

Violence and delayed social independence among young adult British men

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Abstract

Objective To explain why a subgroup of young men aged 20–24 years do not follow the general trend within the adult general population, of declining violence with age.

Method A cross-sectional survey of 8,397 adults in households in Great Britain in 2000. Computer-assisted interviews to measure self-reported violence and psychiatric morbidity.

Results Young men age 20–24 years had the same high prevalence of self-reported violence as those 16–19 years (52 vs 50%; $P = 0.737$), contrasting with women whose violence demonstrated a progressive decline (24.1 vs 14.5%; $P = 0.002$). This age-related gender difference was explained primarily by young men who continued to live at home with their parents (OR = 2.53; 95%CI 1.23–5.20), with smaller effects from childhood conduct disorder (OR = 1.56; 95%CI 0.75–3.21), and hazardous drinking (OR = 2.23; 95%CI 0.76–6.56). Young men living at home were only 4.3% of all male respondents but yielded an attributable risk fraction of 21.4% reporting victim injury.

Conclusion The persisting high prevalence of violence among young adult men is explained by delay in moving to social independence. Public health interventions to reduce effects of known risk factors for violence must consider progressive economic and social changes in young men's lifestyles in westernised countries.

Keywords Men's violence · Public health · Alcohol misuse · Social independence

Introduction

Violence-related morbidity is a key public health problem [1, 2]. Most violence in society is perpetrated by young men and their victims are usually other young men [3], often in social situations involving alcohol intoxication [4, 5]. Violent behaviour naturally declines with age and marked gender differences exist. Hazard rates of serious violence during childhood and adolescence are higher at all ages for boys, with the decline in offending decreasing over time for boys compared to girls [6]. However, less is known about the relative decline in violent behaviour during adult years among the general population.

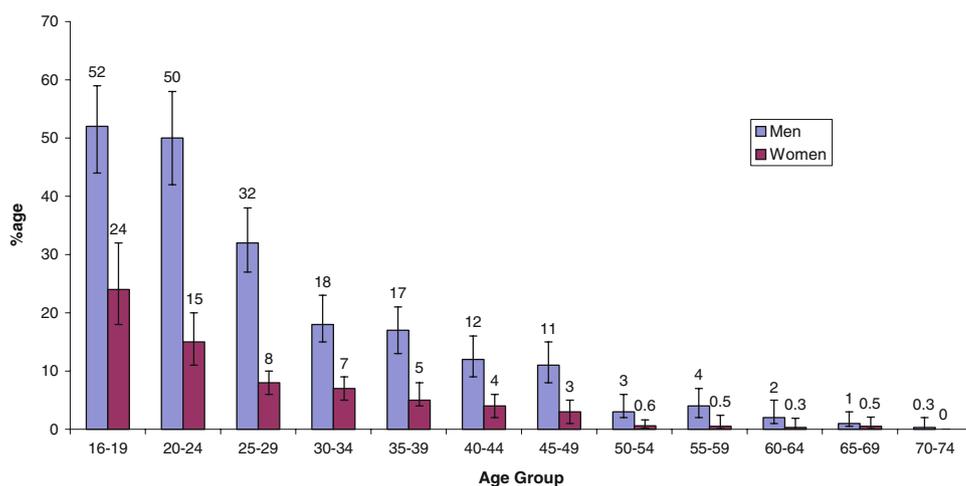
We have observed an important male–female difference in prevalence of self-reported violence in the teenage years and early adulthood in a general household survey of adults 16–74 years in Great Britain carried out in 2000 [7, 8]. The peak age for female violence is known to be in mid-adolescence [9] and, as expected, women aged 20–24 years reported less violent behaviour than those aged 16–19 years (Fig. 1). However, men did not show a parallel reduction in their violence within these age bands. From age 25 years onwards, both men and women demonstrated a progressive fall, although the prevalence in men always exceeded that of women.

We investigated the public health importance of this observation by examining firstly, whether the apparent fall in female violence was statistically significant when compared to men, and secondly by comparing a range of lifestyle and mental health measures among males and females during ages 16–19 and 20–24 years. It was hypothesised that

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Fig. 1 Prevalence of violence in each age group and 95% confidence interval (men and women). The data has been weighted



these factors had the potential to influence violent behaviour in both a negative and positive direction. We thirdly examined whether men’s violence remained similar or changed qualitatively when we applied different measures of severity, identified victims involved, and location of incidents. Finally, we identified factors relating to a persistently high prevalence of violence among a subgroup of young men during their teenage years and early adulthood.

Methods

Sampling procedure and measures

Subjects aged 16–74 were sampled in the survey of Psychiatric Morbidity Among Adults Living in Private Households in England, Wales, and Scotland. Details of the survey have been described previously [7]. Computer-assisted personal interviews were carried out by Office of National Statistics (ONS) interviewers. A total of 8,886 adults completed the first phase interview, 8,397 completed all sections of the questionnaire. A weighting procedure took into account respondents’ relative chances of selection, non-response, and selection bias with respect to age, sex, and region.

First phase interviews included the screening questionnaire from the Structured Clinical Interview for Axis II disorders [10]. Ten categories of DSM-IV personality disorder were derived from this Screen and combined into a single category of “any” personality disorder. For certain analyses, the category antisocial personality disorder (ASPD) was analysed separately. This diagnostic category includes a measure of conduct disorder, 15 items occurring before age 15 years, and 7 items occurring after to constitute an adult antisocial lifestyle. One of these latter items, violent behaviour, was omitted as it overlapped with the outcome measure for the study. Respondents screened positive for psychosis if any two of four criteria were

present using the Psychosis Screening Questionnaire (PSQ) [11]. The revised version of the Clinical Interview Schedule (CIS-R) [12] measured the prevalence of 14 affective and anxiety syndromes in the week preceding interview. These were combined into a single category of “any” affective/anxiety disorder. The principal instrument to assess alcohol misuse was the Alcohol Use Disorders Identification Test (AUDIT), which defines hazardous alcohol use (at a score of 8 or more) as an established pattern of drinking which brings the risk of physical and psychological harm over the year before interview [13]. The Severity of Alcohol Dependence Questionnaire (SADQ) [14] measured alcohol dependence. A number of questions designed to measure drug use were included. Positive response regarding a series of different substances to any of five questions measuring drug dependence over the past year were combined to produce a single category of “any” drug dependence [7].

All respondents were asked questions about violent behaviour in the context of establishing the diagnosis of ASPD. As we intended to retain measures from ASPD in subsequent analyses, in contrast to an earlier US epidemiological study of violence [15] which derived outcome variables of violence from this diagnosis, an additional question was included, similar to previous surveys in New York [16] and Israel [17]. Subjects were asked “have you been in a physical fight, assaulted, or deliberately hit anyone in the past 5 years?” They were then asked how many incidents during this period, whether they had been intoxicated with drugs or alcohol during any of these incidents, where they had occurred, who had been the victim, and outcome to determine seriousness.

Statistical methods

Weighted logistic model with the discrete effects of age groups with random effects to take into account the

sampling procedure and area variation in violence prevalence was fitted using the MLwiN program [18]. The aim was to confirm firstly, whether the prevalence of violence among young adult men was the same as in the teenage age group compared to a progressive decline in young women, and secondly, to examine explicitly whether the fall in reported violence occurred in parallel for both men and women. The specific age group related gender difference was captured by the interaction term between sex and age group, for example 20–24 years, in the model.

Differences in men's and women's lifestyles between late teenage and early adulthood age groups were then examined to identify potential risk and protective factors that might explain gender differences in three age bands 16–19, 20–24, and 25–29 years. Standard Chi-square test on odds ratio estimate of each factor was used for this purpose.

We next investigated which risk factors explained the age-related gender difference (i.e. a non-parallel decline) in violent behaviour. The assumption was that if a risk factor is truly related to sex difference in a specific age period (identified by the interaction term in the regression model we had established in our first stage of analysis), then by adding this risk factor to the model and interacting it with sex and the specific age group, we should then minimise the parameter estimate that originally represented the age-related gender difference in the model and observe excess odds ratio introduced by this factor. Demographic, substance use, mental health, and antisocial behaviour variables were adjusted in this cross-sectional sample. The collaborated weighted logistic model with random effects of reported violent behaviour was fitted using MLwiN [18], examining the effect of each risk factor individually and additively.

We compared differences in characteristics and patterns of violence, between those with the identified factor and those without, in the same age-group of men to identify potential associations between risk factors and patterns of violence. Standard Chi-square test was used.

Finally, we examined mean scores of composite variables for social responsibility between those with the identified factor and those without, to summarise the overall difference of individual characteristics. Stratified *t* test was used.

Results

For the weighted sample, 3.77 times as many men as women aged 16–74 years reported assaulting another person or being involved in a fight over the previous 5 years. Men reported 3.71 as many incidents as women and were 6.09 times more likely to report incidents in which a victim

was injured. Figure 1 demonstrates an apparent 2% ($\chi^2 = 0.12$, $P = 0.73$) fall in prevalence among men reporting violence from age 16–19 to 20–24 years, contrasting with a fall of 10% ($\chi^2 = 9.38$, $P = 0.002$) in women. Model estimates for the trend in prevalence of violence demonstrated that 95% confidence intervals for prevalence among males and females did not overlap from ages 16–19 to 50–54 years. For each age band, prevalence of reported violence by males remained significantly higher than for females.

To examine whether the fall in reported violence occurred in parallel for both males and females, gender difference was examined by weighted logistic model fitting the discrete effects for each age group. The overall odds ratio for gender effect was estimated at 1.42 (95%CI 1.10–1.83; $P = 0.007$). The raw odds ratio for the age difference between men and women was 1.74, indicating that the progressive decline of violence observed in both sexes was not parallel, with female violence showing a greater decline than male violence. The model allowed the gender effect and test of the odds ratio for the age difference between genders in terms of interaction (male \times age 20–24). The estimated odds ratio was 1.69, which was close to the raw odds ratio of 1.74. Interactions for age groups 25–29 and 30–34, between males and females, were also tested but were not significant. There was a moderate difference between males and females in their overall trend of falling violence, but a significant departure from this trend for the 20–24 year age group.

Table 1 indicates major differences in lifestyle and mental health when comparing men and women in the age bands 16–19, 20–24, and 25–29 years. As expected, more men and women age 20–24 years had left the parental home, were living as a couple, and had children by early adulthood, compared to respondents in their teens, these trends continuing in the 25–29 year age band. There was a significant increase in both men and women living in rented accommodation aged 20–24 years, with a further increase for men age 25–29 years. The significant fall for women was due to many now co-owning property with partners. More women age 25–29 years reported living in rural locations. Weekly income increased progressively for women across each age band and for men from 16–19 to 20–24 years, but with a significant fall from 20–24 to 25–29 years.

Significantly more men 20–24 years reported hazardous drinking than those 16–19 years, with a fall among men 25–29 years. There were similar trends in patterns of misuse of illicit drugs and drug dependence among men 20–24 years compared to 16–19 years. Although fewer men 25–29 years were drug dependent compared to 20–24 years, more reported mental health problems of anxiety or affective disorder. There were no differences between

Table 1 Percentage by lifestyle factors in males and females from 16 to 29 years, and odds ratios between age cohorts

Demographic, mental health, antisocial behaviour	Males				Females				
	16–19	20–24	25–29	20–24 cf 16–19	16–19	20–24	25–29	20–24 cf 16–19	
	(n = 330) %	(n = 315) %	(n = 440) %	OR P value	(n = 262) %	(n = 355) %	(n = 363) %	OR P value	
Family type									
In couple	0.6	14.4	54.4	27.9 <0.0001	9.5	32.2	65.9	4.52 <0.0001	4.07 <0.0001
Living with children	0.3	5.3	24.1	18.6 <0.0001	5.6	25.8	44.8	5.86 <0.0001	2.33 <0.0001
Living with parents	94.3	56.6	21.1	0.08 <0.0001	79.2	34.4	7.7	0.14 <0.0001	0.16 <0.0001
Marital status									
Single	99.4	85.4	42.5	0.04 <0.0001	89.4	65.2	28.8	0.22 <0.0001	0.22 <0.0001
Housing tenure									
Living in rented accommodation	33.8	44.4	48.3	1.56 0.006	34.6	54.3	36.8	2.25 <0.0001	0.49 <0.0001
Work status									
Works full/part-time	62.1	78.5	90.0	2.23 <0.0001	65.8	71.1	72.5	1.28 0.15	1.07 0.68
Weekly income									
>£200	9.1	48.3	24.7	9.33 <0.0001	6.0	33.8	52.6	8.00 <0.0001	2.17 <0.0001
Area of residence									
Rural/semi rural	33.9	29.0	28.0	0.80 0.17	29.3	22.6	30.5	0.70 0.06	1.50 0.02
Substance use									
Hazardous drinking	44.7	62.1	50.5	2.03 <0.0001	32.0	29.0	23.4	0.87 0.42	0.75 0.09
Alcohol dependence	19.0	24.4	21.1	1.38 0.10	7.5	7.2	5.2	0.96 0.89	0.71 0.27
Used illicit drugs past year	32.2	36.6	33.9	1.22 0.23	22.2	29.3	14.9	1.45 0.05	0.42 <0.0001
Drug dependence	12.7	24.0	13.9	2.17 0.01	6.0	9.5	3.0	1.64 0.12	0.29 <0.0001
Currently smoking	52.4	61.5	56.1	1.45 0.06	45.5	60.5	52.9	1.83 0.002	0.73 0.08
Psychiatric morbidity									
Any neurotic disorder (CIS-R)	8.5	10.0	15.2	1.20 0.51	19.2	20.9	21.6	1.11 0.60	1.04 0.81
Any personality disorder ^a	28.8	32.7	31.6	1.20 0.28	37.2	31.2	26.6	0.77 0.12	0.80 0.17
Antisocial behaviour									
Conduct disorder (before 15 years)	21.0	24.4	22.2	1.21 0.29	17.0	11.2	8.0	0.62 0.04	0.69 0.15
Antisocial lifestyle (since 15 years)	7.0	15.6	16.0	2.46 0.001	4.9	5.9	4.7	1.22 0.60	0.79 0.48

^a Excludes ASPD

Table 2 Comparison of reported violence in male respondents 16–19, 20–24, and 25–29 years

	16–19 Years	20–24 Years	25–29 Years	20–24 cf 16–19		20–24 cf 25–29	
	(<i>n</i> = 330) %	(<i>n</i> = 315) %	(<i>n</i> = 436) %	OR	<i>P</i> value	OR	<i>P</i> value
Characteristics of violence							
Any violence	51.7	50.3	31.9	0.95	0.73	2.16	<0.0001
Violent when intoxicated	20.0	29.0	21.9	1.63	0.008	0.69	0.025
Five or more incidents	17.6	13.1	9.3	0.71	0.11	0.68	0.108
Three or more victim types	3.0	2.8	4.3	0.92	0.86	1.56	0.27
Victim injured	17.9	20.6	13.9	1.19	0.39	0.62	0.014
Perpetrator injured	15.8	18.4	11.6	1.20	0.37	0.58	0.009
Relationship with victim							
Emotional relationship/partner	0.9	1.2	3.0	1.38	0.97	2.42	0.11
Family member	2.7	1.2	2.3	0.45	0.18	1.84	0.30
Friend	20.3	10.3	5.2	0.45	<0.0001	0.48	0.009
Person known	22.1	14.0	11.6	0.57	0.007	0.80	0.32
Stranger	22.1	33.3	22.6	1.76	0.001	0.58	0.001
Police	3.3	3.4	2.3	1.03	0.94	0.66	0.34
Other	2.4	4.4	1.8	1.84	0.17	0.41	0.039
Location							
Perpetrator's home	3.0	1.6	2.7	0.51	0.21	1.77	0.28
Other's home	3.9	3.4	2.3	0.87	0.73	0.65	0.34
Street/outdoors	35.5	33.0	20.0	0.90	0.51	0.51	<0.0001
Bar	13.9	20.2	18.0	1.57	0.03	0.86	0.45
Workplace	0.9	3.7	4.3	4.23	0.016	1.16	0.69
Other	14.2	9.3	2.3	0.62	0.053	0.23	<0.0001

different age cohorts for personality and conduct disorders. However, more men age 20–24 years reported living an antisocial lifestyle than those 16–19 years, the proportion remaining similar in the 25- to 29-year-age group.

There were no differences in women respondents reporting misuse of drugs and alcohol between 16- to 19- and 20- to 24-year-age bands, except for a significant increase in smoking. However, there were differences in use of illicit drugs and drug dependence, with fewer in the 25- to 29-year-age band compared to 20–24 years. There were no significant differences between the (low) proportions reporting an antisocial lifestyle between the three age bands. However, fewer women age 20–24 years reported childhood conduct disorder compared to those age 16–19 years.

We examined differences in patterns of male violence in the same three age groups, and demonstrated that men in early adulthood were more likely to report violence when intoxicated than men in their late teens, although men in their teens were more likely to report more different victim types (Table 2). Men aged 16–19 years reported more violent incidents involving friends or persons known to them, whereas men aged 20–24 years were more likely to

report incidents involving strangers, occurring in bars. In contrast to older men (age 25–29 years), men age 20–24 years were generally more likely to report violence, injuring a victim, or themselves being injured in an incident, violence involving their friends, strangers, or other persons, and occurring in the street/outdoors.

The interactive effects of the selected predictors for persisting violence among men in early adulthood are demonstrated in Table 3, showing three-way interactions between sex, age group 20–24 years, and potential predictors previously identified in Table 1. The model demonstrates that the difference between men and women aged 20–24 and 16–19 years, in terms of men's persisting violence, was explained by 60.9% by those men still living with their parents at age 20–24 years, together with lesser (non-significant) contributions from their hazardous drinking and childhood conduct disorder.

We conducted further analyses to learn more about the characteristics of men 20–24 years still living with their parents compared to those who had left home. They were less likely to live in an urban area (OR 0.32; 95%CI 0.18–0.54; *P* = 0.0001) and were healthier, fewer reporting long-standing complaints of physical illness (OR 0.39;

Table 3 Changes of odds ratio estimates of violence for gender difference in age groups 20–24 vs 16–19 conditional on conduct disorder, hazardous drinking and living with parent(s)

Factors together	Gender difference OR (% reduced)	Excess effect OR (95%CI)	<i>P</i> value
Conduct disorder	1.06 (↓37.2)	2.45 (0.84–7.18)	0.101
Hazardous drinking		1.44 (0.70–2.93)	0.323
Conduct disorder	0.86 (↓49.1)	2.10 (0.74–6.00)	0.163
Live with parent(s)		2.41 (0.70–2.93)	0.163
Hazardous drinking	0.67 (↓60.4)	1.49 (0.73–3.03)	0.273
Live with parent(s)		2.41 (1.19–4.90)	0.015
Conduct disorder	0.66 (↓60.9)	2.23 (0.76–6.56)	0.144
Hazardous drinking		1.56 (0.75–3.21)	0.234
Live with parent(s)		2.53 (1.23–5.20)	0.012

95%CI 0.22–0.69; $P = 0.001$), or currently smoking (OR 0.61; 95%CI 0.38–0.97; $P < 0.041$). There were no differences in employment status, educational qualifications, or their weekly incomes. Their violence was more likely to have occurred in bars (OR 1.98; 95%CI 1.11–3.54; $P = 0.021$) and involved strangers (OR 2.43; 95%CI 1.48–4.00; $P = 0.0004$). There were no differences in mental health measures, substance misuse, or childhood conduct disorder. Similar proportions reported hazardous drinking, but those living at home had more serious problems resulting from alcohol misuse leading to alcohol dependence (OR 2.34; 95%CI 1.34–4.08; $P = 0.003$).

Among men aged 20–24 years still living with their parents, 11.7% were full-time students. Compared to others living at home, being a student was not associated with reporting violent behaviour in the past 5 years (OR 0.83; 95%CI 0.24–2.89, NS).

We created a composite variable to measure social responsibilities (0–5 scale including living as a couple, any child in household, full/part-time work, married with children). The higher the score, the more responsibilities. Women scored higher overall than men (mean 1.33 SD 0.85 vs 1.09 SD 0.74, $P < 0.001$) and persons who lived with their parents scored lower than those who had left the parental home (mean 1.05 SD 0.63 vs 1.47 SD 1.00, $P < 0.001$). However, when comparing genders according to age bands, women who stayed with their parents age 20–24 years demonstrated a relative increase in their social responsibilities compared to those staying at home age 16–19 years (0.13, $P < 0.05$). This contrasted with men where there was no significant change in social responsibility between the two age bands among those who remained at home (0.01, NS). Among women who had left home, there was no significant difference in social responsibilities between the two age bands (0.14, NS). However, for men who had left home, there was a significant increase in their social responsibilities (0.57, $P < 0.01$).

Discussion

Violence and living in the parental home

Our findings confirmed that high levels of violence observed among young men in Britain during their teenage years persist in early adulthood, contrasting to the fall observed among young women. We also identified that living in the parental home was the most important risk factor to explain the persistence of violent behaviour among young men. We additionally observed that remaining in the parental home in early adulthood appeared to be associated with increased social responsibilities among women but not among men when compared to their teenage years. This may have indicated delay in maturity manifested in achieving social independence among young men compared to young women. However, the findings for women remaining in the parental home could in some cases suggest delay in social independence in taking on the responsibility of caring for a child without a partner and requiring parental support, forming a relationship with a partner who could not support them independently and requiring accommodation, or in some cases remaining in the parental home to care for parents. Nevertheless, the implications of increased responsibilities whilst remaining in the parental home might have a substantial impact on lifestyle and act as a protective factor for engaging in violence.

To our knowledge, this is the first epidemiological demonstration that delay in moving to social independence among men is a stronger risk factor than any other demographic, social, or mental health measures. The public health importance of these findings is emphasised by the increased risks of physical injury to both victims and perpetrators from men age 16–24 years who are violent compared to men who are older. According to our findings, a subgroup of young men who should be targeted in future public health interventions are those who continue to live in the parental home instead of living independently. Additional, but less important, risk factors include conduct disorder during their childhood and hazardous drinking. These findings indicate a shift of emphasis for future research into violence-related morbidity, moving away from risk factors of male psychopathology and towards men's lifestyles. Hazardous drinking is clearly of considerable importance to young men's violent behaviour but should now be reconsidered within this wider context.

Mental disorders, including ASPD, are positively associated with antisocial behaviour, but such conditions affect small subgroups of the general population [19, 20]. National cross-sectional [8] and longitudinal [21] studies have cast doubt on severe mental illness, including psychosis, as a leading cause of violence in the general population, together

with the observation that most violent individuals do not have a mental disorder [8, 15]. Demographic characteristics show stronger associations (male gender, single marital status, minorities, lower social class) in Western countries, where social inequalities and consequent social alienation [22], attachment to criminal peers [23], and being disadvantaged by intellectual or educational opportunity [24] have stronger associations with antisocial behaviour. Public health interventions to reduce violence are indicated by the strong associations observed with substance misuse, particularly heavy alcohol consumption [4]. However, drinking styles [25] and context of drug and alcohol misuse [26, 27] are of major importance and interact with demographic factors and social adversities, together with specific social circumstances which influence the behaviour of young men, as demonstrated by this study.

Young men's lifestyles

Young adult men living at home in Britain are no longer influenced by parents to conform to standards of behaviour expected of previous generations. Violence outside of the home and involving strangers can be construed as one among a series of hedonistic and negative social behaviours (including hazardous drinking, drug misuse, sexual risk-taking, non-violent antisocial behaviour, etc.) exhibited by a subgroup [28] without responsibilities of providing their accommodation, supporting dependent children, or ameliorating effects on their behaviour of living with a female partner. This lifestyle may be increasingly prevalent among some men within the context of increasing prolongation of early adulthood, and where it now takes longer to obtain a full-time job that pays sufficiently to support a family [29]. US research has indicated that many young persons in their early 1920 s have not become fully adult according to their own subjective assessments and do not perceive themselves as either ready or able to perform these roles. Based on 1% samples of 1960 and 2000 US censuses, only 31% of men age 30 years in 2000 had completed all the major transitions of leaving home, finishing school, becoming financially independent, getting married, and having a child, in contrast to 65% in 1960. Furthermore, young people remaining at home now receive more substantial financial aid from their parents compared to previous generations [29].

Living at home and continuing higher education as a student was not associated with violence according to our analysis. Young persons who fail to benefit from higher education in Britain have become increasingly marginalised in the labour market in recent decades despite improving economic conditions [30, 31]. While the demand for highly qualified labour grows, the weakening of demand in the traditional areas of craft apprenticeship, clerical and

administrative occupations places a substantial number of young people in a much less secure position. For some young men, this may act as a brake on their move to independence. For some young women, early partnership and pregnancy still offer alternative routes to adulthood, but with uncertain economic and social consequences. Although unemployment and lower income did not differentiate young men who remained in the parental home in this survey, not having to provide their accommodation or support dependents meant relatively higher disposable incomes and more leisure time possibly associated with more high-risk activities including violence, than those with adult social responsibilities. This may explain why their heavy drinking had resulted in more serious problems with alcohol, in that they were able to persistently consume more. Although currently healthier than men with more social responsibilities, this subgroup would appear at substantially greater risk of long-term, alcohol-related morbidity.

Limitations

Our study was focused on gender differences in violent behaviour in relation to what appeared to be a change with age. However, this was a cross-sectional study and a direct association of change in social responsibilities and lifestyle with the apparent change in violent behaviour among young men cannot ultimately be established. Future longitudinal study on change in patterns of young men's lifestyle in relation to their antisocial behaviour is necessary. An additional limitation was reliance on self-report of violent behaviour using laptop computer and the inability to probe the meaning and context of these violent events in greater depth. Furthermore, this was a cross-sectional survey of persons in British households at one point in time and it is unclear whether these observations will change in the future and whether the findings apply both to other developed and less developed countries. Finally, although living at home for men in their early 1920 s appears a final common pathway which is likely to lead in some instances to violent behaviour, we have not identified the mechanism leading to this outcome. However, an increased burden of social responsibilities which characterise the lives of more young men who leave home, and some young women who remain in the parental home, are likely to be protective.

Men's persisting violence and the burden of care

Young adult men currently account for most violent crimes in the UK, and are most prevalent among victims of homicide [3]. The specific 20–24 age group living in the parental home were only 4.3% of male respondents but accounted for 16.3% of all incidents of self-reported violence by men and yielded an attributable risk fraction of 21.4% of those

reporting injury to a victim. This represents a significant burden of care on health and criminal justice agencies associated with ongoing changes in young men's lifestyles in the UK. These health transitions [32] are due to progressive social and economic changes occurring over the last 40 years. Further research is needed into their effects on violent and other high-risk behaviours to identify new interventions in the context of promoting healthier lifestyles. However, the high-risk subgroup we have identified may well constitute "hidden" and therefore hard-to-reach individuals. Public health interventions have so far considered mainly population measures, including availability and cost of alcohol, control over outlets selling alcohol, and reliance on criminal legislation, the latter operating subsequent to the violent behaviour [4]. Further interventions are required that impact directly on young men's lifestyles. Targeting risk factors such as childhood vulnerability and alcohol misuse are more likely to be successful if placed in the context of wider and more important changes which are ongoing in young men's lifestyles.

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