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RESEARCH ARTICLE

Distinct associations of computer/mobile devices use and TV watching with depressive symptoms in adults: A large population study in China

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Abstract

Background: Recent evidence shows that screen time may be an important risk factor for mental health. The aim of this study was to examine the association of computer/mobile devices (CMD) use and TV watching separately with depressive symptoms in a large representative sample of Chinese adults.

Methods: A sample of 18,994 adults in Tianjin, China was studied in a cross-sectional analysis. Depressive symptoms were assessed using the Self-Rating Depression Scale (SDS). CMD use and TV watching time were self-reported and divided into five categories. The associations were estimated by odds ratios (ORs) using logistic regression models adjusted for multiple confounders.

Results: The prevalence of elevated depressive symptoms was 16.3% (SDS ≥ 45). For CMD use, the ORs of the depressive symptoms decreased across time levels. Compared with the least use time (<1 hr/day), multivariable-adjusted ORs (95% confidence interval [CI]) of other time categories for elevated depressive symptoms were 0.78 (0.66, 0.91), 0.67 (0.57, 0.80), 0.65 (0.54, 0.77), and 0.77 (0.62, 0.96) respectively. For TV watching, the ORs of the depressive symptoms increased across time levels. Compared with the least watching time (<1 hr/day), multivariable-adjusted ORs (95% CI) for elevated depressive symptoms across the time categories were 1.00 (0.89, 1.12), 1.28 (1.11, 1.48), 1.26 (0.98, 1.60), and 1.95 (1.10, 3.35), respectively.

Conclusions: These findings suggested that different types of screen time may play different roles in the mental health of general adults. Further studies are needed to clarify the reasons for these distinct associations.

KEYWORDS
computer/mobile devices use, depressive symptoms, screen time, TV watching

1 | INTRODUCTION

The use of electronic media with a screen has become increasingly integrated into people's lives. Screen time is defined as the viewing or use of anything with a screen, including TV, computers, and mobile devices such as smartphones and tablets. Higher screen time shows significant associations with major chronic diseases like CVD (Stamatakis, Hamer, & Dunstan, 2011), diabetes, obesity (Vandelanotte, Sugiyama, Gardiner, & Owen, 2009), and all-cause mortality (Ford, Bergmann, Boeing, Li, & Capewell, 2012).

Depression is a major public health issue with high prevalence rates all over the world. World Health Organization estimates that 350 million people suffer from depression, which is projected to become the second leading cause of illness in 2020 (World Health Organization, 2012). Recently, the relationship between screen time and depression has gained attention from researchers, though the major focus was limited to TV and computer. Most of these studies found a consistent association between TV watching and impaired mental health (Hamer & Stamatakis, 2014; Hamer, Poole, & Messerli-Burgy, 2013; Lucas et al., 2011; Sanchez-Villegas et al., 2008). On the contrast, the results about computer use are less consistent. While some studies found a positive association between computer use and depression (Madhav, Sherchand, & Sherchan, 2017; Sanchez-Villegas et al., 2008), some were not (Thomée, Eklöf, Gustafsson, Nilsson, & Hagberg, 2007; Thomee, Harenstam, & Hagberg, 2012). Several studies even suggested possible beneficial effects of computer use on cognition and mental health (Kesse-Guyot et al., 2012; Shaw & Gant, 2002). These findings suggest that types of screen time may not be similarly associated with mental health. However, limited studies have been conducted to evaluate the possible different mental health effects of varied screen time and the results are still mixed. A cross-sectional study in the Netherlands showed that people with depressive disorder spend more time in sedentary computer use and people with comorbid anxiety and depressive disorder spend more time in TV watching (de Wit, van Straten, Lamers, Cuijpers, & Penninx, 2011). Another study with employed adults in the UK revealed that both TV watching and computer use were adversely associated with mental well-being in women, but only computer use was adversely associated with mental well-being in men (Atkin, Adams, Bull, & Biddle, 2011). On the contrast, a study with Japanese older adults reported that TV watching, but not computer use, was associated with greater psychological distress (Kikuchi et al., 2014). Another similar study with English older adults also found that TV watching time was associated with higher depressive symptoms and poorer cognitive function, while the computer use was associated with lower depressive symptoms and higher cognitive function (Hamer & Stamatakis, 2014).

The discrepancies of these findings may be attributed to the different characteristics of the study populations. As we know, there is still no research assessing the relationships between types of screen time and depressive symptoms in general adults. Elucidating a better understanding of the specific association between duration and types of screen time and mental health may be critical to developing more effective strategies to prevent or treat depression in general adults. Moreover, as the spread of mobile devices usage, smartphones and tablets become more and more popular among the general population. In January 2016, the Ministry of Industry and Information Technology of China announced that over 1.3 billion Chinese people (95.5%) have their own mobile phones (The Ministry of Industry & Information Technology of China, 2015). Therefore, the inclusion of mobile devices for the examination of the relationship between screen time and mental health is warranted.

Thus, the present study aimed to examine the association of computer/mobile devices (CMD) use and TV watching separately with depressive symptoms in a large representative sample of adults in China.

2 | METHODS

2.1 | Study participants

This analysis used data from the Tianjin Chronic Low-grade Systemic Inflammation and Health (TCLSIH) Cohort, which is a large prospective cohort study of inhabitants living in Tianjin, China. An extensive description of the objectives, rationale, and methods of TCLSIH was reported elsewhere (Gu et al., 2017). In short, the cohort was based on annual health examinations conducted in Tianjin Medical University General Hospital Health Management Center and focused on the relationship between chronic low-grade systemic inflammation and health status. Participants who had received physical examinations and completed a detailed lifestyle questionnaire were recruited. Written informed consent was obtained from every participant, and the study protocols were approved by the Institutional Review Board of Tianjin Medical University.

The recruitment of participants started in January 2013 and is permanently ongoing. Up to December 2016, data from 21,469 participants were coded and prepared to be analyzed. Participants who did not complete data collection on screen use or depression scale (n = 1,023), body mass index (BMI) and physical activity (PA; n = 93) were excluded. The complete-case analysis was used because the amount of missing data was relatively small (5.2% of all the data). Participants who were removed from the sample because of missing data (n = 1,116) did not differ significantly from those who remained in the sample in terms of their ages, BMI, and levels of PA (all p values for t test are >0.2). Moreover, those participants who have a history of cardiovascular disease (n = 1,137) or cancer (n = 222) were also excluded. Thus, our final sample included 18,994 participants (mean age: 42.2; standard deviation [*SD*]: 11.9 years; males: 54.4%).

2.2 | Measures

2.2.1 | Assessment of screen time

Overall CMD use time was assessed by the following questions: "How many hours per day do you spend using a computer and mobile devices, for example, smartphones or tablets?" TV watching time was assessed by asking participants "How many hours per day do you spend watching television?" For both questions, participants could

choose an answer from one of the five categories: <1 hr/day, 1–3 hr/day, 3–5 hr/day, 5–10 hr/day, and >10 hr/day. Questions were asked for both weekday and weekend use.

2.3 | Assessment of depressive symptoms

Depressive symptoms were assessed by the Chinese version of the Self-Rating Depression Scale (SDS), which has been proven to be a valid measure for the Chinese population (Lee et al., 1994). There are 20 items rated on a 4-point scale. Summary scores range from 20 to 80, with higher scores indicating the elevated depressive symptoms. The cut-off point of ≥45 was used to define depressive symptoms in the main analysis (Xu et al., 2004; Zung, 1965). Scores higher than this cut-off point are considered to reflect increased depressive symptoms. Other cut-off points (40 and 48) and continuous scores of SDS were also used in the sensitivity analyses.

2.4 | Assessment of covariates

All participants received standardized physical examinations, which included measurements of height, weight, waist circumference (WC), blood pressure, fasting blood sugar, and plasma lipids (Su et al., 2016; Yu et al., 2015). BMI was calculated as weight (kgs) divided by height (m) in squared. Metabolic syndrome (MetS) was defined according to the criteria of the American Heart Association Scientific Statement (Alberti et al., 2009). Sociodemographic variables including sex, age, education, occupation, household income, and social connections (including marital status, cohabitants, and amount of social contact) were also collected. Sleep duration, total sitting time and smoking/drinking status were obtained from the questionnaire. Dietary intake in the last month was evaluated using a 100-item validated food frequency questionnaire. Detailed information has been described elsewhere (Wang et al., 2018). According to the factor analysis, dietary patterns were categorized into fruits and sweets pattern, healthy foods pattern, and animal foods pattern. Total energy intake was calculated by combining the information obtained from the food frequency response with the Chinese food composition tables (Yang, Wang, & Pan, 2002).

Level of PA in the last week was assessed using the short version of the International Physical Activity Questionnaire (Craig et al., 2003). Metabolic equivalent (MET) hours per week were calculated for walking, moderate, and vigorous activities respectively according to the following formulas: MET coefficient of activity × duration (hr) × frequency (day) (Craig et al., 2003). Total PA level was calculated by summing scores of all activities. Internet addiction was assessed by asking participants the following questions "Are you addicted to internet use" with four options: none, light, moderate, and severe.

2.5 | Statistical analysis

Continuous variables were summarized as geometric mean ± *SD* if normally distributed, or median (interquartile range) if nonnormally distributed. Categorical variables were summarized as proportions. Depressive symptoms were analyzed as binary variables using 45 as the cut-off point. Differences in covariates between the depressive and nondepressive participants were examined by analysis of variance for continuous variables or by χ^2 tests for categorical variables. Logistic regression models were fitted to assess the associations between CMD use or TV watching categories and depressive symptoms, using the lowest category (<1 hr/day) as the reference group. For analyses of both screen categories, three different models were fitted: Model 1: A crude univariate model; Model 2: Adjusted for age, sex, BMI, and WC; and Model 3: Adjusted for age, sex, BMI, WC, household incomes, educational levels, occupations, marital status, cohabitants, social contact, PA, sitting time, sleep duration, total energy intake, MetS, smoking status, drinking status, internet addiction, dietary patterns, and TV watching time (for CMD use) or CMD use time (for TV watching). The final multivariable logistic analysis was performed with the forced entry of all factors considered to be potential covariates. All *p* values for linear trends were calculated by using the types of screen time. Significance level was set at 0.05. All the statistical analyses were performed by using SAS (version 9.1; SAS Institute, Cary, NC).

3 | RESULTS

A total number of 18,994 participants were included in the final analysis. Of all the participants, the mean SDS score was 36.64 with an *SD* of 7.59; 16.3% were classified as having elevated depressive symptoms (SDS ≥ 45). The average daily TV watching time was 1.63 hr (*SD*, 1.40 hr) in this sample, and the average daily CMD use time was 5.07 hr (*SD*, 3.05 hr). TV watching time and CMD use time was negatively correlated (Pearson's correlation coefficient = −0.24; $p < .0001$). Participant characteristics according to depressive symptoms categories are presented in Table 1. Compared with those who were not depressed, the depressed participants were more likely to be female, less likely to be married and have visiting friend, lower household income and education level, lower PA level and energy intake, lower scores on the heathy food pattern, lower BMI, and WC. Depressive symptoms were positively associated with internet addiction. The depressed participants spent more time on TV watching and less time on CMD use.

The crude and adjusted associations between types of screen time and depressive symptoms are shown in Table 2. For the CMD use, the ORs of the depressive symptoms decreased across time levels, although a clear dose-response association was not observed. In the crude models, ORs (95% CI) for depressive symptoms across categories of CMD use time were 0.71 (0.62, 0.83), 0.62 (0.53, 0.71), 0.59 (0.51, 0.68), and 0.79 (0.67, 0.94), respectively ($p < .0001$). These results were almost unchanged when adjusted for multiple confounding factors. In the final multivariable logistic models, the adjusted ORs for depressive symptoms across categories of CMD use were 0.78 (0.66, 0.91), 0.67 (0.57, 0.80), 0.65 (0.54, 0.77), and 0.77 (0.62, 0.96) ($p < .0001$;Figure 1, left panel). In contrast, the ORs of the depressive symptoms was increased across the

TABLE 1 General characteristics of participants with the depressive symptoms categories

Characteristics	Depressive symptoms (SDS, cut-off point ≥45)		
	No (*n* = 15,892)	Yes (*n* = 3,102)	*p* Value[a]
Demographic variables			
Age (year), mean ± *SD*	40.91 ± 11.92[b]	40.43 ± 11.82	.3343
Sex (males, %)	55.01	51.43	.0002
Household income (≥100,000, %)	36.27	25.17	<.0001
Educational level (≥college graduate, %)	67.39	60.07	<.0001
Occupation (%)			
Managers	44.40	39.91	<.0001
Professionals	17.05	17.19	.8497
Others	38.55	42.90	<.0001
Social connection			
Marital status (married, %)	87.60	85.58	.002
Cohabitants (yes, %)	8.16	9.15	.0686
Social contact (yes, %)	61.87	55.35	<.0001
Lifestyle and health indicator			
BMI (kg/m^2), mean ± *SD*	24.33 ± 3.72	24.04 ± 3.84	.006
WC (cm), mean ± *SD*	82.3 ± 11.25	81.5 ± 11.55	.0284
Physical activity (MetS × hour/week), median (IQR)	11.55 (4.00–24.00)	8.00 (1.28–22.17)	<.0001
Sitting time (hr/day), mean ± *SD*	6.55 ± 3.23	6.28 ± 3.83	<.0001
Sleep duration (6.5–7.5 hr/day, %), mean ± *SD*	27.91	28.49	.4911
Total energy intake (kcal/day), median (IQR)	2107.43 (1751.72–2397.95)	2080.85 (1670.30–2422.25)	.0035
MetS (yes, %)	26.17	26.21	.9592
Smoking status (%)			
Smoker	21.21	23.73	.0031
Ex-smoker	5.85	5.57	.5508
Nonsmoker	72.94	70.73	.0156
Drinking status (%)			
Everyday	5.05	5.10	.8973
Occasional	58.23	56.65	.102
Ex-drinker	8.95	9.30	.5282
Non-drinker	27.76	28.94	.1821
TV watching (hours/day), mean ± *SD*	1.61 ± 1.37	1.83 ± 1.55	<.0001
Computer/mobile devices use (hours/day), mean ± SD	5.11 ± 3.02	4.87 ± 3.20	<.0001
Internet addiction (%)			
None	73.15	69.77	.0001
Light	19.58	18.47	.1545
Moderate	2.73	4.38	<.0001
Severe	4.54	7.38	<.0001
Dietary patterns, median (IQR)			
Fruits and sweets	−0.16 (−0.47–0.23)	−0.14 (−0.51–0.38)	<.0001
Healthy foods	−0.14 (−0.60–0.42)	−0.28 (−0.76–0.35)	<.0001
Animal foods	−0.22 (−0.54–0.22)	−0.09 (−0.47–0.50)	<.0001

Abbreviations: BMI, body mass index; IQR, interquartile range; MetS, metabolic syndrome; *SD*, standard deviation; SDS, Self-Rating Depression Scale; WC, waist circumference.

[a]Independent *t* test or the χ^2 test.

[b]Continuous variables were summarized as geometric mean ± standard deviation (*SD*) if normally distributed, and as the median and interquartile range (IQR) if nonnormally distributed. Categorical variables were summarized as proportions.

TABLE 2 Adjusted associations between computer/mobile device use time or TV watching time and depressive symptoms

	Computer/mobile device use time (above) or TV watching time (bottom) (hours/day)					
	0–1	1–3	3–5	5–10	>10	*p* for trend[a]
Computer/mobile device use						
No. of participants	1,499	3,815	4,609	7,399	1,671	
No. of participants with SDS ≥ 45	339	658	704	1087	314	
Model 1[b]	reference	0.71 (0.62, 0.83)[c]	0.62 (0.53, 0.71)	0.59 (0.51, 0.68)	0.79 (0.67, 0.94)	<.0001
Model 2[d]	reference	0.69 (0.59, 0.80)	0.56 (0.48, 0.66)	0.51 (0.44, 0.60)	0.67 (0.56, 0.81)	<.0001
Model 3[e]	reference	0.78 (0.66, 0.91)	0.67 (0.57, 0.80)	0.65 (0.54, 0.77)	0.77 (0.62, 0.96)	<.0001
TV watching						
No. of participants	2,956	12,113	3,330	527	67	
No. of participants with SDS ≥ 45	459	1,851	659	114	19	
Model 1[b]	reference	0.98 (0.88, 1.10)	1.34 (1.18, 1.53)	1.50 (1.19, 1.88)	2.15 (1.23, 3.64)	<.0001
Model 2[d]	reference	1.01 (0.90, 1.13)	1.42 (1.24, 1.63)	1.60 (1.26, 2.02)	2.23 (1.27, 3.78)	<.0001
Model 3[e]	reference	1.00 (0.89, 1.12)	1.28 (1.11, 1.48)	1.26 (0.98, 1.60)	1.95 (1.10, 3.35)	<.0001

Abbreviations: BMI, body mass index; CI, confidence interval; SDS, Self-Rating Depression Scale.
[a]Multivariable logistic regression analysis.
[b]Crude model.
[c]Adjusted odds ratios (95% CI; all such values).
[d]Adjusted for age, sex, BMI, and waist circumference.
[e]Adjusted for age, sex, BMI, waist circumference, household incomes, educational levels, occupations, marital status, cohabitants, social contact, physical activity, sitting time, sleep duration, total energy intake, metabolic syndrome, smoking status, drinking status, internet addiction, dietary patterns, and TV watching time (for computer/mobile device use) or computer/mobile device use time (for TV watching).

TV watching time levels with a clear dose-response relationship in all models. In the final multivariable model, the adjusted ORs for depressive symptoms across categories of TV watching were 1.00 (0.89, 1.12), 1.28 (1.11, 1.48), 1.26 (0.98, 1.60), and 1.95 (1.10, 3.35) ($p < .0001$; Figure 1, right panel).

Additional sensitivity analyses were carried out to exclude the possible bias of the associations. No significant interaction between screen time categories and sex or physical activities was found (all p values for interaction > .05). Similar results were obtained when other cut-off points of SDS scores were used in the multivariable logistic analysis. For example, the adjusted ORs for depressive symptoms (SDS ≥ 40) across categories of TV watching were 1.08 (0.98, 1.18), 1.29 (1.15, 1.44), 1.34 (1.09, 1.64), and 1.42 (0.85, 2.36) (p for trend < .0001). The adjusted ORs for depressive symptoms (SDS ≥ 48) across categories of CMD use were 0.81 (0.67, 0.98), 0.73 (0.60, 0.90), 0.63 (0.51, 0.79), and 0.83 (0.63, 1.08) (p for trend < .0001). We also tested whether similar results would be observed if depressive symptoms were treated as continuous variables. Mean SDS scores for five screen time categories were adjusted for all the covariates by using analysis of covariance. Adjusted mean SDS scores (95% CI) across categories of CMD use time were 41.0 (37.6, 44.5), 40.2 (36.7, 43.6), 40.0 (36.5, 43.4), 39.9 (36.4, 43.3), and 40.7 (37.2, 44.1), respectively. The mean SDS scores significantly decreased with increasing CMD use time ($p < .0001$) and the effect sizes (Cohen's d) for differences between reference group (<1 hr/day) and every other time categories are −0.11, −0.14, −0.15, and −0.05, respectively.

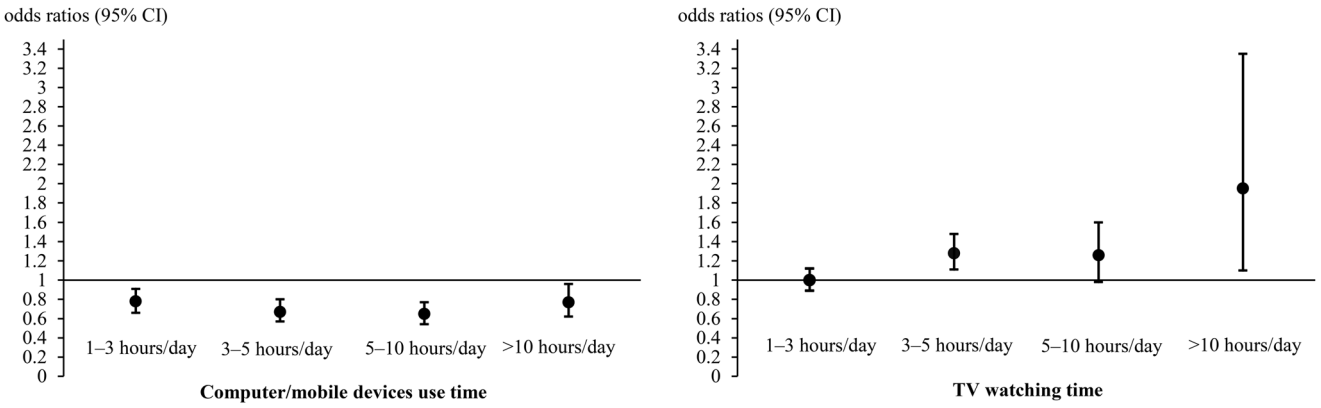

FIGURE 1 Fully adjusted odds ratio (95% confidence interval) of increased depressive symptoms (SDS ≥ 45) for different time categories of computer/mobile devices use (left) and TV watching (right). Reference: Computer/mobile device use time (TV watching time) <1 hr/day. SDS, Self-Rating Depression Scale

Adjusted mean SDS scores (95% CI) across categories of TV watching time were 39.3 (35.8, 42.7), 39.8 (36.4, 43.2), 40.7 (37.2, 44.1), 40.7 (37.2, 44.2), and 41.3 (37.4, 45.1), respectively. The mean SDS scores significantly increased with increasing TV watching time ($p < .0001$) and the effect sizes are 0.07, 0.19, 0.19, and 0.26 respectively. Both of these results are comparable to the categorical analyses.

4 | DISCUSSION

The main aim of this study was to examine the association of CMDs use and TV watching separately with depressive symptoms in a large representative sample of Chinese adults. Results indicate that time spent in TV watching was significantly associated with increased depressive symptoms, which are in accordance with previous work showing a link between TV watching and mental health (Hamer & Stamatakis, 2014; Hamer et al., 2013; Lucas et al., 2011; Sanchez-Villegas et al., 2008). In contrast, we found that another type of screen time, the use of computer and mobile devices, were associated with less depressive symptoms. Importantly, both associations are independent of potential confounders such as total sitting time, total energy intake, dietary patterns, PA level, and internet addiction. This is one of the first studies include the smartphones and tablets as screen use and the results are consistent with some prior work that merely investigate the computer use (Kesse-Guyot et al., 2012; Shaw & Gant, 2002). These distinct associations of different types of screen time with depressive symptoms in general populations are also consistent with one study which have investigated the association between several types of sedentary behavior and mental health in older adults (Hamer & Stamatakis, 2014).

TV watching is thought to be one of the most passive sitting behavior(Clark et al., 2009). Compared with TV watching, CMD use would be more active both physically and mentally. Therefore, the distinct associations between CMD use and TV watching and depressive symptoms that we have observed in this study are plausible for a number of reasons. First, depressive symptoms have been related to cardiovascular disease risk factors (Hare, Toukhsati, Johansson, & Jaarsma, 2014). Therefore, the different associations with depressive symptoms found on TV watching and CMD use may be explained by their differential effects on cardiometabolic risk factors. TV watching has been shown to be associated with lower energy expenditure compared with other screen behaviors (Hamilton, Hamilton, & Zderic, 2008). Computer use may require some muscle activity and people are not constantly still when using mobile devices. Accumulated evidence showed that TV watching, rather than computer use, was associated with worse cardiometabolic biomarkers (Altenburg, de Kroon, Renders, Hirasing, & Chinapaw, 2013) or higher risk of cardiometabolic diseases (Nang et al., 2013). A very recent study found a positive association between TV watching and clustered cardiometabolic risk but a negative association for computer use (Ullrich et al., 2018), which indicated a quite similar pattern of results as in our study. Second, the different associations may also be attributed to the different impact of TV watching and CMD use on cognitive functions. Compared with TV watching, CMD use is more mentally stimulating. Two independent studies with older adults have shown negative associations between TV watching and cognitive functions, but positive associations between computer use and cognitive functions (Hamer & Stamatakis, 2014; Kesse-Guyot et al., 2012). Third, people who spend more time in TV watching would have less time for direct social interaction and limit the development of social support networks, which have been proven to be protective against mental disorders (Cacioppo, Hawkley, & Thisted, 2010). By contrast, CMD use has been proven to be linked to adults' social interaction (Cotten, Anderson, & McCullough, 2013), which may lead to higher social participation and access to health care services.

Strength of the study includes the use of a large representative sample of adults, the separate analysis of two types of screen time and the ability to adjust for a wide range of potentially important confounding factors, including behavioral, social and clinical variables. Some limitations of the study should be noted. First, the cross-sectional design limits the ability to make causal inferences about the observed relationships. Although we have adjusted statistically for a wide array of covariates, residual confounding might also be a possible explanation for our results. Besides, because evidence for longitudinal associations was lacking, we cannot rule out the possibility of reverse causation. Second, the depressive symptoms were assessed with a self-report questionnaire rather than diagnostic psychiatric interviews. Total scores on the SDS do not correspond with a clinical diagnosis of depression but rather indicate the level of depressive symptoms that may be of clinical relevance. Third, screen behaviors were assessed using self-report measures, which may have introduced a potential for bias in judgment. TV watching time at home typically is reported with considerable accuracy, while self-report measures of workplace screen behavior appear to be less accurate (Clark et al., 2009). Furthermore, TV watching and CMD use were not categorized as week and weekend use in our study. Because the major population in our cohort are adults, the major aim for CMD use during weekday may be work rather than entertainment. Occupational sitting has been found to be less detrimental to cardiometabolic health than nonoccupational sitting in a recent study with adults (Dempsey et al., 2018). The negative association between CMD use and depressive symptoms in our samples may reflect the benefits of relatively long working time on mental health. All these possible measurement errors are important points of consideration in interpreting the results. Assessment of the screen behavior on weekdays and weekend days separately in a more objective and continuous way (such as device-based measurement) is highly preferable in future research. Fourth, TV watching has been associated with an increased intake of food with high energy density and overall unhealthy dietary habits (Pearson & Biddle, 2011). Although adjustment for total energy intake and dietary patterns did not appreciably alter our results, future studies should attempt to examine this issue in greater detail.

In conclusion, different types of screen time may play different roles in the mental health of general adults. This study suggested that

prolonged TV watching is associated with an increased risk of depressive symptoms, while higher CMD use is associated with better mental health. Future studies need to focus not only on overall screen time but also types of screen behavior in examining their mental health impact. Longitudinal studies examining the relationship between screen time and mental health are also warranted.

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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