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Self-selection or situational stratification? A quasiexperimental study on social class differences in health behaviors in China

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Abstract

Fundamental cause theory suggests that differences in social status lead to health inequalities, with lifestyle serving as the intermediary mechanism. This study uses multiple waves of data from the China Family Panel Studies (CFPS) to first explore differences in drinking, smoking, and physical exercise across different social classes and finds that managers have significantly greater tendencies toward risky health behaviors such as drinking and smoking. Subsequently, the study examines changes in class differences in drinking behavior with respect to the anticorruption policy. The results show that neither lifestyle transition theory nor the self-selection mechanism can fully explain the phenomenon of managers drinking more. Health stratification is not a simple reflection of the socioeconomic status gradient, and there is an urgent need to rethink the theoretical framework of social stratification that emphasizes microlevel individual practices as a direct reflection of macrostructural positions.

Keywords: Fundamental cause theory, Drinking, Lifestyle transition theory, Eight-point regulation, Quasiexperiment

Introduction

Health is both the result of social stratification and a driving force for stratification and mobility. With the continuous advancement of poverty alleviation and health work in China, chronic diseases have become the leading cause of death of Chinese people. High blood pressure, smoking, high sodium/salt intake, air pollution, high blood sugar, high cholesterol, obesity, and alcohol consumption were the main risk factors for Chinese deaths in 2017 (Zhou et al. 2019). Therefore, it is evident that lifestyle has a significant impact on health.

On the one hand, from Veblen's "Theory of the Leisure Class" to Bourdieu's "Distinction: A Social Critique of the Judgment of Taste," lifestyle is considered an important barrier and boundary symbol for class segregation. The death-of-class thesis even suggests that the Marxian concept of "class" is constantly being replaced by "status groups" based on lifestyle and value orientations, with differences in identity, symbols, taste, and consumption becoming increasingly prominent (Pakulski and Waters 1996). On the other hand, individualization theory holds that in modern society, people's attachment

to Weber's concept of "social class" is gradually weakening, and an individualized lifestyle is being nurtured (Beck 2018:109). Relevant studies in China also show that the trend of "structured" social class and clear boundaries coexist with local "fragmentation" and "individualization" (Li 2017). In general, health is a goal pursued by members of all social strata and classes, and lifestyle is an important means of achieving health. Western studies have shown that the higher the socioeconomic status, the lower the proportion of smoking and drinking. By contrast, many studies in China have shown the opposite trend. This study explores the structural influence of social status on lifestyle opportunities from the perspective of the differences in healthy lifestyles across social classes. Is it true that, as fundamental cause theory suggests, the higher the social status, the healthier the lifestyle? Can individuals choose their lifestyle autonomously? Or are all individuals prisoners of the structural "iron cage" regardless of their social status?

Backgrounds: class, lifestyle, and health

Fundamental cause theory holds that socioeconomic status is the fundamental cause of health disparities and health inequalities (Link and Phelan 1995). Individuals with higher status have greater access to vital resources that reduce the likelihood of disease and death, resulting in better health outcomes (Phelan and Link 2013). Both fundamental cause theory and the explanation of the "status syndrome" phenomenon (Marmot 2008) argue that a health gradient corresponds to the socioeconomic status gradient. The basic logic is that the socioeconomic status gradient leads to unequal resource possession, which in turn leads to a health gradient. Fundamental cause theory asserts that as long as resource inequality exists, health inequality will not disappear (Phelan and Link 2013: 109).

Lifestyle is an important intermediate factor in the formation of health inequalities, and individuals with higher socioeconomic status are more likely to have a healthy lifestyle (Wang 2012). Socioeconomic status and its associated resources lead to health inequalities through four mechanisms: tools, spillovers, habits, and institutions (Freese and Lutfey 2011). Habits mainly refer to instrumental behaviors that significantly affect individual health but are not explicitly aimed at improving health. These are preferences and tendencies formed during socialization (Phelan and Link 2013: 108). Michael Marmot emphasized that the potential cause of status syndrome lies in the extent to which individuals can control their lives and participate in social life. Therefore, we should pay more attention to lifestyle factors and individual social roles beyond medical technology (Marmot 2008).

In health research, lifestyle is defined as a collective pattern of health-related behaviors that individuals engage in based on their opportunities for living (Cockerham 2010:159). This reveals the tension between structure and individual agency. Behaviors such as drinking, smoking, and exercise habits appear to be individual choices, but they are actually constrained by the opportunities for living that are available to their social class (Abel 1991; Cockerham 2010; Durrell 2009). Fundamental cause theory and the explanation of "status syndrome" both assume there are class differences in the autonomy of lifestyle choices and that the greater an individual's socioeconomic status and the more resources he or she possesses, the higher the autonomy and the more control one has over one's own life. For example, acquired effectiveness theory suggests that education

is the most important factor affecting an individual's health because it provides various resources that can enhance their control over life, increasing their likelihood of adopting healthy lifestyles (Mirowsky and Ross 2003). The "holographic" principle of fundamental cause theory suggests that the explanatory variable (socioeconomic status) plays the same role in multiple domains or pathways that affect health outcomes (Lutfey and Freese 2005), which means there are socioeconomic status gradients in all dimensions that affect health. This essentially assumes a direct correspondence between microlevel individual behavior and the macrolevel stratification structure.

However, there are two debatable aspects of the above theories. First, lifestyle is closely related to specific social and cultural contexts (Abel 1991) and to the particular stages of social development and change. For example, drinking alcohol was considered part of social etiquette in early China (Xu 2009). While Western scholars argue that smoking and alcohol consumption are indicators for measuring healthy lifestyles and can be used for cross-cultural comparisons (Cockerham 2010), their applicability in China needs to be treated with caution.

Second, the validity of the assumption of a linear relationship between social class and lifestyle autonomy is also questionable. Existing theories and research indicate that lifestyle is not only a matter of individual choice but is also deeply influenced by structural constraints. However, it is assumed that the higher social strata experience fewer structural constraints and have greater autonomy. However, these studies do not explore how structures influence higher social strata. Simmel proposed that fashion is hierarchical and a product of class division. Once the lower strata begin to imitate the fashion of the higher strata, the higher strata will abandon the old fashion and seek new fashion (Simmel 2001:72). Can the higher strata choose to stick to the old fashion to maintain their social status? The answer is likely negative.¹ Individuals may sacrifice their health to pursue social status (Lutfey and Freese 2005). Although everyone desires health and longevity, they are not individuals' only goals.²

This study explores class differences in structural constraints and individual autonomy using the differences in healthy lifestyles among social classes. The following sections first review the impact of lifestyles (especially drinking) on health, then describe the class differentiation of lifestyles and the differences between the patterns in different countries. Finally, relevant competitive explanations for that there are more risk health behaviors in high status groups in Chinese society are sorted and corresponding research hypotheses are proposed.

The impact of lifestyle on health

Lifestyle has become a core factor influencing health. Early studies have identified seven factors that influence individual health: diet, smoking, exercise, alcohol consumption,

¹ Richard A. Peterson and others proposed that the cultural consumption of the dominant class has gradually shifted from "pretentious exclusivism" to "cultural omnivorousness" (Peterson and Kern 1996), but this does not mean that the boundaries between high and low culture have been blurred or eliminated. Cultural omnivorousness simply means being more open and able to appreciate anything, rather than excluding things based on strict rules (Chan 2010:8).

² Randall Collins pointed out that researchers in the past had mistakenly treated smoking as a health issue, but sociologists should keep a clear mind and "understand that these activities are not just personal lifestyles, but rituals...the rise and fall of smoking rituals can be explained mainly in sociological terms" (Collins 2012: 413–414). This assertion also applies to drinking behaviors (Li 2009).

sleep, weight, and stress (Belloc and Breslow 1972). The first six factors are related to lifestyle, while stress is a factor that affects lifestyle. This is because stress often triggers unhealthy lifestyles, such as overeating, drinking, and smoking (Krueger and Chang 2008). Empirical studies have shown that smoking, alcohol abuse, lack of exercise, overweight, and too much or too little sleep are all detrimental to health (Kenkel 1995). The seven major risk factors for cardiovascular disease (high sodium/salt intake, high fat intake, smoking, overweight and obesity, low fruit and vegetable intake, lack of physical activity, and excessive alcohol consumption) are all closely related to lifestyle factors such as diet and exercise (Robertson et al. 2006). In the fifth stage of the disease transition, being overweight or sedentary has become a major risk factor for disease and death (Shi Zhilei et al. 2020). Smoking contributes 24–50% of male mortality in Western countries (Marmot 2006), and smoking is the second leading cause of death for Chinese people after high blood pressure (Zhou et al. 2019).

The impact of alcohol consumption is rather complex. Excessive drinking is detrimental to health, but many studies in the past have suggested that moderate drinking is beneficial for health, as it can reduce the risk of cardiovascular disease and metabolic syndrome compared to not drinking or drinking excessively (Fillmore et al. 2007). However, recent research has argued that alcohol consumption, regardless of its amount, is harmful to human health. The World Health Organization estimates that alcohol consumption causes 53% of all global deaths and 72% of all deaths in people under 69 years of age (World Health Organization 2018). Data analysis of 195 countries/regions worldwide has shown that alcohol consumption is the main risk factor for global disease burden and health damage, and the best way to reduce health damage is to abstain from drinking (GBD 2016 Alcohol Collaborators 2018). Alcohol consumption was one of the top ten risk factors for Chinese deaths in 2017 (Zhou et al. 2019), and epidemiological research on the Chinese population has also questioned the idea that moderate alcohol consumption is beneficial (Millwood et al. 2019). In addition, the impact of alcohol on health is stratified, with alcohol-related health damage and death effects significantly greater for lower socioeconomic groups than for higher ones (Katikireddi et al. 2017; World Health Organization 2018:15).

Class differences in healthy lifestyles

Impacted by neoliberalism, the important impact of lifestyle on health has been misinterpreted as individuals being fully responsible for their own health problems (Dahler-Larsen 2009:3). However, Bourdieu believes that the types of food being consumed and the ways of eating reflect the different tastes of different social classes (Bourdieu 2015:278, 295). In other words, an individual's health behavior is conditioned by restrictions and constraints of a social structure. Fundamental cause theory suggests that lifestyle is the core intermediary mechanism that forms health inequality. Unhealthy lifestyles such as smoking, excessive drinking, poor eating habits, and lack of exercise are more common in the lower classes in the West (Cockerham 2010; World Health Organization 2018), and in most high-income countries, men with low education levels are more likely to binge drink or drink excessively (World Health Organization 2018). This class difference pattern does not change with age, meaning there is a "locked-in" effect (Jones et al. 2011). These behaviors can explain 17% to 35% of the disparities in health

outcomes between the highest and lowest income and occupational status groups (Borg and Kristensen 2000). In recent years, these unhealthy behaviors have become increasingly concentrated in the bottom layer of society, which has low education levels, low income, or no work (Crimmins and Zhang 2019; Schilbach 2019).

However, the situation in China is different from that in the West. On the one hand, similar to individuals in the West, individuals in higher social classes in China are more likely to engage in physical exercise (Wang 2012; Shi et al. 2020). On the other hand, the greater the occupational status is, the more likely individuals are to smoke, drink alcohol, and have an unhealthy body shape, despite the tendency to rate their own health as better (Huang and Yin 2013; Kim et al. 2004; Chen et al. 2010). This is particularly evident among men, where a higher socioeconomic status does not necessarily lead to a healthier body shape (Wu 2021a, b). These findings not only differ from those in the West but also contradict fundamental cause theory. Why are individuals in high social classes in China more likely to engage in health-risk behaviors?

Competitive explanations for the differences

Regarding the phenomenon that high-class groups in China have more health risk behaviors, such as drinking alcohol, previous studies have proposed four explanations from theoretical and methodological perspectives: lifestyle transition theory, self-selection related to health choices, social function, and the problems of false correlation and missing variable measurement.

The first explanation, lifestyle transition theory, suggests that in the process of social transformation, the upper class and urban population in China were the first to be influenced by the West's unhealthy lifestyle (Kim et al. 2004). This theory assumes that the relationship between socioeconomic status and lifestyle depends on the level of social development. In developing countries, high-status individuals are more likely to consume processed foods rather than natural foods and are more susceptible to novel, expensive, and unhealthy Western lifestyles (Kim et al. 2004). The advantage of this theory is that it provides a dynamic explanation and indicates that it is not unique to China. Therefore, Wang (2017) posited that lifestyle transition theory explains the risk-prone lifestyle of high socioeconomic status individuals in China because they are deeply influenced by Western lifestyles.

However, this theory presents two paradoxes. First, why do high-status individuals in developing countries choose to emulate unhealthy behaviors instead of adopting healthy lifestyles similar to those of individuals in the upper-middle classes in the West? The theory's explanation is that such unhealthy behaviors are viewed as privileges of wealth. This suggests that the search for the reasons behind interclass relations within developing societies is more crucial than simply emulating the West. Second, the relationship between socioeconomic status and healthy lifestyles follows different developmental paths in developed and developing countries. Is this relationship at different stages of the same development trend, or does it follow different developmental paths? While the theory implies a U-shaped relationship between social development level and healthy lifestyles, indicating that developing countries will follow in the footsteps of developed nations, it also emphasizes that tobacco and alcohol consumption are closely related to specific societal cultures (Kim et al. 2004). Thus, there is an inherent tension and

contradiction between a single linear view of development and the diversity of societal cultures. Therefore, lifestyle transition theory falls short in explaining the greater prevalence of smoking and drinking behaviors among the high-status population in China. To test this theory, we differentiated the high-status group previously referred to in vague terms as "high status" into management and professional staff,³ which is beneficial for examining the heterogeneity within the high-status population and, thereby, testing the internal logic of lifestyle transition theory. This leads to our first hypothesis.

Hypothesis 1: According to lifestyle transition theory, the high-status group (including managers and professionals) is significantly more inclined to consume alcohol and tobacco than other social classes.

The second explanation pertains to self-selection associated with health selection theory. Self-selection refers to the possibility that certain individual traits (such as health status or noncognitive abilities) may simultaneously affect the propensity to drink and smoke as well as the attainment of occupational status. Health is an important factor affecting socioeconomic status, with individuals with better health often having higher education, income, and occupational status (Hong and Liu 2019). Health selection theory posits that individuals with better health are more likely to achieve higher socioeconomic status. However, self-selection bias occurs when individuals with better self-rated health are more likely to engage in drinking and smoking, while those with poorer health are more likely to abstain from these behaviors, even when everyone is aware of the health hazards of drinking and smoking. Additionally, the harmful effects of alcohol consumption on the health of lower socioeconomic groups are greater (World Health Organization 2018:15; Katikireddi et al. 2017). The combination of these two mechanisms may lead to a greater prevalence of drinking and smoking among individuals with higher socioeconomic status, as they have better initial health status and experience fewer negative health effects from these behaviors. Other traits may also lead to self-selection, such as the peer effect of drinking and an individual's self-control ability (Eisenberg et al. 2014; Schilbach 2019). Therefore, Qi and Wang (2010) proposed that differences in health habits are mainly due to individual choices rather than systematic differences between different socioeconomic groups. In other words, the propensity of individuals with higher socioeconomic status to drink and smoke is a spurious correlation, and the real driving forces behind this phenomenon are health selection and individual self-selection mechanisms. Accordingly, we propose Hypothesis 2, which posits the existence of self-selection mechanisms.

Hypothesis 2: According to the self-selection explanation, individuals who rate their own health as better are more likely to drink and smoke.

³ A survey conducted in Beijing showed that the proportion of middle-aged high-level intellectuals who drink and smoke were 22.2% and 20.7%, respectively, which were lower than the general population's 28.0% and 33.4% (He and Chen 2009).

The purpose of this article is to explain why the high-level group tends to have a greater frequency of alcohol consumption. Assuming that individual preferences are relatively stable over time, according to the self-selection explanation, the drinking behavior of individuals from different social classes is not systematically affected by external shocks. This study uses "Eight-Point Regulation"⁴-related policies as a quasiexperiment. Focusing on drinking behavior,⁵ we examine the changes in the drinking tendencies of different social classes before and after policy implementation. If there is a significant difference in the proportion of alcohol consumption between different social classes before and after policy shocks, there is reason to question the explanatory power of self-selection bias and seek other explanations. This leads to Hypothesis 3.

Hypothesis 3: If health selection theory and self-selection mechanisms have complete explanatory power, the drinking tendencies of high-level groups (managers and professionals) will not significantly differ before and after implementing "Eight-point Regulation"-related policies.

The third explanation emphasizes the social function of drinking and smoking. China is an "ethics-based" society (Liang 2011), and many social relationships are extensions of family ethics. Social communication at the dinner table is an important way for Chinese people to expand and maintain relationship networks (Bian 2004). In such social situations, drinking and smoking are the most common forms of interaction. Since the reform and opening up, individuals have had to rely more on relationship consumption to be self-reliant, leading to socializing through drinking during the transitional period (Li 2009). At the dining table, through toasting and other interactions, strangers gradually become acquaintances, which helps to turn official affairs into private matters that follow the logic of human relations (Yan and Wang 2013). In many cultures, drinking and smoking on different occasions are conducive to promoting social solidarity. For example, smoking has always been the center of solidarity ceremonies in Western

⁴ The "Eight-Point Regulation" refers to the "Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform" that was deliberated and adopted by the Political Bureau of the 18th Central Committee on December 4, 2012. The eighth item stipulates that "we must practice frugality and strict economy, strictly observe relevant provisions on honest and clean governance, and strictly enforce regulations on housing and vehicle allocation and other work-related benefits and living allowances." Subsequently, various regions have formulated relevant measures to implement the spirit of the Central Eight-Point Regulation, including preventing and addressing issues such as extravagant dining, mutual banquet invitations at public expense, public-funded tourism, or disguised tourism, and have reported cases of violations of the Central Eight-Point Regulation's spirit (see the website of the Central Commission for Discipline Inspection and National Supervision Commission of the People's Republic of China for details). Therefore, the implementation of this policy applies to all party members and officials, not just members of the Political Bureau of the Central Committee, as pointed out by the anonymous reviewer. Thanks for the reminder from the anonymous reviewer. Other relevant policies include the "Six Prohibitions" (including "strictly prohibiting receptions beyond standard") and the "Four Winds" (including opposition to hedonism and extravagance). As of the end of May 2014, a total of 41,880 cases of violations of the spirit of the Central Eight-Point Regulation had been investigated and handled nationwide, with 54,862 individuals facing disciplinary actions and 14,050 individuals receiving party and governmental disciplinary sanctions (source: Xinhua News Agency, "Implementing the Eight-Point Regulation and Fighting the 'Four Winds', Practicing the 'Three Strictnesses and Three Honests', and Upholding Righteousness," China Youth Daily, July 27, 2019, retrieved from xxx).

⁵ The consumption of cigarettes is related to regulations on smoking control in public places. On December 29, 2013, the General Office of the Communist Party of China Central Committee and the General Office of the State Council issued a notice regarding leading cadres setting an example by not smoking in public places. The notice stipulates that leaders at all levels are not allowed to smoke in public places where smoking is prohibited. Smoking is strictly prohibited in official activities of party and government organs at all levels, and all party and government organs should be made smoke-free. As this period falls between the two CFPS surveys of 2012 and 2014, it is difficult to distinguish the effects of the smoking ban and other related policies such as the "Central Eight-point Regulations" spirit. Therefore, in the "quasiexperiment," we only focus on drinking behavior.

armies (Collins 2012: 552). In the UK, alcohol has long been regarded as the lubricant of middle-class socialization (James 2015: 487). In China, tobacco and alcohol consumption and tobacco and alcohol gifts are important means of "building relationships" (Yang 2009: 109–111). Therefore, Zhao and Heng (2013) argued that drinking is functional in human relationships and the entire social structure.

Using alcohol consumption as a critical tool for social interaction does not imply that individuals possess unrestricted autonomy to choose whether to imbibe alcohol, even for members of the upper echelons. Within the censuring phenomenon of "publicly funded wining and dining," numerous government officials lamented the fact that frequent banquets not only deplete personal leisure time and energy but also pose a potential hazard to physical wellbeing due to excessive drinking (Yan and Wang 2013). Nonetheless, despite the presence of stringent institutional prohibitions and crackdowns, the official culture of alcohol consumption within Chinese governmental circles seems to persist with unwavering determination. This phenomenon can be attributed to alcohol consumption serving as a means of engendering trust and incentivizing behavior; thus, it helps alleviate the information asymmetry characteristic of the pyramid-like hierarchy present in contemporary Chinese local governance, the noninstitutionalized nature of governance tasks, and the resulting dearth of organizational incentives (Qiang 2019). A study conducted in the United States revealed that the current residential environment accounts for two-thirds of the variability in alcohol consumption (Hinnosaar and Liu 2021). Thus, the inclination toward alcohol consumption is not solely dictated by socioeconomic status or class but rather is influenced by the specific structural position and contextual factors operative within a given social group.

The fourth explanation pertains to methodological issues related to spurious correlation and measurement error in the dependent variable. A spurious correlation arises from the incomplete measurement of socioeconomic status, whereby the frequency of alcohol and tobacco consumption may represent dimensions of socioeconomic status beyond education and income, such as nutritional intake, health care facility utilization, and social support (Chen et al. 2010). This is essentially due to missing variables and measurement errors in the dependent variable. While alcohol and tobacco use can pose physiological risks, they can also provide psychological satisfaction (Huang and Yin 2013). Alcohol serves as a "legitimate" means of transferring and releasing emotions in human society, playing a role in awakening and relieving functions (Wang 2005:141–144). To address these methodological issues, we propose the following strategies. First, a quasiexperimental approach is adopted to address spurious correlations resulting from missing variables, examining differences in alcohol consumption among different social classes before and after introducing the "Eight-Point Regulation" policy to minimize the effects of self-selection and missing variables. The fixed effect in the difference-in-differences method can handle missing variable bias by controlling for unobserved variables that do not vary over time. Second, to control for the impact of negative emotions on health behaviors, the model incorporates psychological variables that measure negative emotions related to the satisfaction proposition.

Research design

Using cross-sectional data from the China Family Panel Studies (CFPS), this study first examines the differences in healthy lifestyles between different social classes and tests whether individuals in higher social classes are more likely to drink and smoke. Second, a quasiexperiment is constructed using the "Central Eight-Point Regulations" policy implemented in December 2012, and the difference-in-differences (DID) method is employed to analyze the CFPS data (CFPS2012, CFPS2014), with the interaction term of year and social class to examine whether the changes in social class differences between the two time points are significant and to test whether the self-selection mechanism can fully explain the phenomenon of higher social classes consuming more alcohol.

Data, variables and models

This study uses four waves of data from the China Family Panel Studies (CFPS) for 2010, 2012, 2014, and 2016 (Xie et al. 2014). The advantage of the CFPS is that it can construct quasiexperiments by comparing changes in social class differences before and after the "Central Eight-Point Regulations" policy was implemented in December 2012 and can test theories of lifestyle transformation and self-selection. Therefore, the CFPS2012 and CFPS2014 data are the focus of analysis in this study.

The dependent variables are alcohol consumption, smoking, and physical exercise, which are defined as follows: (1) Excessive alcohol consumption is a binary variable (0 = no), which asks respondents whether they have consumed alcohol more than three times a week in the past month. Thus, this study's operationalization of alcohol consumption is closer to excessive drinking, avoiding the controversy over moderate drinking mentioned earlier to some extent. (2) Smoking is a binary variable (0 = no) that asks respondents whether they have smoked in the past month. (3) The frequency of physical exercise and sport (*duanlian shenti*) is an ordinal variable, with 1–5 representing "never," "once a month," "two to three times a month," "two to three times a week," and "almost every day," respectively.

Occupational classes are divided into seven categories according to the CFPS's occupational codes: 1 = managers (unit leaders), 2 = professionals, 3 = clerical staff, 4 = service workers, 5 = agricultural laborers, 6 = manual workers, and 7 = other personnel.⁶ Self-rated health is measured on a five-point Likert scale, with 1–5 indicating "unhealthy" to "very healthy," and is treated as a continuous variable in the model. The control variables include gender, age, age squared, ethnicity, household registration, marital status, education, personal annual income (log-transformed), and depression score.⁷ The descriptive statistics for the CFPS2012 and CFPS2014 data are shown in Table 1.

⁶ The "managers" refer to unit leaders and senior managers in public and private sectors. The "professionals" include senior and junior professionals and technical personnel. The "Other" category includes military personnel, unemployed individuals, and those who could not be classified. Due to their low proportion, their coefficients were not reported in the results. There were many missing values in the occupational variable in CFPS2012, which were filled using the respondent's data from 2010.

⁷ The depression score came from the CESD scale, with values ranging from 1 to 4, with higher scores indicating more severe depression. The CESD scale used in each CFPS wave contained different items, but the scores between the different years were comparable after conversion.

Table 1 Descriptive Statistics of Variables in the CFPS2012 and CFPS2014

Variable	CFPS2012	CFPS2014
Overdrinking (No = 0)	19.33%	17.82%
Smokers (Non-smokers = 0)	34.60%	33.63%
Frequency of physical exercise		
Never	59.39%	
Once a month	3.14%	
2–3 times a month	5.94%	
2–3 times a week	8.06%	
Almost everyday	23.47%	
Male (Female = 0)	53.98%	54.04%
Han (Ethnic minorities = 0)	91.02%	90.14%
Age	45.10 (12.94)	44.32 (13.57)
Urban Hukou (Rural Hukou = 0)	23.13%	23.12%
Married (Unmarried = 0)	89.03%	86.11%
Self-rated health	2.85 (1.18)	3.12 (1.22)
Depression score	1.64 (.39)	1.40 (.48)
Public sector (Private sector = 0)	12.24%	11.78%
Log of annual income	4.66 (5.20)	4.23 (5.33)
Educational level: Uneducated	21.99%	26.20%
Primary school	21.17%	22.25%
Middle school	34.14%	29.07%
High school	13.85%	14.02%
College or above	8.85%	8.46%
Occupational status: Managers	2.74%	4.95%
Professionals	5.61%	5.78%
Clerical staff	4.70%	5.58%
Service workers	14.51%	15.18%
Agricultural laborers	51.93%	45.04%
Manual workers	19.85%	21.99%
Others	0.67%	1.48%
Sample size (N)	18,421	17,936

(1) In the rest of the paper, the simple comparisons use cross-sectional data, and the difference-in-difference analysis uses panel data, therefore the sample size changes from analysis to analysis. The sample size in this table represents the number of cases after combining the data for the difference-in-differences analysis and deleting cases with missing values for relevant variables in the propensity score analysis. The sample size for the follow-up may be smaller

(2) The figures in the table are expressed as means and percentages, with standard deviations in parentheses

Quasiexperiment

In the social sciences, where experimental studies are difficult to conduct, quasiexperimental methods are often used. Natural experiments are considered to be a type of quasiexperimental method that is ethical and close to real experiments. Although natural experiments may have external validity issues, they can provide clean and reliable causal effects. Natural experiments essentially imitate randomized controlled experiments, so the groups entering the intervention and control conditions should be as random as possible. Therefore, although natural experiments are usually constructed by social and political forces, not all policy changes or shocks can constitute a natural experiment.

This study attempts to test various explanations for why the higher-level group is more likely to drink alcohol by examining the implementation of the "Eight-point Regulation" policy. The key issue is whether the comparison before and after the policy's implementation conforms to the design of a natural experiment. Although natural experimental designs based on the "Eight-point Regulation" have been applied, as Chen and Wu (2015) noted, the concept of natural experiments commonly used in the domestic economics community is actually quasiexperimental. The key difference between natural experiments and quasiexperimental experiments is that quasiexperiments cannot achieve a random or quasirandom assignment process. The data from natural experiments with approximate random allocation can be estimated by simple multiple regression to estimate policy effects. However, in "quasiexperiments," even after controlling for other variables, differences between the treatment group and the control group still exist, so the change in results before and after treatment needs to be compared to estimate policy effects, namely, difference-in-differences estimation (Stoke and Watson 2012: 379). The implementation of the "Eight-point Regulation" policy was not aimed at improving health or lifestyles and can, therefore, be used to test the self-selection hypothesis of interest in this study.

We chose the CFPS2012 and CFPS2014 data for the quasiexperimental design and used the difference-in-differences method to compare the class differences in drinking before and after implementing the Central Eight-Point Regulation. As the policy primarily targeted managerial and white-collar workers, they formed the experimental group, while workers and farmers who were less or unaffected by the policy formed the control group.⁸ If the higher-class group drinks more due to individual preferences, even if the anticorruption policy prohibits the use of public funds for drinking, individuals can still pay for their own alcohol. If there is a significant change in class differences before and after policy implementation, it can be argued that the drinking behavior of higher-class individuals is not entirely self-determined but rather is constrained by other structural factors. An implicit assumption is that not all individuals' drinking preferences significantly changed between 2012 and 2014; that is, individuals would not drink excessively due to public funds while refraining from drinking when they have to pay for it. This is a strong assumption, but based on qualitative research results (Yan and Wang 2013; Qiang 2019), we believe it is reasonable in current society.⁹

⁸ Although the target of the anticorruption policy is Party members and those within the system, we did not use the classification of in-system and out-system to construct our experimental and control groups. This is because the two systems are not completely isolated from each other, and those outside the system often obtain resources controlled by in-system officials through dining and social interactions (Chen and Bian 2015), which is also an important aspect of the anticorruption campaign. In the cases of violating the "Central Eight-Point Regulations" reported on the websites of the Central Commission for Discipline Inspection of the Communist Party of China and the National Supervisory Commission of the People's Republic of China, many incidents involve in-system personnel accepting invitations from outside the system.

⁹ It can even be difficult for policies directly targeting alcohol consumption to achieve the desired effects. An analysis of the ban on late-night alcohol sales in a German state showed that the ban reduced hospitalization rates related to alcohol consumption among young people, but had no significant impact on older people (Marcus and Siedler 2015). The Prohibition Act implemented in the United States in February 1920 also failed to achieve success and was repealed in 1933 (Okrent 2010).

Results

First, a regression analysis was conducted on the CFPS2012 data to compare the differences in healthy lifestyle behaviors among different social classes. Second, the CFPS tracking data from 2012 and 2014 were compared using the difference-in-differences method to examine whether there were significant changes in the social class differences in healthy behaviors before and after implementing the Central Eight-Point Regulation. Finally, robustness tests were conducted using the four waves of CFPS data, including an analysis of the differences between institutional and noninstitutional populations and social class differences in health knowledge.

Class differences in healthy behaviors

Based on the characteristics of the dependent variables, we constructed binary logit models (whether drinking alcohol or smoking) and an ordered logit model (frequency of physical exercise). The results are shown in Table 2.

First, the likelihood of unit leaders drinking alcohol was significantly greater than that of other classes except for farmers, and their likelihood of smoking was only significantly greater than that of professionals. However, in terms of physical exercise and sport, unit leaders and other white-collar workers (professionals and office workers) did not differ significantly, but their exercise was significantly higher than that of blue-collar workers (service industry workers, laborers, and farmers). Therefore, the assertion in previous

Table 2 Class Differences in Drinking, Smoking, and Physical Exercise (N = 18,421)

Variable	Model 1: Overdrinking	Model 2: Smoking	Model 3: Physical Exercise
Male (Female = 0)	2.501 (.065) ***	4.204 (.075) ***	.068 (.032) *
Age	.088 (.011) ***	.044 (.010) ***	.002 (.008)
Age/100	-.072 (.012) ***	-.047 (.011) ***	.021 (.008) *
Han (Ethnic minorities = 0)	-.697 (.070) ***	.088 (.074)	-.359 (.055) ***
Married (Unmarried = 0)	.139 (.076)	-.028 (.069)	-.068 (.047)
Urban Hukou (Rural Hukou = 0)	-.115 (.061)	.092 (.059)	.148 (.041) ***
Educational level: Uneducated	-	-	-
Primary school	-.067 (.067)	-.028 (.070)	.213 (.054) ***
Middle school	-.103 (.065)	-.186 (.067) **	.375 (.052) ***
High school	-.157 (.082) #	-.243 (.081) **	.620 (.061) ***
College or above	-.375 (.117) **	-.735 (.109) ***	.712 (.073) ***
Occupational status: Managers	-	-	-
Professionals	-.796 (.151) ***	-.431 (.141) **	.006 (.079)
Clerical staff	-.513 (.139) **	-.130 (.135)	.093 (.082)
Service workers	-.504 (.122) ***	-.136 (.122)	-.233 (.075) **
Agricultural laborers	-.611 (.117) ***	-.019 (.117)	-.333 (.078) ***
Manual workers	-.317 (.115) **	-.020 (.117)	-.425 (.075) ***
Log of annual income	.020 (.005) ***	.014 (.005) **	.006 (.004)
Self-rated health	.103 (.019) ***	.036 (.019) *	.032 (.015) *
Depression score	-.169 (.062) **	.191 (.060) **	-.228 (.043) ***
Pseudo R ²	18.33%	36.81%	1.91%
Log Likelihood	7381.2	7505.3	20,393.4

(1) Models 1 and 2 are dichotomous logit models, and Model 3 is an ordinal logit model. The intercepts are not reported

(2) # P < 0.1, * P < 0.05, ** P < 0.01, *** P < 0.001. (3) Standard deviation in parentheses

studies that "individuals with higher socioeconomic status tend to have more severe tendencies to drink and smoke" is somewhat inaccurate. A more accurate statement would be that the tendency of unit leaders (managers) to drink and smoke is more severe, while that of professionals is significantly lower than that of other occupational groups. Thus, Hypothesis 1 was not supported.

Second, individuals with higher socioeconomic status were more inclined to participate in physical exercise, which is consistent with the fundamental cause theory. However, the key theoretical question is why there is such a large difference in healthy behaviors between managers and professionals. Hypothesis 1 was rejected, indicating that the explanation of lifestyle transition theory is unsatisfactory.

Third, the self-rated health coefficient in all three models in Table 2 was significantly positive, which preliminarily verifies Hypothesis 2, namely, that risky health behaviors such as drinking and smoking are self-selected, and individuals who consider themselves to be in better health are more likely to drink and smoke. Even after controlling for self-rated health, the tendency of unit leaders to drink alcohol remained significantly greater than that of the other groups. However, the model in Table 2 cannot address self-selection caused by inherent individual preferences, i.e., individuals who obtain managerial positions may be more inclined to drink alcohol, or other traits simultaneously affect drinking preferences and occupational attainment. Therefore, quasiexperimental analysis using the difference-in-differences method will be used next to control for self-selection effects.

Changes in the class difference in drinking

To investigate the reasons why managers tend to drink more, we tested Hypothesis 3 using the "Central Eight-Point Regulation" and other anticorruption policies implemented in December 2012 as a "quasiexperiment" to analyze the changes in alcohol consumption among different social classes between 2012 and 2014. First, we described and compared the drinking rates among different social classes in the three surveys conducted in 2010, 2012, and 2014.

Figure 1 compares the data from the three cross-sectional surveys conducted between 2010 and 2014, while Fig. 2 compares the tracking samples from the three surveys. Both figures show that the drinking rate of unit leaders is obviously higher than that of other occupational groups (except for manual workers), with their drinking rate being at least twice that of professionals. The change patterns in the two figures are basically consistent, with a sharp decline observed in the drinking rate of unit leaders from 2012 to 2014, while such a significant change was not observed in other occupational groups. This change in unit leaders does not continue the previous trend, as their drinking rate increased from 2010 to 2012. Therefore, the main reason for the sharp decline is likely the impact of the "Eight-Point Regulations" and related policies.

A simple comparison revealed the impact of anticorruption policies as a quasiexperiment on the drinking behaviors of different occupational groups. However, a logit regression model needs to be constructed to control for confounding effects. Testing Hypothesis 3 requires examining the differences in drinking tendency changes among different occupational groups between 2012 and 2014 to clarify whether changes in

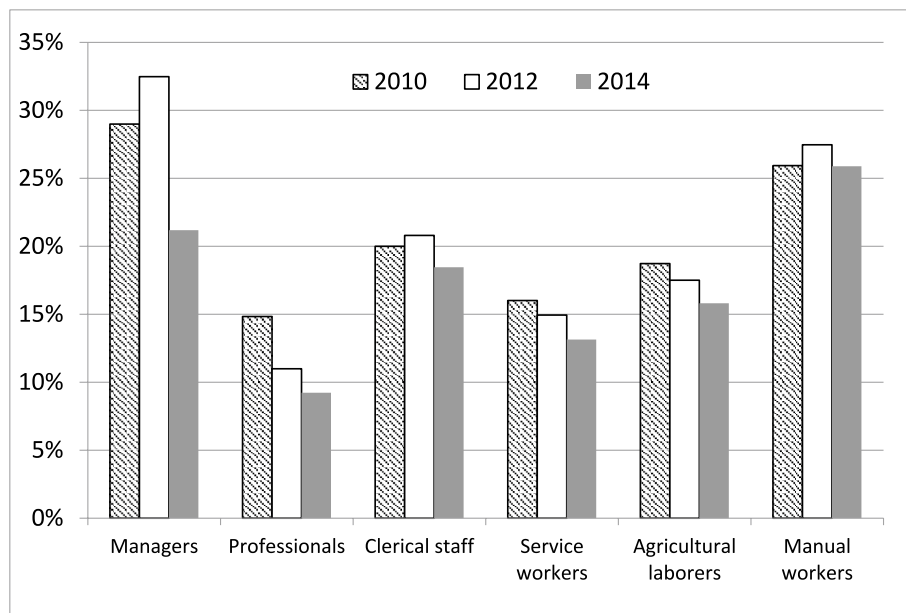


Fig. 1 Changes in Drinking Level by Occupation (Cross-sectional Data of CFPS2010, CFPS2012 and CFPS2014)

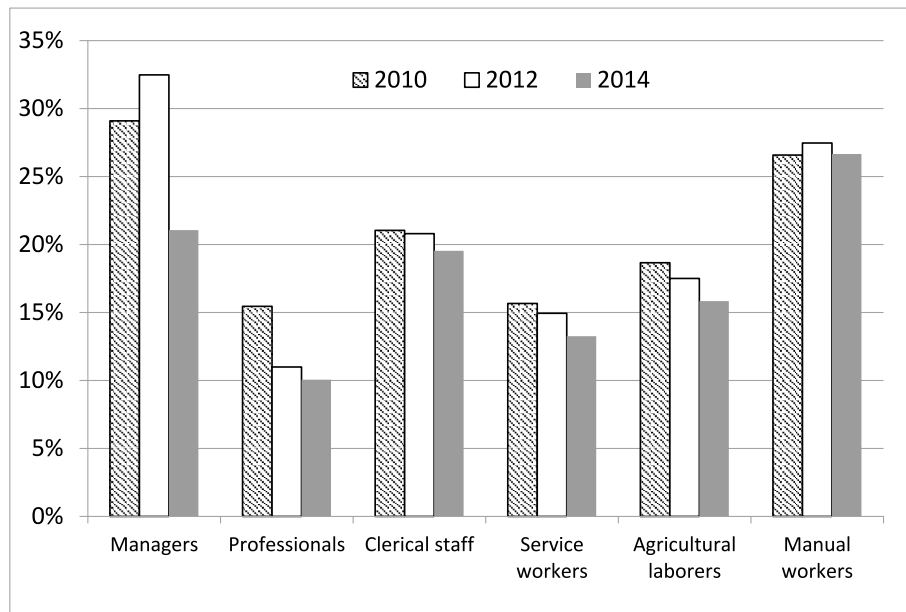


Fig. 2 Changes in Drinking Level by Occupation (Panel Data of CFPS2010, CFPS2012 and CFPS2014)

drinking tendencies are unique to a certain occupational group or only reflect overall trends. The difference-in-differences method can eliminate the effect of overall trends and be used to analyze the differences in the magnitude of changes in drinking behavior among different occupational groups. We merged the CFPS2012 and CFPS2014 data and added a year variable (Model 4) and interaction terms between occupation and year

Table 3 Logit Models on Class Disparity in Overdrinking (CPFS2012-CPFS2014)

Variable	Model 4 No interaction	Model 5 Agricultural laborers as reference group	Model 6 Professionals as reference group
Occupational status: Managers	–	.189 (.100) #	.370 (.146) *
Professionals	– .556 (.105) ***	– .182 (.125)	–
Clerical staff	– .329 (.093) **	– .001 (.101)	– .190 (.127)
Service workers	– .286 (.081) ***	.062 (.075)	– .127 (.110)
Agricultural laborers	– .363 (.077) ***	–	– .189 (.100) #
Manual workers	– .105 (.075)	.265 (.060) ***	– .076 (.100)
Year 2014 (Year 2012 as reference group)	– .126 (.032) ***	– .103 (.046) *	– .095 (.154)
Year × Occupational status:			
Managers		.418 (.145) **	.425 (.207) *
Professionals		–.007 (.161)	–
Clerical staff		.083 (.134)	.090 (.199)
Service workers		.032 (.096)	.039 (.176)
Agricultural laborers		–	.007 (.161)
Manual workers		– .011 (.071)	– .004 (.164)
Pseudo R ²	18.13%	18.16%	18.16%
Log likelihood	14,289.1	14,284.3	14,284.3

(1) Control variables and intercepts not reported. Control variables include: gender, age, age squared, ethnicity, hukou, marital status, self-reported health, education, log of income, and depression level

(2) #*P* < 0.1, **P* < 0.05, ***P* < 0.01, ****P* < 0.001

(Models 5 and 6) to analyze the differences in drinking behavior changes among different occupational groups, as shown in Table 3. The year coefficient in Model 4 is negative and statistically significant, indicating that the overall proportion of drinkers in 2014 was lower than that in 2012. Model 5 uses agricultural laborers as the reference group for occupation, and the year interaction term coefficient is significant only for managers, indicating that the change in drinking behavior among managers is significantly greater than that among agricultural laborers, while the change in drinking behavior

Table 4 Difference-in-Difference Results of Class Disparity in Overdrinking

	Estimation method	2012–2014	2010–2012	2014–2016
Logit models	Pooled data	– .423 (.207) *	.566 (.199) **	.252 (.198)
	Population average	– .443 (.175) *	.539 (.167) **	.253 (.179)
	Fixed effects	– 1.324 (.480) * [3210]	.733 (.348) * [3524]	.335 (.421) [1996]
Linear probability models	Pooled data	– .086 (.027) **	.067 (.029) *	.017 (.021)
	Population average	– .088 (.023) ***	.062 (.024) *	.021 (.019)
	Fixed effects	– .109 (.031) ** [36,688]	.050 (.025) * [34566]	.022 (.031) [31,487]
Sample size (N)		36,353	34,450	30,728

(1) The table reports the coefficient of the interaction term between the unit leader and the year, with professionals as the reference group for occupational status; the reference year is the previous year, that is, the reference years for the three models are 2012, 2010, and 2014, respectively

(2) The numbers in square brackets represent the number of cases in the fixed effects model. The control variables are the same as those in Table 3

(3) #*P* < 0.1, **P* < 0.05, ***P* < 0.01, ****P* < 0.001

(4) Standard deviation in parentheses

among professionals is not different from that among agricultural laborers. Therefore, Hypothesis 3 is only partially supported; that is, only the drinking tendency of managers in high-level groups changed significantly after the policy was promulgated. There are significant differences in the impact of policies on the drinking tendencies of managers and professionals.

To test Hypothesis 3, Model 6 used professionals as the reference group to directly display the coefficient of interaction between managers and the year variable. To obtain robust results, we constructed three models: pooled data, population average (PA), and fixed effects (FE). Because the logit model is not suitable for analyzing interaction terms, a corresponding linear probability model was estimated. As shown in the first column of Table 4 (2012–2014), regardless of whether the logit model or the linear probability model was used, the results of the three estimation methods were similar. There was a significant difference in the magnitude of the change in drinking tendency between managers and professionals. The interaction coefficients were negative, indicating that the decrease in the drinking tendency of managers during 2012–2014 was significantly greater than that of professionals, which indicates a significant change in the drinking tendency of managers before and after the policy was issued. Therefore, the difference-in-differences results do not support Hypothesis 3. Self-selection cannot fully explain the stronger drinking tendency of managers; rather, their health behaviors are constrained by their own structural status and context.

Robustness check

First, the parallel trend assumption of the difference-in-differences (DID) method requires examining the change in trend before and after policy implementation. As anticorruption policy intervention is persistent, it is expected that there will be significant differences in the trends before and after policy implementation. The second and third columns of Table 4 present the results of occupational differences before the policy implementation (2010–2012) and during the continuous policy implementation stage (2014–2016), respectively. The results in the second column for 2010–2012 indicate that, compared to professionals, managers had a faster increase in their drinking tendencies before implementing the "Central Eight-Point Regulation". The results in the third column for 2014–2016 show that there was no significant difference in drinking tendencies between managers and professionals during the continuous policy implementation stage. This result does not conform to the parallel trend assumption, which means that the trend in drinking tendencies between managers and professionals before policy intervention may have already been different. However, this difference in trend indicates that the DID method estimation is not precise and underestimates the effect of policy intervention. Therefore, we are more confident in attributing the sharp decline in managers' drinking tendencies during 2012–2014 to the policy effect, and the patterns of occupational differences revealed by the quasiexperimental and DID methods are robust.

The second aspect of robustness testing involves comparing the effects of the anticorruption policy on individuals within and outside the public sector and system. The results in Table 5, Column 1, show no significant difference in the change in drinking behavior between those inside and outside the system. This suggests that the "eight-point

Table 5 Difference-in-Difference Results of sectoral Disparity in Overdrinking Using Logit Models

Model	2012–2014	2010–2012	2014–2016
Pooled data	– .002 (.087)	– .165 (.081) *	.000 (.092)
Population average	– .044 (.073)	– .168 (.065) *	.005 (.081)
Fixed effects	– .298 (.167) # [3210]	– .352 (.139) * [3524]	.018 (.166) [1996]
Sample size (N)	36,354	34,450	30,728

(1) The table reports the coefficients of the interaction term between being inside/outside the public sector and year. Being outside the system is the reference group. Other model settings are the same as in Table 4

(2) # $P < 0.1$, * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

regulation" policy affects not only individuals within the system but also those outside of it.

The reason for this is that the social and dietary behaviors of those within and outside the system are not completely isolated but rather have significant interaction. In Column 2 of Table 5, the results show that the change in drinking behavior of those within the system was smaller or greater than that of those outside of it during the 2010–2012 period. Specifically, the decline in the proportion of drinking among external managers (32.18–20.36% = 11.82%) was greater than that among internal managers (33.12–27.06% = 6.06%) from 2012 to 2014. Therefore, although external managers were not the target group of the anticorruption policy, the policy's intervention in dietary and social behavior had a significant impact on them as well.

Finally, we tested the hypothesis of no difference in health knowledge between managers and professionals. In this study, professionals were used as the control group for managerial staff to test the lifestyle transition theory and self-selection mechanism; however, another possible explanation is that these two groups may have different health knowledge, which affects their lifestyle and health behaviors.¹⁰ Although the model controlled for education level, there is still a lack of direct testing for the hypothesis of no difference in health knowledge. Therefore, we used two sets of data to examine the hierarchical differences in health knowledge: first, we used the attitudes of respondents toward traditional Chinese medicine in the CFPS data as a proxy variable for health knowledge; and second, we used three questions on health attribution from the 2011 China General Social Survey (CGSS) data.¹¹ The results of the multinomial logit model show no significant difference in the choice of questions between managers and professionals. Therefore, we conclude that there is no difference in health knowledge between managers and professionals, and the hypothesis of no difference in health knowledge in this study is credible. Therefore, the phenomenon of higher alcohol consumption among

¹⁰ Fundamental cause theory holds that there is a social and economic gradient in the dissemination of health knowledge, with higher socioeconomic groups having more extensive health knowledge. However, Bruce G. Link and others have pointed out that in rare cases, higher socioeconomic groups may have erroneous health knowledge (Link and Phelan 2010:7). One example is the popularity of sunbathing among the Western middle class, which was believed to be beneficial for health, but later medical research revealed a significant correlation between excessive exposure to sunlight and skin cancer (James 2015:485).

¹¹ The CFPS question asks, "Would you seek medical treatment from traditional Chinese medicine if it were available?" with three answer choices: "yes," "no," or "indifferent." The three CGSS2011 questions ask respondents whether they agree or disagree with the following statements: "Serious health problems are caused by people's own behavior (such as smoking, drug use)," "Serious health problems are caused by genetics," and "Serious health problems are caused by poverty." The answer choices for each statement are "agree," "disagree," or "neither agree nor disagree." The results of the four multicategory logit models are not reported due to space limitations, but interested readers may request them from the author.

managers is more likely to originate from their position in the class structure and micro-social contexts related to social interactions.

Conclusions and discussion

This study aims to explore how social class status affects health-related lifestyles using ordinary regression models and quasiexperimental difference-in-differences analysis of data from the Chinese Family Panel Survey. We draw two main conclusions: first, there are class differences in health-related lifestyles, with a class gradient observed in physical exercise, where higher-class individuals have healthier lifestyles, and a "reverse class" gradient is observed in alcohol consumption, where managers have a significantly greater tendency to drink than professionals, workers, and agricultural laborers. Second, self-selection mechanisms cannot fully explain the stronger drinking tendencies among managers, and we need to explore other theoretical explanations.

There is no difference in health knowledge among social classes; therefore, the explanation of lifestyle transition theory is not tenable. Second, quasiexperiments indicate that self-selection mechanisms are insufficient to explain the higher alcohol consumption rates of managers. After the implementation of the "eight-point code" policy, the alcohol consumption rates of managers significantly decreased, indicating that their drinking tendencies are not solely influenced by individual preferences or cultural traditions but rather by their structural position. The ensuing question is as follows: What structural limitations are they subject to? As qualitative research suggests, drinking has an important social function in the institutional structure in which managers operate, forcing individuals to consume large amounts of alcohol and temporarily set aside health considerations in pursuit of social status and economic benefits. Once anticorruption policies change and limit this institutional structure, the drinking behavior of managers changes significantly. However, the drinking behavior of other social class groups is not significantly affected by such measures. Therefore, an individual's social structural position and policy environment significantly impact their drinking behavior. However, drinking as a social medium is not unique to China; in the Western "carousing rituals" described by Collins (2012), alcohol is also an important social medium. Why is alcohol consumption a social medium particularly important for managers in China? In general, cultural factors make it difficult to explain why cultural influences differ greatly among different social class groups. These questions require further research into microlayering mechanisms.

Fundamental cause theory emphasizes the impact of resources possessed by individuals occupying different structural positions. Although an individual's level of resource possession is usually proportional to his or her social class, this does not necessarily mean that structural constraints always favor the higher class and suppress the lower class. In contemporary society dominated by chronic diseases, a healthy lifestyle still requires personal practice by individuals. High social status does not automatically lead to optimal health outcomes. As Pierre Bourdieu and Jean-Claude Passeron argued, "High social status does not automatically or entirely benefit those who come from it" (Bourdieu and Passeron 2002:33). The higher class may also have to practice risky health behaviors due to structural constraints, a topic that has rarely been discussed in stratification research. The death-of-class thesis argues that the class concept in Marxism no

longer works in modern society, and the diversification and individualization of lifestyles and consumption trends in contemporary society have shifted the focus toward Weberian concepts of status groups and social class. However, the following fundamental question remains: How are traditional class or status attributions in contemporary society related to individuals' daily microlevel practices? Collins (2012) criticizes previous theories as being too abstract and macrolevel, failing to capture the reality of contemporary social stratification. His theory of interaction ritual chains attempts to introduce symbolic interaction theory by examining stratification in microcontexts. Collins argues that in contemporary society, the microcontextual reality is no longer closely associated with power and wealth, and direct social experiences are less derived from macrolevel class identity status and more from situational stratification mechanisms (Collins 2012:9, 401). Individual sociology also believes that in the more individualized second stage of modernity, stratification theory, which focuses excessively on group attributes, is out of step (Wu Zhen 2021). Both individual sociology and Collins' situational stratification turn to microinteraction theory, positing that the macrolevel perspective of sociological stratification is no longer the only choice for researchers (Martuccielli and Sangalli 2020:41).¹² This study also confirms this finding to some extent. Drinking behavior is not directly determined by an individual's political and economic resources but is often determined by situational stratification. Qualitative research indicates that to motivate subordinates to be "arrogant" or "disrespectful," superiors often have to adopt indiscriminate drinking strategies (Li 2009; Qiang 2019). In other words, there is no simple mapping between the hierarchical positions in traditional stratification structures and individuals' daily life practices. This does not mean that traditional socioeconomic resources are no longer important; rather, to better understand the stratification logic and life practices in contemporary society, it is necessary to carefully examine the interaction between the structure and individuals of different classes and the process of transforming social class resources into microcontextual advantages.

This study has two main limitations. First, the feasibility of a quasiexperimental design is flawed. On the one hand, the "Eight-point Regulation" policy is not a short-term external impact but rather a series of continuous anticorruption policies, which makes it difficult to clarify which factors are at play. On the other hand, the assumption that individuals do not change their drinking preferences due to public expenditure is strong and requires further verification. Second, due to the adoption of indirect testing methods to examine the micro explanation emphasizing socializing function, it is difficult to directly test and explain the differences in drinking behavior between managers and professionals. Moreover, quantitative analysis still cannot clearly explain how managers' structural positions affect their drinking behavior.

Abbreviation

CFPS China Family Panel Studies

¹² According to the historian Xudong Hou (2018), the previous various "entity-based" group theories have the danger of simplifying the complex and multidimensional history, and narrowing the words and deeds of ancient people into a single direction. He pointed out that even emperors lived in the relationships with their courtiers, and could not escape the situation of "rulers" being dominated and shaped by them.

Acknowledgements

A preliminary version of the article was presented in the "2016 Symposium on Sociological and Demographical Methods" (Nanjing) and "2019 CASS Forum-Road and Experience in the Founding of New China" (Kunming). We want to thank Wenhong Zhang, Yuxiao Wu, Jun Li, Hao Dong and other colleagues for their comments and suggestions.

Author contributions

YH designed the study and conducted research, DZ and JS contributed in analysis and modeling.

Funding

This study was supported by the National Social Science Fund for Young Scholars (Grant No. 17CSH063) and Major Program of National Fund of Philosophy and Social Science of China (23ASH013).

Availability of Data and Materials

We based our study on data, publicly available of the China Family Panel Studies (CFPS 2010-2016).

Declarations

Competing interests

The authors declare they have no competing interests.

Received: 14 October 2023 Accepted: 5 June 2024

Published online: 17 June 2024

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