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The relationship between labour market categories and alcohol use trajectories in midlife

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ABSTRACT

Background and aims Studies on the role of labour market position and change in alcohol use during midlife are scarce and their results are inconclusive mainly due to their failure to define comprehensive and distinct labour market groups and the short periods of time studied. In this study we used different activity categories for men and women to examine alcohol use trajectories in midlife covering a period of 17 years.

Methods Using data from four sweeps of the National Child Development Study covering ages 33–50 (N=9960), we used multilevel growth models to study the association between labour market categories and longitudinal changes in weekly units of alcohol consumed.

Results In the reference group of full-time employed men alcohol trajectory decreased over the follow-up period ($\beta=-0.14$; 95% CI -0.18 to -0.11) while in the reference group of employed women it increased ($\beta=0.06$; 95% CI 0.04 to 0.08). Men and women who were 'mainly sick' had significantly steeper declines in their alcohol consumption trajectory. Women who became employed after being homemakers had the steepest increase in alcohol use ($\beta=0.05$; 95% CI 0.01 to 0.09).

Conclusions Being employed is a strong determinant of alcohol use for men and women in midlife, making the workplace a good target for health promotion programmes and policies aimed at reducing alcohol use. Caution is needed when interpreting the health effects of alcohol consumption as low alcohol users may have previously been heavy drinkers.

use, whereas unemployment would result in increased consumption as it could be used for self-medication purposes to cope with distress and anxiety.¹⁴ Conversely, while employment may provide more available income and opportunities to drink, long-term unemployment might be associated with a decrease in consumption due to a lack of financial resources to purchase alcohol. Furthermore, heavy alcohol use may also hinder the possibilities of getting a stable job and keeping it. These might be among the reasons why studies on trends in alcohol consumption in relation to changes in labour market status have yielded contradictory results. A meta-analysis of 12 longitudinal studies¹⁵ showed that becoming unemployed may lead to decreased alcohol use in older men and women, while young men may tend to increase consumption. Chronic unemployment was also associated with a decrease in alcohol consumption in older men and younger women, while becoming employed was related to increases in consumption among all age groups except young women. Similarly, loss of employment was not associated with increased drinking in a 5-year follow-up study of middle-aged men, and only those who became unemployed through illness were significantly more likely to reduce their drinking compared with those who remained employed.¹⁶ Conversely, in a 5-year follow-up study, Virtanen *et al*¹⁷ found that for men going from atypical employment or unemployment to permanent or fixed-term employment was associated with decreased alcohol use, whereas those with a downward trajectory or chronic unemployment tended to increase their alcohol intake. No associations were found between employment status and changes in alcohol use for women in this study. Furthermore, it has been suggested that employed women may drink more frequently or be more likely to report current alcohol consumption compared with those not in the labour market,^{18 19} and that employed men and women may tend to drink more often than their unemployed counterparts.²⁰

Some aspects must be considered when assessing the results of the studies above. Most of the longitudinal studies reviewed only considered changes over short periods of time (from 1 to 5 years),^{16 17 20} and only 1 of the 13 studies in the meta-analysis by Temple *et al*¹⁵ had more than a 10-year interval between measurement occasions. Studies with a long period between measurements will be more able to capture changes in statuses as well as the effects of these changes on health-related behaviours such as drinking. However, a long interval may miss relevant variations between measurement points and be unable to determine the length of

INTRODUCTION

It is believed that alcohol consumption tends to decrease with age¹ and that drinking patterns are more stable for adults than for young people.² Declines in alcohol consumption and alcohol problems from adolescence to adulthood have been generally explained as being the effect of 'role incompatibility', as involvement in new roles and activities (ie, family formation, parenthood and entry into paid employment) may interfere with a heavy drinking life style.^{3–5} This process has been referred to as 'maturing out'.⁶ Conversely, health problems have been consistently related to reductions in consumption or drinking cessation in elderly populations.^{7–11}

The reasons for variations in alcohol use in midlife are less clear. Life transitions may not affect alcohol use in adulthood the way they do in younger people, and their effects may also vary by sex.^{12 13} It is generally thought that more stable positions in an individual's life, like being employed, would result in reductions in alcohol



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time spent in each status. Furthermore, exploring change in alcohol consumption with measures at only two points may be subject to some statistical issues (eg, regression to the mean) that the use of more measurements could circumvent.²¹

Most of the studies reviewed examined differences in alcohol consumption between employed and unemployed individuals, without distinguishing between those actively seeking a job from those that may be out of the labour market for other reasons. Social roles differ between men and women with women being primarily responsible for care work. This fact visibly affects their labour market participation and results in gendered employment patterns. Moreover, studies on alcohol use and labour market should take into account the complex link of health with occupation and alcohol use. According to the healthy worker effect, relatively healthy individuals are likely to obtain employment and to remain employed, while unhealthy people tend to have the shortest employment duration or be out of the workforce.²² Conversely, ill health may be behind a restriction or decrease of alcohol use.¹⁰

The objective of the present study was to examine change in individuals' labour market status as a predictor of alcohol consumption trajectories throughout midlife. For this purpose we studied a population-based cohort of men and women from ages 33–50 years, when the 'maturing out' process is likely to be over and alcohol use is more stable. We used information on activity status from four points in this period to define different labour market categories for men and women.

METHODS

Source of information

Data for this study were drawn from the National Child Development Study, also known as the 1958 British Birth Cohort Study, which follows the lives of 17 000 people born in England, Scotland and Wales in a single week of 1958. Details of the cohort have been published elsewhere.²³ Since the birth survey in 1958, there have been eight further sweeps at ages 7, 11, 16, 23, 33, 42, 46 and 50. Despite sample attrition and some specific biases, such as a tendency for participants with less stable employment patterns and more disadvantaged circumstances to be more likely to be lost from the study,²⁴ the sample remains broadly representative of the surviving cohort.²⁵ For the purpose of this study we used information from four sweeps covering participants at ages 33, 42, 46 and 50. As only cohort members present in at least three sweeps were considered, 2921 men and 2337 women were excluded from the study. Excluded men and women were more likely to have lower educational attainment, be non-partnered and have higher malaise scores. Mean of weekly alcohol intake at age 33 was also higher among excluded men. The final analytic sample consisted of 4820 men and 5140 women.

Labour market typologies

Different activity trajectories were created for men and women based on their specific adherence to the labour market and home responsibilities. Men's link with the labour market is more stable, while women exhibit significant movements in and out of the workforce, especially related to care work within the family sphere.²⁶ Besides, the vast majority of men in employment work full-time (FT), while women are significantly more likely to be in part-time (PT) work.²⁷ PT work might help women combine work and home responsibilities, whereas for men working PT, as an atypical working arrangement linked to precarious conditions,²⁸ might indicate a failure to obtain a FT job. PT employment as well as unemployment may be indicative

of employment instability in men. Conversely, the relative importance of unemployment in women's trajectories compared with other positions and the need to construct meaningful trajectories prompted the omission of unemployment in the typologies created for women.

Defined categories for men were: (1) *mainly FT employed*: FT employed in at least three sweeps; (2) *mainly PT or unemployed*: PT employed in at least three sweeps, or unemployed in at least three sweeps, or 2×2 combinations of PT and unemployment; (3) *became unstable*: FT employed at age 33 and 42 and PT or unemployed at age 46 and 50 or at age 50 only; (4) *mainly sick or became sick*: sick/disabled in at least three sweeps; or any activity at age 33 and 42 and sick/disabled at age 46 and 50; and (5) *other*: men with an irregular labour market pattern who could not be included in any of the above categories. Categories for women were: (1) *mainly employed*: either FT or PT employed in at least three sweeps; (2) *mainly homemaker*: homemaker in at least three sweeps; (3) *from employed to homemaker*: either FT or PT employed at age 33 and 42 and homemaker at age 46 and 50 or at age 50 only; (4) *from homemaker to employed*: homemaker at age 33 or at age 33 and 42 and either FT or PT employed at age 46 and 50 only; (5) *mainly sick or became sick*: sick/disabled in at least three sweeps or any activity at age 33 and 42 and sick/disabled at age 46 and 50; and (6) *other*: women with an irregular labour market pattern who could not be included in any of the above categories.

Alcohol consumption

Alcohol consumption was defined in terms of UK units of alcohol consumed in the past week at ages 33, 46 and 50. Data from age 42 were not used due to errors in the data collection process.²⁹ Participants who reported drinking in the previous week were asked to provide information on the quantity of the different alcoholic beverages they consumed (at age 46 the question referred to an average week). The reported information was converted into standard UK units (1 unit=8 g of pure ethanol) using a conservative conversion rate of 2 UK units for a pint of beer/cider and 1 UK unit for all other beverages. Participants who reported no consumption were assigned a 0.

Covariates

Information on participants' partner status¹³ (cohabiting with a partner either married or not) was recorded at each age. The malaise inventory³⁰ was used to measure psychological distress or tendency towards non-clinical depression at age 33.³¹ Highest qualifications gained at age 33³² were recoded into three categories according to the International Standard Classification of Education (ISCED 2011): low (primary and lower secondary education), intermediate (upper secondary and postsecondary education) and high (from short-cycle tertiary education onwards), used as reference category.

Analysis

We used multilevel growth models to examine the association of activity categories in midlife on longitudinal change in weekly units of alcohol consumed. Growth models describe trajectories in terms of intercept and slope effects, allowing variance within and between individuals.

Unconditional growth models (allowing for random intercepts and slopes) for units of alcohol consumed from age 33–50 with an interaction between activity typologies and time were fitted separately for men and women. Those mainly FT employed were used as the reference category for men and those mainly

employed for women. Additional models incorporating each of the covariates were estimated and likelihood ratio tests were used to determine whether the inclusion of each covariate improved model fit. Partner status was included as a time-varying covariate whereas highest qualifications and mental health at baseline were included as time-invariant predictors. For men, the final adjusted model included only partner status while for women highest qualification and mental health at age 33 were also included. Given the availability of only three measures of alcohol consumption change was estimated to be linear. Random effects were allowed to co-vary. All analyses were conducted using Stata V.12 (StataCorp, College Station, Texas, USA) using a maximum likelihood algorithm.

RESULTS

The descriptive characteristics of the sample are presented in table 1. Almost 85% of male cohort members belonged to the FT employed category, while in women those mainly employed accounted for 62% of the total sample. With respect to alcohol use, men's average weekly units at age 33 was three times higher than that of women, and at ages 46 and 50 it was more than double (16.7 (SD=19.8), 12.7 (SD=15.5) and 14.3 (SD=6.7) vs 4.9 (SD=7.6), 5.8 (SD=7.7) and 6.1 (SD=8.4)). In the case of the covariates, 50% of men and 63% of women had only acquired low qualifications at age 33, with the lowest rates among those mainly employed and the highest among the sick in both sexes. Women had poorer mental health at age 33 than men (8.4% vs 3.6% at high risk of psychological distress). The risk of psychological distress was highest in the sick category in men and women (20% and 31%, respectively), and for women those that became homemakers and mainly homemakers also rated high (18% and 12%). Finally, the percentage of those living with a partner at age 33 was similar in men and women, with the highest rates within the mainly employed among men and within those that became employed among women; the lowest rates of partnered individuals were among the sick group in both sexes.

Table 2 shows estimates of the intercepts (values at age 33) and slopes describing age-related linear changes in alcohol consumption in the longitudinal labour market typologies (per year increase in age, centred at age 33). Average consumption at age 33 of the reference category of men (mostly FT employed) was 15.84 units per week (95% CI 15.23 to 16.45) with an average decline of 0.14 units per unit increase in age (95% CI -0.18 to -0.11). For women, those who remained mostly in employment had an average intake of 5.40 units at age 33 (95% CI 5.13 to 5.67) but increased their consumption at a rate of 0.06 units a year (95% CI 0.04 to 0.08).

In men, those who were mainly sick (or became sick) during follow-up typically drank almost four more units at age 33 than the reference category of those mainly in FT employment ($\beta=3.96$, 95% CI 0.42 to 7.51) and made a more rapid decline in their consumption over time ($\beta=-0.36$, 95% CI -0.57 to -0.15). The significant effect observed for the intercept was attenuated after adjusting for partner status (the p value fell outside the conventional threshold of 0.05 used for significance testing but there was evidence of borderline statistical significance ($p=0.075$)) and remained significant for the slope. Similarly, those belonging to the 'Other' category typically consumed more alcohol at age 33 ($\beta=3.50$, 95% CI 1.44 to 5.57) and made greater declines in their drinking over time ($\beta=-0.15$, 95% CI -0.28 to -0.02) than the mainly FT-employed group, an effect which remained significant after adjusting for partnership status. The estimates for those mainly PT or

Table 1 Descriptive characteristics of men and women of the National Child Development Study (UK) at ages 33, 46 and 50 according to labour market categories

Labour market categories	UK units* of alcohol consumed per week												Highest qualifications at age 33						Malaise score >7 at age 33		Partnered at age 33	
	Age 33			Age 46			Age 50			High			Intermediate			Low		N		Per cent		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Per cent	N	Per cent	N	Per cent	N	Per cent		
Men																						
Mainly FT employed	4053	16.2	18.4	3785	12.6	14.6	3743	14.4	15.9	603	16.5	1316	36.1	1727	47.4	99	2.7	3072	82.4			
Mainly PT or unemployed	68	15.4	23.3	67	9.7	14.9	63	10.4	16.5	4	7.8	9	17.7	38	74.5	2	3.9	28	53.9			
Became unstable	136	18.0	20.0	136	13.9	18.9	136	14.0	15.7	26	20.0	36	27.7	68	52.3	4	3.0	107	78.7			
Mainly sick	130	19.8	29.5	123	12.8	25.3	127	12.2	25.5	3	2.8	23	21.1	83	76.2	23	20.4	62	54.9			
Other	433	19.9	27.5	324	14.2	19.4	359	14.9	21.3	34	10.2	83	24.9	216	64.9	31	8.9	231	66.6			
Total	4820	16.7	19.8	4435	12.7	15.5	4428	14.3	16.7	670	15.7	1467	34.4	2132	49.9	159	3.6	3500	80.0			
Women																						
Mainly employed (FT/PT)	3189	5.4	7.8	2996	6.2	7.8	2960	6.5	8.4	398	13.7	805	27.8	1695	58.5	189	6.4	2361	79.9			
Mainly homemaker	317	3.8	5.5	295	5.1	9.3	302	5.1	8.6	31	10.9	48	16.8	206	72.3	35	12.2	246	85.4			
Became homemaker	78	7.1	9.9	78	7.1	7.4	78	8.6	13.1	9	11.8	16	21.1	51	67.1	14	18.0	66	84.6			
Became employed (FT/PT)	642	3.6	6.1	642	5.0	6.3	642	5.5	6.9	60	9.5	165	26.1	408	64.5	37	5.8	593	92.4			
Mainly sick	135	5.0	7.4	131	3.3	6.7	129	4.9	9.5	2	1.7	17	14.2	101	84.2	38	30.7	83	68.0			
Other	779	4.7	8.3	576	5.5	8.1	588	5.5	8.4	53	7.9	128	19.1	489	73.0	91	13.2	525	76.2			
Total	5140	4.7	7.6	4718	5.8	7.7	4699	6.1	8.4	553	11.8	1179	25.2	2950	63.0	404	8.4	3874	81.2			

*1 Unit=8 g of ethanol. FT, full-time; PT, part-time.

Table 2 Fixed effects of unconditional and adjusted growth models of weekly alcohol consumption from age 33–50 by labour market category for men and women of the National Child Development Study (UK)

	Unconditional model			Adjusted model*				
	β	95% CI	p Value	β	95% CI	p Value		
<i>Men</i>								
Intercept†	15.84	15.23	16.45	0.000	15.46	14.83	16.08	0.000
Mainly full-time employed	(ref.)				(ref.)			
Mainly part-time or unemployed	-1.16	-6.26	3.93	0.655	-1.72	-6.81	3.36	0.507
Became unstable	1.98	-1.33	5.29	0.241	1.90	-1.39	5.20	0.257
Mainly sick or became sick	3.96	0.42	7.51	0.028	3.22	-0.33	6.76	0.075
Other	3.50	1.44	5.57	0.001	3.17	1.11	5.23	0.003
Slope‡	-0.14	-0.18	-0.11	0.000	-0.14	-0.18	-0.11	0.000
Mainly full-time employed	(ref.)				(ref.)			
Mainly part-time or unemployed	-0.17	-0.48	0.15	0.298	-0.16	-0.47	0.15	0.321
Became unstable	-0.11	-0.31	0.09	0.273	-0.11	-0.30	0.09	0.283
Mainly sick or became sick	-0.36	-0.57	-0.15	0.001	-0.36	-0.58	-0.15	0.001
Other	-0.15	-0.28	-0.02	0.024	-0.16	-0.29	-0.04	0.012
No cohabiting partner					2.18	1.41	2.96	0.000
<i>Women</i>								
Intercept†	5.40	5.13	5.67	0.000	6.32	5.77	6.87	0.000
Mainly employed (full-time/part-time)	(ref.)				(ref.)			
Mainly homemaker	-1.67	-2.57	-0.76	0.000	-1.43	-2.33	-0.52	0.002
From employed to homemaker	1.56	-0.14	3.26	0.073	1.30	-0.39	2.99	0.132
From homemaker to employed	-1.81	-2.45	-1.16	0.000	-1.65	-2.28	-1.01	0.000
Mainly sick or became sick	-0.52	-1.87	0.84	0.456	-0.81	-2.18	0.56	0.246
Other	-0.66	-1.28	-0.04	0.037	-0.59	-1.22	0.03	0.064
High qualifications					(ref.)			
Medium qualification					-1.03	-1.65	-0.40	0.001
Low qualifications					-1.42	-1.98	-0.85	0.000
Malaise score >7					0.92	0.13	1.70	0.022
Slope‡	0.06	0.04	0.08	0.000	0.06	0.04	0.08	0.000
Mainly employed (full-time/part-time)	(ref.)				(ref.)			
Mainly homemaker	0.02	-0.04	0.08	0.529	0.02	-0.04	0.08	0.488
From employed to homemaker	0.00	-0.11	0.12	0.972	0.02	-0.09	0.14	0.684
From homemaker to employed	0.05	0.01	0.09	0.024	0.05	0.01	0.09	0.025
Mainly sick or became sick	-0.11	-0.20	-0.02	0.019	-0.10	-0.19	0.00	0.046
Other	-0.01	-0.06	0.03	0.559	-0.01	-0.06	0.03	0.521
No cohabiting partner					0.50	0.16	0.83	0.004
Malaise score >7					-0.06	-0.11	0.00	0.035

*Men adjusted for partnership status. Women adjusted for partnership status, highest qualifications at age 33 and malaise score at age 33.

†Reflects alcohol consumption at age 33.

‡Change in alcohol consumption per year increase in age.

unemployed, and those who became unstable over time were non-significant.

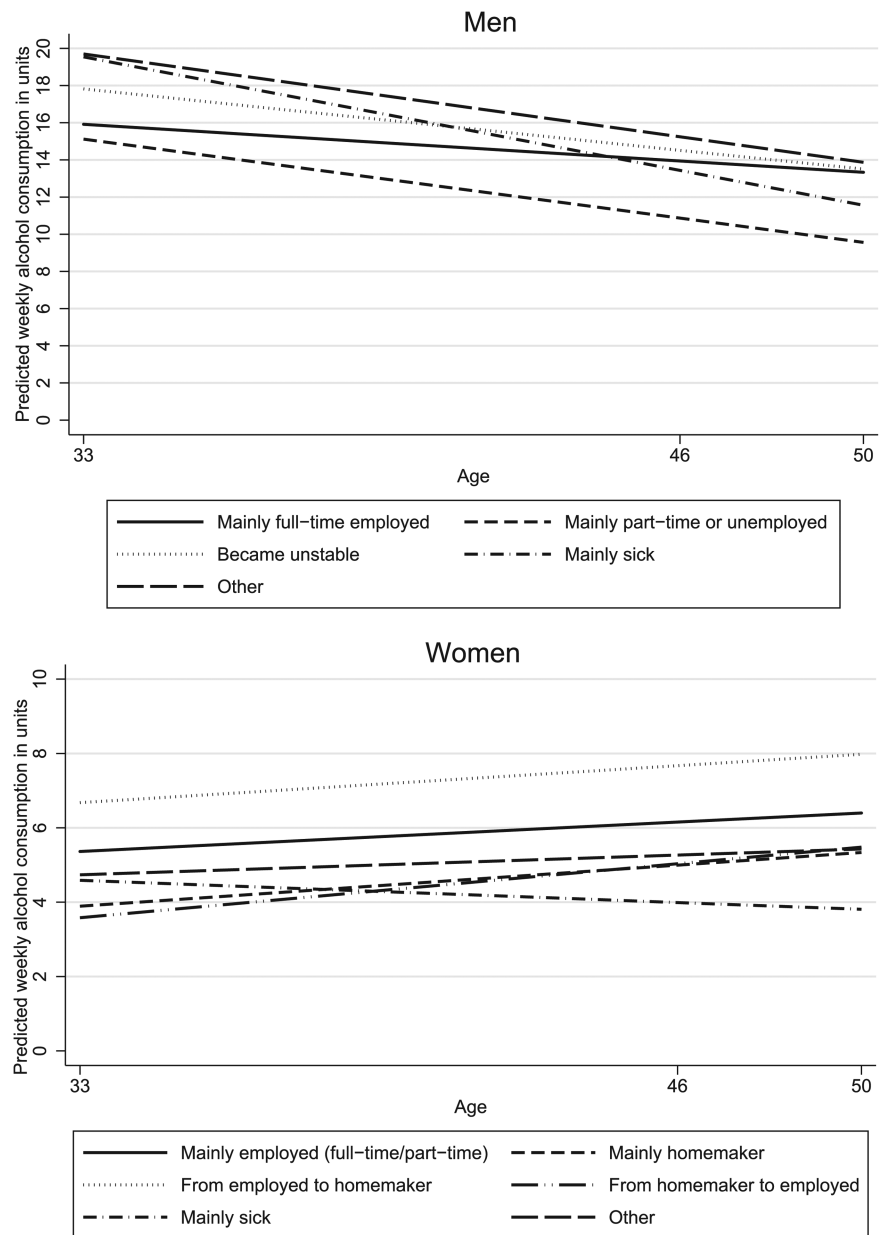
Like in men, women who were mainly sick throughout observation also made greater reductions in their alcohol intake over time ($\beta = -0.11$, 95% CI -0.20 to -0.02), however, unlike men, this group did not significantly differ in their weekly alcohol intake at age 33 ($\beta = -0.52$, 95% CI -1.87 to 0.84) than those who remained in employment throughout follow-up. Those who made the transition from homemaker to employment during follow-up consumed less alcohol on average at age 33 ($\beta = -1.81$, 95% CI -2.45 to -1.16) than those mostly employed, however, they increased their intake over time at a greater rate ($\beta = 0.05$, 95% CI 0.01 to 0.09). Those who were mainly homemakers throughout follow-up on average drank less alcohol at age 33 ($\beta = -1.67$, 95% CI -2.57 to -0.76) than the mainly employed group, but did not significantly differ in their rate of change in consumption over time.

Figure 1 illustrates predicted alcohol trajectories from age 33–50 by labour market category for men and women. Note that the scale of the y-axis on each graph differs. In men, all categories displayed a downward trajectory of alcohol consumption. In women, all labour market groups displayed an upward trend in alcohol intake except the sick group which made significant declines in their drinking.

DISCUSSION

The present study used repeated longitudinal measures to examine individuals' labour market categories as predictors of weekly alcohol consumption at age 33 and the rate of change in drinking across midlife. Our findings show different trends in alcohol intake for men and women. In men, alcohol consumption typically declined while women made modest increases in their intake from age 33 through 50. The main findings regarding different activity categories are that those mainly sick or

Figure 1 Predicted alcohol trajectories from ages 33 to 50 by labour market category for men and women of the National Child Development Study (UK).



becoming sick made substantial declines in their alcohol consumption in both sexes. Conversely, women becoming employed significantly increased their alcohol use compared with those that remained in the workforce.

The different trends in consumption observed between men and women during the period could be explained by the fact that men's drinking level at age 33 is still influenced by larger amounts of alcohol use at younger age, and that decreases in alcohol use due to 'maturing out' are still in progress. Conversely, women may increase their alcohol use after lower levels of intake due to pregnancy and motherhood.³³ Noteworthy, 81% of the women in this sample had children at home at age 33 (data not shown).

Our finding that those mainly sick made significant declines in their alcohol intake is supported by other studies that have reported health-related declines in alcohol use.⁷⁻¹⁰ We observed that men who were mainly sick during follow-up consumed significantly more alcohol at age 33 and experienced steeper declines in consumption over time. This finding supports the

need to consider the role of ill health and of former heavy drinking in studies using only current level of alcohol use.³⁴ However, it needs to be mentioned that in order to reach appropriate statistical power, the sick category used in our study combined those mainly sick with those who became sick during follow-up. It would have been preferable to examine both groups separately as it is possible that the higher alcohol intake in this group at age 33 is largely driven by those who became sick during follow-up, as those who were sick at baseline may have already been drinking lower amounts.

With respect to women, our findings are supported by those of previous studies which found an increased level of alcohol use among employed women compared with those not in the labour market.¹⁸⁻¹⁹ Although the mechanisms linking employment to women's drinking behaviour are complex, it has been suggested that while responsibility for others (eg, caring for young children) would be incompatible with alcohol consumption, work outside the home may provide women with more available income and opportunities to drink.³⁵⁻³⁶ Furthermore,

our findings suggest that homemakers entering the workforce significantly increase their alcohol intake, although the effect size is very modest. However, sensitivity analysis using those that became employed as the reference category showed that their rate of change did not differ from those that remained homemakers (data not shown). This suggests that leaving behind pregnancy and responsibility for small children may have more influence on increasing alcohol use than employment.

The findings of this study show other interesting relationships between activity grouping and drinking trajectory although they are not considered statistically significant. FT-employed men that became unstable (PT or unemployed) at the end of the period had higher weekly alcohol use at age 33 than those who stayed in FT employment. It has been argued that heavy drinking may increase the risk of downward mobility or unemployment.³⁷ Conversely, men that remained PT or unemployed throughout the period had a lower level of alcohol use at baseline and declined at a greater rate. Lower levels of alcohol use have also been found in other studies among men with weak links with the labour market.^{15 20 38} Besides, poor health as the reason for weak engagement with the labour market³⁹ that would also account for the lower drinking level within this group cannot be ruled out.

The strengths of our study mainly lie in its prospective longitudinal design, the length of the follow-up period, the large sample size and the use of several measurement occasions to define activity typologies and estimate alcohol consumption trajectories. Conversely, even though we used data on a large sample of individuals, the analysis was limited by the small size of some groups. Although we tried to incorporate the most relevant categories for men and women, some meaningful ones were not large enough to further stratify the sample. For example, as described above, separating those mainly sick throughout the period from those who became ill would have been particularly relevant. It also needs to be mentioned that our alcohol trajectories were based on estimated mean alcohol consumption levels, and that future work should consider the associations of labour market transitions with heavy alcohol use or alcohol-related disorders. Furthermore, the way we constructed labour market categories and linked those to alcohol intake over time did not consider the dynamic interplay between the two over time, and this would be an interesting avenue for future work.

Finally, some caution must be applied as to the extent to which these results can be extrapolated to the present general population. Our study population is based on a British cohort of men and women born in 1958 that does not have the ethnic diversity of today's population, although it remains broadly representative of the general population of that time, and the activity typologies examined are largely applicable to contemporary population. Furthermore, some sociocultural and historical factors may affect the observed level of alcohol use of this cohort that may differ from that of other birth cohorts.¹ According to the results of a trend analysis to disentangle age, period and birth cohort effects in alcohol consumption level in Great Britain⁴⁰ it is possible that younger cohorts may reach lower levels of alcohol use than those described in this paper.

This study contributes to a better understanding of alcohol trajectories in midlife by examining the associations of different labour market categories on alcohol use and we found that being employed is a strong determinant of alcohol use for men and women. Employment is a core activity for most of the population during midlife and its importance to structure people's life and to establish patterns of sociability make the

workplace a good target for programmes focused on health promotion and policies aimed at reducing alcohol use.

What is already known on this subject

The effect of life transitions in variation of alcohol use in midlife is not clear and studies on trends in alcohol consumption in relation to changes in labour market have yielded contradictory results.

What this study adds

Overall alcohol consumption in midlife declines for men and increases for women. Men as well as women who were mainly sick made significant reductions in their alcohol consumption, illustrating the 'sick-quitting' effect. Women entering the labour market after being a homemaker had the steepest increase in alcohol use over time.

Contributors EC, SB and AB devised the research question. EC analysed data and completed first draft of the manuscript. SB and AB provided important additional comments on the initial manuscript. EC, SB and AB agreed on the decision to submit the final manuscript. Each author certifies that he or she has participated sufficiently in the work to believe in its overall validity and to take public responsibility for appropriate portions of its content.

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Competing interests None.

Provenance and peer review Not commissioned; externally peer reviewed.

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