	**	0.88		1.09		2.60	**
<i>Socioeconomic status</i>										
Class 1	1.00		1.00		1.00		1.00		1.00	
Class 2	0.87		1.09		1.07		0.79		0.54	
Class 3	1.01		0.90		0.77		0.58		0.47	
Class 4	0.78		0.93		0.72		0.84		0.37	
Class 5	0.81		0.94		0.52	**	0.71		0.49	
<i>Delinquency</i>										
None	1.00		1.00		1.00		1.00		1.00	
Minor offences	3.08	**	2.93	**	3.51	**	6.78	**	6.82	
Serious offences	4.09	**	6.21	**	9.01	**	22.22	**	32.33	**
<i>Engagement in education</i>										
Attitude to education	1.01		1.03		1.01		1.01		0.99	
School behaviour	0.96	*	0.96		0.96		0.96		0.93	
Educational expectations	0.95	**	0.96	**	0.99		0.98		1.01	
<i>Parental supervision</i>										
Knowledge	0.95	**	0.94	**	0.95	**	0.94	**	0.95	**
Discipline	0.93	**	0.91	**	0.92	**	0.96		0.95	
Solicitation	1.08	**	1.11	**	1.11	**	1.03		1.06	*
Monitoring	0.99		0.98		0.97	*	1.04	*	0.97	
<i>Personality dimensions</i>										
Emotional stability	1.00		1.00		0.99		1.02		0.99	
Risk taking	1.05	**	1.05	**	1.05	**	1.06	**	1.06	**
Impulse control	1.00		0.99		1.00		1.00		1.01	

Notes: * $p < 0.05$; ** $p < 0.01$.

a risk-taking personality. Increasing levels of pocket money were associated with increasing risk of substance use. Pocket money was not associated with an increased risk of using solvents. Money from jobs was associated with increased risk of smoking and alcohol intoxication only. Money from other sources was only associated with increased odds of using ecstasy.

Discussion

The findings from this paper present a profile of the sources of income for young people and the amount of money they received at age 13/14 years. The results showed that nearly all young people received money from one of three sources. Increased disposable income amongst young people is associated with increased

risk of smoking, alcohol or drug use (excluding solvents) even after controlling for possible confounding factors. Young people who use solvents may not always need to purchase them to access them, weakening any association between income and solvent use. In contrast the other substances examined in this study do need to be purchased and more purchasing power is associated with increased likelihood of their use. Pocket money is associated with both licit and illicit drug use. In contrast, money earned from part-time jobs is associated only with licit drug use (alcohol and tobacco). It may be the case that the constraints of undertaking a paid, albeit part-time, job may restrict opportunity to engage in illicit drug use or it may reflect other personal characteristics or circumstances that are associated with resilience to illicit drug use that were not observed in this study, for example saving up for a special high-cost purchase that precludes spending money on illicit drugs. It is also possible that it is only those young people who are least likely to use illicit drugs who are trusted to undertake jobs such as babysitting. Money from 'other' sources is associated with increased risk of ecstasy use only. While it is not possible to determine the actual means by which this money is obtained, it is quite possible that the main 'other source' is some form of delinquent activity. Young people who engage in acquisitive crime are also those most likely to progress beyond experimental cannabis (Ellickson & Morton, 1999).

These findings are important for a number of reasons. First, access to money at age 13/14 years appeared to be associated with increased levels of drug use. Second, they suggest the potential role of both the source of money, and the amount, as a factor that now requires further exploration. Third, this factor could form part of drug prevention strategies through information on financial management within drugs education and prevention initiatives developed to tackle drug use amongst school-aged young people. The content of such strategies could include advice on money management and financial responsibility which Steinberg and Avenevoli (1998) suggest may have a significant deterrent impact on adolescent drug use and delinquency.

In particular, the higher levels of ecstasy use reported by young people aged 13/14 years who received money from 'other' sources is an important issue. However, the precise nature of these 'other' sources was not made clear in this study. The links between ecstasy and the 'party scene' (Measham et al., 1998) may provide some insights here as this location (a party) was the most popular venue for its use. There are indications that 'other' sources may include delinquent and criminal behaviour because these young people were more likely to report acquisitive crime such as shoplifting. A full understanding of the nature of these 'other' sources and their role in adolescent drug use is important in order to assess their role as a risk or protective factor to adolescent drug use. This issue now merits attention from researchers and policy makers.

The age of the young people in this study (school year 10, 13–14 years) is also an important factor. Much of the existing literature on adolescent paid employment is based on evidence from older school pupils than those who participated in this study. As increasing numbers of young people begin to work

part-time during school years 11 and 12 and beyond (for example, Payne, 2003, noted that 17% of those in year 11, 45% in year 12 and 59% in year 13 had part-time jobs), this issue would benefit from a more thorough investigation during this age group than the quantitative approach of this paper. This could be addressed with a qualitative approach to researching the issues raised here.

There are several limitations to this study based mainly on the survey approach adopted for data collection. This included limited information on precisely how much the young people spent on licit and illicit drugs. This makes it difficult to fully examine associations between these behaviours. Furthermore the young people were not asked specifically if they spent money on licit or illicit drugs. In addition the precise nature of the activities from which earned income was received or the details of 'other' sources of income were not explored fully. Finally, details of frequency of substance use may have provided more insight into drug-use patterns, money and its source, possibly providing more detail on the patterns of alcohol use and money reported in this paper. As a result this paper was unable to go beyond reporting the trends between source of income and drug-use levels for young people aged 13/14 years.

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