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Working from Home: Increased Productivity or a Gateway to Counterproductivity? The Role of Personality Traits

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ABSTRACT

As flexible work arrangements gain popularity, the effects of working from home (WFH) on employee behavior have become increasingly relevant. This study investigates how Big Five personality traits influence remote work productivity, cyberslacking, and counterproductive work behavior (CWB), compared to office-based work. In an online survey, $N = 106$ employees reported their personality traits, weekly WFH proportion, and work behaviors. Results showed that conscientiousness and a higher WFH proportion were positively related to productivity. Conscientiousness also negatively correlated with cyberslacking and CWB. No moderating effect of conscientiousness on the WFH-behavior link was found. These findings suggest that personality impacts work behavior, though its role across work settings may be overstated.

Trabajar desde casa: ¿aumento de la productividad o una vía hacia la contraproduktividad? El rol de los rasgos de la personalidad

RESUMEN

A medida que las modalidades de trabajo flexibles ganan popularidad, los efectos del teletrabajo en el comportamiento de los empleados se han vuelto cada vez más relevantes. Este estudio investiga cómo los cinco grandes rasgos de la personalidad influyen en la productividad del teletrabajo, el *cyberslacking* (uso indebido de Internet en el trabajo) y el comportamiento laboral contraproducente (CTC), en comparación con el trabajo presencial. En una encuesta en línea, $N = 106$ empleados informaron sobre sus rasgos de personalidad, proporción semanal de teletrabajo y comportamientos laborales. Los resultados mostraron que el factor de conciencia y una mayor proporción de teletrabajo se relacionaron positivamente con la productividad. El factor de conciencia también se correlacionó negativamente con el *cyberslacking* y el CTC. No se encontró ningún efecto moderador del factor de conciencia en el vínculo entre teletrabajo y comportamiento. Estos hallazgos sugieren que la personalidad impacta en el comportamiento laboral, aunque su papel en los entornos laborales puede estar sobreestimado.

Since the Covid-19 pandemic led the world into unexpected isolation in 2020, mobile work has become part of everyday life for many employees (Sostero et al., 2024). Recent statistics have indicated that mobile working or teleworking was not just a Covid-19-phenomena. In 2023, around 20% of workers in the United States (US) engaged in telework (Bureau of Labor Statistics, 2023). In the European Union (EU), 22% of workers participated in telework “usually or sometimes” in 2022, which was 8% more than in 2019 (Zucconi et al., 2024).

With the increasing popularity of working from home (WFH), research has progressively focused on the frequency and amount of flexible telework and its various effects on employees (Chavez & Murcia, 2023; Ferrara et al., 2022; Gajendran et al., 2024). While many

studies concerning the pandemic focused on health outcomes such as perceived stress and exhaustion (Belzunegui-Eraso & Erro-Garcés, 2020; Parra et al., 2022; Sio et al., 2021), research on productivity and engagement also emerged (Toscano & Zappalà, 2021; Umishio et al., 2021). Stress factors during the pandemic, post-pandemic research is essential to establish the stability of the effects monitored during the forced shift to remote work.

The question of how productively employees behave while WFH and to what extent they pursue their work (or whether they are potentially engaging in counterproductive behaviors) has gained increased attention, particularly for companies and leaders. Some board members and managing directors have even called for the abolition or reduction of the home office, as the example of SAP

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(Systems, Applications, and Products in Data Processing) showed (Katanich, 2024). As previous studies have indicated positive and negative effects of remote work (Anakpo et al., 2023; Gajendran et al., 2024), it is crucial to investigate individual differences in work behaviors while WFH compared with office-based work. While positive attitudinal and behavioral outcomes have been increasingly examined in the past few years, little is known about counterproductive behaviors in flexible work arrangements. Therefore, this study investigates the influence of employees' personalities on whether they work more productively or engage in counterproductive behaviors while working from home in comparison to working in the office. The following section provides the theoretical background, discussing remote work productivity, personality influences, and counterproductive work behaviors.

Theoretical Background

Working from Home

WFH includes two different considerations of telework and mobile work. Germany's Federal Institute for Occupational Safety and Health (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin) (Backhaus et al., 2021, p. 2) clarified, "Teleworking is regulated in the Workplace Ordinance (ArbStättV) and includes a permanently installed virtual display unit workstation in the employee's private area. The weekly working hours and duration of the teleworking workplace are set out in the contract. The necessary equipment (technology, furniture) is provided/installed by the employer or persons appointed by the employer". In contrast, mobile working describes "sporadic, not necessarily all-day work with a PC or portable display devices (e.g. laptop, tablet) that is not tied to the office at work or the home workplace." (Backhaus et al., 2021, p. 2).

This distinction has several consequences in terms of labor law, occupational health and safety, and tax regulations, but does not have an overriding influence on our investigation. This study examines WFH, which can be classified as both telework and mobile work, assuming that it takes place in a domestic environment. However, distinctions between permanent remote work and temporary/occasional telework may entail different work dynamics with potentially divergent effects on productivity (and other related constructs, i.e. performance) and counterproductive behaviors (Alfanza, 2021; Gajendran et al., 2024). As the temporary teleworking is more popular than permanent remote work (Bureau of Labor Statistics, 2023), this study focuses on temporary WFH, but also explores the effect of the proportion of weekly working hours spent WFH. This study does not cover mobile work conducted in locations other than the home environment.

Remote Work Productivity

An ongoing debate has ensued in corporate circles and private contexts concerning whether employees work more productively on site in the company office than from home, or vice versa, or whether there is simply no difference in productivity (Katanich, 2024). In organizational psychology, it is important to distinguish between performance and productivity. Performance is defined as "scalable actions, behavior and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals." (Viswesvaran & Ones, 2000, p. 216). Productivity, in contrast, is a narrower concept, often described as the relation between input and output (Tangen, 2002). In this study, we focus on self-reported telework productivity, defined as employees' behaviors that contribute to accomplishing work tasks when working from home, compared to when working in the office. Recent experimental studies suggested that flexible work arrangements can increase productivity (Angelici

& Profeta, 2024). A meta-analysis also revealed a positive correlation between remote work intensity and supervisor-rated performance (Gajendran et al., 2024), indicating that such findings are not limited to self-reported data. Notably, after reviewing the literature regarding WFH productivity, engagement, and performance, Anakpo et al. (2023) identified mainly positive correlations. However, correlations also involved negative or null effects, implying that employees seem to work more productively while WFH in most cases, with opposite effects in other cases (Venkatesh et al., 2023). The authors deduced that the relationship between WFH and the outcomes is moderated by factors such as the nature of work, employers and industry characteristics, and home settings.

The partially contradictory results of the studies in Anakpo et al.'s (2023) review raise the question of which variables explain on how the workplace affects behavioral outcomes. Tudu and Singh (2022) used self-determination theory (Ryan & Deci, 2017) to construct moderating variables related to the correlation of WFH and performance, proposing six main moderators of dedication, determination, configuration, collaboration, coordination, and disposition. This study takes a deeper look at the effects of disposition (i.e., personality).

Influence of Personality Traits

Personality is commonly associated with the Big Five personality traits or the OCEAN model (Costa & McCrae, 1992), which is characterized by the five basic tendencies of openness, conscientiousness, extraversion, agreeableness, and neuroticism (DeYoung et al., 2007; DeYoung et al., 2013; McCrae & Costa, 1999; Saucier & Goldberg, 2002). Several decades of research using this model have shown substantial associations between personality traits and job performance (He et al., 2019). With rising popularity of flexible work arrangements, the role of employees' personality traits in predicting remote work effectiveness, productivity, and performance gained considerable attention.

The relevance of personality traits for remote work outcomes can be interpreted through the lens of Trait Activation Theory (TAT; Tett & Burnett, 2003). According to TAT, personality traits are expressed in work behavior most strongly when trait-relevant situational cues are present. The TAT has been widely applied to explain within-person variability in work behaviors and job performance (Tett et al., 2021). Remote work conditions, accompanied with increased autonomy, reduced supervision, and higher need for self-regulation, activate traits like conscientiousness, which may otherwise remain inactive in more structured office environments. For example, individuals high in conscientiousness may thrive when situational demands require planning, time management, and task persistence—all of which are essential for effective remote work. High Openness to experience is associated with the ability to adapt to changes in processes, systems, and structure (Neal et al., 2012). According to the TAT, the situational cues of remote work require the adoption to modified job characteristics, activating the trait of openness and enabling employees with higher openness to work more productively at home.

Openness to experience has been positively associated with productivity and engagement when WFH (Gavoille & Hazans, 2022; Krick et al., 2022; Nilsson, 2021). Several studies have found conscientiousness to be positively correlated with desired work behaviors such as engagement, performance, and productivity (Gavoille & Hazans, 2022; Hoffmann, 2021; Krick et al., 2022; Nilsson, 2021; Wright, 2023). While extraversion can have a positive main effect on work engagement (Krick et al., 2022; Olsen et al., 2024), remote work has been found to negatively interact with extraversion, resulting in a negative effect of extraversion on work engagement for fully remote workers (Olsen et al., 2024). However, meta-analysis results have been unable to confirm this effect (Hoffman, 2021).

Previous research has indicated no correlation between agreeableness and remote work engagement, productivity, or performance (Gavoille & Hazans, 2022; Hoffman, 2021; Krick et al., 2022; Nilsson, 2021; Olsen et al., 2024). Literature has revealed contradictory effects for neuroticism. While some studies have described a negative relationship (Hoffmann, 2021; Olsen et al., 2024), not all have revealed an effect (Gavoille & Hazans, 2022). Olsen et al. (2024) found a negative main effect of neuroticism on performance, observing no interaction with remote work intensity. In contrast, Krick et al. (2022) demonstrated positive effects of WFH on employee commitment, job satisfaction, and engagement for less emotionally stable individuals.

In summary, previous research on the effect of personality traits on remote work, conscientiousness and openness to experience have consistently emerged as predictors of positive work outcomes in remote settings. Conscientious individuals excel in self-management, organization, and adherence to goals, all of which are critical for productivity in a remote context (Hoffmann, 2021). Similarly, openness to experience, which is characterized by adaptability, creativity, and a willingness to embrace new ideas, aligns well with the demands of flexible work arrangements, where innovation and autonomy are often required (Felstead & Reuschke, 2020).

Referencing the mainly positive effects of remote work on productivity (Anakpo et al., 2023; Gajendran et al., 2024), we also assume that the proportion of WFH per week has a positive effect on telework productivity. Based on the presented theoretical foundation and empirical findings, we propose the following hypothesis:

H1: Conscientiousness, openness to experience, and the proportion of WFH are positively correlated with self-reported productivity while WFH.

Counterproductive Work Behavior and Cyberslacking

Although several studies have highlighted the positive aspects of teleworking, a risk remains that WFH can result in deteriorating job outcomes (Evans et al., 2022). Considering the lack of supervisory oversight during WFH, employees have more opportunities to spend their time on activities other than work. Cyberslacking has been defined as “a phenomenon in which employees are distracted by non-work Internet browsing when they should be accomplishing work tasks” (O'Neill, Hambley, & Chatellier, 2014, p. 152). It often involves behaviors such as checking, sending, and receiving non-work emails, visiting internet sites (most often news sites and financial sites), and online shopping (Blanchard & Henle, 2008). Cyberslacking can harm organizations' success as it is negatively correlated with job performance (Venkatesh et al., 2023). Additionally, cyberslacking has been found to moderate the relationship between remote work satisfaction and remote work performance (Khorakian et al., 2024).

Personality traits have been linked to cyberslacking in remote work settings in previous studies, and agreeableness, conscientiousness, and honesty (from the HEXACO personality model which slightly differs from the OCEAN model; e.g. Ashton et al., 2014) were found to be negatively correlated with cyberslacking (O'Neill, Hambley, & Chatellier, 2014). Furthermore, O'Neill, Hambley, and Bercovich (2014) found positive correlations between cyberslacking, extraversion, and neuroticism and a negative correlation with openness. In contrast, Phillips (2020) revealed negative relationships between cyberslacking and extraversion.

Moreover, as noted above, WFH enables employees to engage in other counterproductive work behaviors (CWBs) beyond cyberslacking. CWBs are characterized by intentional behaviors that harm the organization, colleagues, or customers (Anderson et al., 2001). Gruys and Sackett (2003) differentiated between 11 dimensions of theft and related behavior, poor attendance, poor quality work, destruction of property, misuse of information, misuse of time and resources, unsafe behavior, alcohol use, drug use,

inappropriate verbal actions, and inappropriate physical action. One problem with this conceptualization is that some of these behaviors do not align with flexible work arrangements and do not occur in remote work settings (Holland et al., 2016). In response, Junça Silva and Martins (2023) developed a scale focusing on counterproductive (tele)work behavior.

In general, remote work intensity does not seem to result in more or less CWB (Wong, 2021). However, Nemțeanu and Dabija (2021) found that the interaction reduction while teleworking can result in professional isolation, which consequently increases the likelihood of CWBs. Remote work therefore requires a high degree of discipline and self-organization in professional isolation. This highlights the relevance of the personality traits and the amount of WFH in predicting CWB in remote work settings, which constitutes the primary focus of the present study.

To date, research on the influence of personality traits on the occurrence of CWB in remote work settings has been limited. As previous research has determined that conscientiousness and agreeableness can generally prevent CWB (Berry et al., 2007; Bolton et al., 2010; Salgado, 2002; Spector, 2010), we expect corresponding negative correlations of conscientiousness, agreeableness, and CWB in telework settings. However, it should be noted that agreeableness revealed stronger effects for interpersonal deviance than for organization-related outcomes (Berry et al., 2007). Due to the reduction of social interactions while WFH, we expect that agreeableness will play a less significant role in predicting telework-related CWBs. The primary research goal of this study is to investigate the correlation of the Big Five personality traits with counterproductive behaviors (including cyberslacking) in the context of WFH.

In a meta-analysis, Gajendran et al. (2024) identified positive effects of remote work intensity on versatile attitudinal outcomes such as enhanced job satisfaction and lower turnover intentions. However, these variables have also been correlated with CWB, revealing that less satisfied employees engage more in CWB and exhibit higher turnover rates (Carpenter et al., 2021). Furthermore, Carpenter et al. (2021) found CWB to be negatively correlated with productivity. As noted above, remote work intensity is positively associated with productivity (Anakpo et al., 2023; Angelici & Profeta, 2024). Based on this finding, we also assume that people with a higher proportion of WFH are less likely to engage in CWBs while WFH, leading to our second proposed hypothesis:

H2: Conscientiousness, agreeableness, and the proportion of WFH are negatively correlated with cyberslacking (vs. working in a corporate office setting) and CWB.

We also examine whether the proportion of WFH moderates the relationship between conscientiousness and self-reported work behaviors (telework productivity, cyberslacking, and CWB). Trait Activation Theory (Tett & Burnett, 2003) further supports the assumption that organizational, social, and task-related cues interact with personality traits in predicting work behaviors. The proportion of WFH can be interpreted both as a task and an organizational cue, as it influences processes in work as well as the organizational culture regarding new work models and collaboration. In WFH settings, where self-discipline and goal orientation are not externally reinforced, the trait of conscientiousness is more likely to be activated than in office settings with direct supervision. Thus, the effects of personality may not only vary between individuals but also depend on the degree of WFH.

Conscientious people have been found to be more productive in a remote work context (Gavoille & Hazans, 2022; Hoffman, 2021; Krick et al., 2022; Nilsson, 2021) and less engaged in cyberslacking behaviors (O'Neill, Hambley, & Bercovich, 2014; O'Neill, Hambley, & Chatellier, 2014); therefore, it is reasonable to assume that the extent of WFH positively interacts with conscientiousness, leading to our final proposed hypothesis:

Table 1. Survey Scales Including Reliability and Sample Items.

Construct	Scale	Author	No. of items	Cronbach's α	Sample item
Big Five traits	Short version of the Big Five Inventory (BFI-K)	Rammstedt and John (2005)	21	.68	"I appreciate artistic and aesthetic impressions."
Openness to experience			5		
Conscientiousness				.70	
Extraversion			4	.80	
Agreeableness			4	.60	
Neuroticism			4	.76	"I am helpful and selfless toward others."
			4		"I become easily depressed, dejected."
Telework productivity		Tleuken et al. (2022)	6	.80	"I complete more tasks when remotely working than I do in the office."
Cyberslacking		O'Neill, Hambley, & Bercovich (2014)	3	.78	"When I'm working remotely, I get distracted more with non-work-related internet activities than I do when I'm at the office."
Counterproductive work behavior (CWB)	Counterproductive telework behavior scale (CTwBS)	Junça Silva and Martins (2023)	18	.93	"In telework I played videogames/computer games or watched series/movies, YouTube."

H3: The proportion of WFH moderates the relationship between conscientiousness, and the dependent variables telework productivity, cyberslacking, and CWB.

Methods

Participants and Procedure

Our data include a sample of $N = 106$ German employees who completed an online survey using the SoSci Survey software tool (Leiner, 2024). We recruited participants between August and October 2024 via LinkedIn, Facebook, and the authors' personal networks. To determine the required sample size, a power analysis using G*power (Faul et al., 2007) was conducted. The analysis revealed a sample size of $N = 88$ for a linear model with three predictors based on an effect size of $d = .20$. Respondents were between 22 and 68 years of age with an average age of 40.4 ($SD = 11.1$), 47 (44%) of the participants were male, 56 (53%) female, and 3 participants (3%) reported diverse/other gender. The majority of the sample were employees ($n = 101$; 95%), 4 participants (4%) were self-employed, and 1 (1%) was a student/apprentice. Participants confirmed that they had the opportunity to work from home in their employment, and those who indicated that they had no WFH opportunities were excluded from the survey. All participants in the study provided informed consent. The Commission for Impact Assessment and Ethics of the concerned institution had no ethical concerns regarding this research project.

Measures

The participants completed questions measuring the Big Five personality traits, telework productivity, cyberslacking, CWB, and demographic data. Table 1 presents an overview of the scales used in the survey and associated references. We measured the Big Five personality traits using the short-form Big Five Inventory (BFI-K; Rammstedt & John, 2005), cyberslacking was assessed using items from O'Neill, Hambley, and Chatellier (2014). For CWB, we used the Counterproductive Telework Behavior Scale (CTwBS) scale (Junça Silva & Martins, 2023), which was developed to measure specific aspects of CWB that can arise in remote work settings. The scale differentiates between withdrawal, time misuse, and abusive and deviant behavior. Productivity is commonly surveyed using a self-reporting approach, we also used this method operationalized with six items from Tleuken et al. (2022).

All scales were measured using a 5-point Likert scale ranging

from 1 (*very inaccurate*) to 5 (*very accurate*). Please note that productivity and cyberslacking scales compare respondents' self-reported behavior when teleworking to their behavior at the office, and higher values indicate more productive/more cyberslacking behavior when WFH than when in the office, while CWB references telework only.

Data Analysis

Hypotheses 1 and 2 are investigated by analyzing the correlations between personality traits; the proportion of WFH; and telework productivity, cyberslacking, and CWB. *H3* is analyzed employing a linear regression framework with centered predictors. Moreover, the variables of age, gender, employment type, and educational level were added to control for any confounding effects using dummy coding for categorical variables. Categories with less than three cases were excluded from the analysis. This applied to the gender category "diverse", and other employment types than employee or self-employed.

Results

Table 2 presents the means, standard deviations, and correlations of the variables. Regarding *H1*, telework productivity is positively correlated with conscientiousness ($r = .20, p = .04, 95\% \text{ CI } [0.01, 0.38]$) and the proportion of WFH ($r = .43, p < .001, 95\% \text{ CI } [0.26, 0.57]$), and openness to experience did not significantly correlate with telework productivity ($r = .15, p = .13, 95\% \text{ CI } [-0.05, 0.38]$).

Regarding *H2*, conscientiousness is negatively correlated with cyberslacking ($r = -.21, p = .03, 95\% \text{ CI } [-0.38, -0.12]$) and CWB ($r = -.52, p < .001, 95\% \text{ CI } [-0.65, -0.36]$), whereas no significant correlation is evident between agreeableness and cyberslacking ($r = .03, p = .79, 95\% \text{ CI } [-0.17, 0.22]$) or CWB ($r = -.09, p = .38, 95\% \text{ CI } [-0.27, 0.11]$) as well as the proportion of WFH and cyberslacking ($r = -.10, p = .31, 95\% \text{ CI } [-0.28, 0.09]$) or CWB ($r = .16, p = .10, 95\% \text{ CI } [-0.03, 0.34]$), which is a partial confirmation of *H2*. The differentiation between the subscales of CWB revealed negative correlations with conscientiousness for time misuse ($r = -.46, p < .001, 95\% \text{ CI } [-0.60, -0.30]$), withdrawal ($r = -.42, p < .001, 95\% \text{ CI } [-0.56, -0.25]$), and abusive and deviant behavior ($r = -.46, p < .001, 95\% \text{ CI } [-0.60, -0.29]$) while the effect of the proportion of WFH was insignificant for the subscales (time misuse: $r = .11, p = .28, 95\% \text{ CI } [-0.09, 0.29]$; withdrawal: $r = .16, p = .10, 95\% \text{ CI } [-0.03, 0.34]$; abusive and deviant behavior: $r = .13, p = .20, 95\% \text{ CI } [-0.07, 0.31]$). Notably, a negative correlation was revealed between

Table 2. Means, Standard Deviations, and Correlations for the Big Five Personality Traits and Work Behavior.

	<i>M</i>	<i>SD</i>	<i>N</i>	<i>E</i>	<i>O</i>	<i>C</i>	<i>A</i>	<i>TP</i>	<i>CS</i>	<i>CWB</i>
Neuroticism	2.71	0.86								
Extraversion	3.50	0.86	.24*							
Openness	3.72	0.68	.16	.06						
Conscientiousness	3.95	0.62	-.24*	.16	.22*					
Agreeableness	3.36	0.75	-.02	.18	.06	.08				
Telework productivity	3.08	0.74	-.03	.06	.15	.20*	.01			
Cyberslacking	2.36	1.01	.22*	-.04	-.02	-.21*	.03	-.36***		
CWB	1.56	0.63	.17	-.03	-.21*	-.52***	-.09	.02	.40***	
Proportion of WFH (%)	35.66	30.30	-.07	.19*	-.03	.02	.05	.43***	-.10	.16

Note. CWB = counterproductive work behavior; WFH = working from home.

* $p < .05$, ** $p < .01$, *** $p < .001$.

CWB and openness to experience ($r = -.21$, $p = .03$, 95% CI [-0.38, -0.02]) and a positive correlation emerged between cyberslacking and neuroticism ($r = .22$, $p = .02$, 95% CI [0.03, 0.40]).

For the moderating effect analysis ($H3$), we introduced the interaction term of the proportion of WFH and conscientiousness into the regression models for the three dependent variables. All regression models and their fit indices are presented in [Appendix, Table A1](#). No significant interaction effect is evident for telework productivity ($b = -.00$, $p = .33$), cyberslacking ($b = -.00$, $p = .65$), or CWB ($b = -.00$, $p = .14$).

We conducted a model comparison to determine whether introducing the interaction term significantly improved the model fit in predicting telework productivity, cyberslacking, and CWB. We determine that adding the interaction term did not result in a significantly better model fit across all dependent variables of CWB, cyberslacking, and telework productivity (CWB: $F(1, 103) = 2.18$, $p = .14$; cyberslacking: $F(1, 103) = 0.20$, $p = .65$; telework productivity: $F(1, 102) = 0.97$, $p = .33$). The differences in the explained variance are consistently low (CWB: $\Delta R^2 = .01$; cyberslacking: $\Delta R^2 = .01$; telework productivity: $\Delta R^2 = .01$). For each variable, Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) values indicated a better fit for the model without the interaction term (CWB: AIC = 155.96, BIC = 169.25; cyberslacking: AIC = 303.20, BIC = 313.86; telework productivity: AIC = 216.03, BIC = 229.34) compared with the interaction model (CWB: AIC = 263.34, BIC = 289.97; cyberslacking: AIC = 304.99, BIC = 318.31; telework productivity: AIC = 217.02, BIC = 233.00).

These findings consistently indicate that the interaction between the proportion of WFH and conscientiousness does not substantially contribute to predicting telework productivity, cyberslacking, and CWB beyond their individual main effects. Adding the control variables of age, gender (binary coding: male/female), employment type (employee, self-employed), and educational level (low, medium, high) did not reveal any different results regarding the hypothesis. Detailed results of the control variable analysis for each dependent variable are displayed in [Appendix, Table A2](#).

Overall, $H1$ is partially supported (for conscientiousness and the proportion of WFH, but not for openness), as well as $H2$ (supported for conscientiousness, but not for agreeableness and the proportion of WFH). $H3$ is rejected, as no interaction was found.

Discussion

Key Results and Interpretation

This study examines the influence of the conscientiousness personality trait on work behaviors for WFH and working on site in a corporate office. Our findings enhance the research on the relevance of personality traits on productivity while WFH and added empirical evidence to fill the research gap on CWBs during telework.

We demonstrate that telework productivity is positively correlated with conscientiousness and the proportion of WFH, but the correlation with openness to experience was insignificant. Conscientious employees have been found to exhibit generally higher performance ([Zell & Lesick, 2022](#)). Furthermore, employees with the conscientiousness trait have reported being even more productive when WFH than in the office, which aligns with previous research ([Gavoille & Hazans, 2022](#)).

People with a higher use of WFH also self-reported being more productive compared with working in the office. This could indicate that employees tend to select the places where they can work most productively. For example, people who know that they will be disturbed at the home office tend to work in the corporate office more often. This finding aligns with [Gajendran et al. \(2024\)](#), who also demonstrated the positive effects of remote work intensity on supervisor-rated job performance, indicating the multi-method consistency of this correlation.

Cyberslacking and CWB are found to be negatively correlated with conscientiousness, which partially confirms hypothesis two, considering that agreeableness as well as the proportion of WFH are not significantly correlated with cyberslacking or CWB. These effects expand the understanding of CWB in a remote work setting, which has only been found for cyberslacking to the best of our knowledge. As [Holland et al. \(2016\)](#) stated, CWB during WFH includes other facets than on site in the firm. Especially interpersonal deviance, which is primarily associated with agreeableness ([Berry et al., 2007](#)), can rarely be carried out when WFH. This might explain that agreeableness plays a less important role for CWB while WFH. The correlation between neuroticism and cyberslacking aligns with previous findings ([O'Neill, Hambley, & Chatellier, 2014](#)). Less emotionally stable individuals might have a deficit of self-regulation practices, resulting in a tendency to be more easily distracted by, e.g. social media activities. When WFH, this might be more strongly expressed due to the fewer control mechanisms. While it may seem contradictory that a higher proportion of WFH is associated with both higher productivity and higher CWB values, the CTwBS includes items that specifically refer to counterproductive telework behaviors, beginning with "At telework...". Consequently, those who rarely work from home may not answer items referring to telework.

This study examines the effects of conscientiousness and the proportion of WFH, finding no moderating effect of the time spent WFH on the correlation between conscientiousness and the dependent variables, rejecting the associated hypothesis ($H3$). This result indicates that working from home more does not strengthen or weaken the effect of conscientiousness on remote work behavior, which is in line with the conclusions drawn from the results regarding the main effects of the Big Five traits.

Practical Implications

Referring to our introductory example of SAP management requesting people to return to working on-site, many companies are asking themselves whether they should maintain their employees' workplace flexibility as they fear a loss of productivity. Our results do not generally support these apprehensions as employees that work from home more report to be even more productive. According to our findings, conscientious employees' work behavior will most probably not deteriorate if they switch to WFH. As the proportion of WFH does not affect this general tendency, conscientious people should be allowed to choose the appropriate place of work where they are most productive if the work requirements can accommodate such flexibility. Regarding the effects of neuroticism, less emotionally stable people could benefit from self-management training, enabling them to maintain focus on task-related activities when WFH. Finally, considering the finding that CWB can increase when WFH, companies should establish clear guidelines for WFH, employing, for example, technical solutions to enable the exact recording of working and break times.

The findings of this study allow our cautious conclusion that the question of whether WFH is effective should be considered at an individual level, regarding factors such as the personality traits; however, as the predictors in the present study explain merely a part of the variance, further variables reviewed in other studies (Anakpo et al., 2023) should also be included.

Limitations and Future Research

One limitation of this study is the small and non-probabilistic sample of exclusively German employees, which restricts the result's generalizability. Consequently, the practical implications should be interpreted with appropriate caution. As previous studies have already identified other personality traits as relevant, the fact that only significant effects are found for conscientiousness (but not for other personality traits) could be based on a lack of statistical power. However, the sample examined ($N = 106$) was larger than the estimated necessary sample size of $N = 88$, indicating that effects equal or greater than $d = .20$ should be visible in our data. Therefore, future research should review or conduct meta-analysis referring to the post-pandemic literature on personality traits and remote work, which is partially contradictory. Particularly concerning neuroticism, it is not yet understood whether less emotionally stable people profit from WFH or if it harms their productivity, and what mechanism could explain the relationship.

Another limitation is the cross-sectional study design which does not allow any implications regarding the temporal stability or even causal conclusions. Practical implications given in the related section of this study should therefore be critically considered for applicability in the specific context, and future research should consider longitudinal investigations.

Additionally, some scales used in this study showed relatively low reliability coefficients (especially $\alpha = .60$ for Agreeableness and $\alpha = .68$ for Openness), which may have introduced a substantial degree of measurement error. This lower reliability could have attenuated observed effect sizes and reduced the likelihood of detecting true associations between personality traits and telework outcomes (Hunter & Schmidt, 2015). Future research should aim to use more reliable instruments to strengthen the robustness of the findings.

Moreover, self-report scales for productivity, cyberslacking, and CWB always entail a risk of participants making perceived socially desirable responses. In contrast, Gajendran et al. (2024) found positive correlations for performance measured via supervisor rating. Nevertheless, future research should include external assessments such as objective performance/result criteria or technology-supported analysis of internet activities as an indicator of cyberslacking, if data protection regulations allow. Experimental

or quasi-experimental comparisons of different work settings would also be valuable for accurate measurement of the differences between WFH and working in a corporate office. As the present study could only assume differences between WFH and working on site, this could contribute to a deeper understanding if personality traits become even more relevant for work behavior in a teleworking context, or if the general impact is unrelated to the place of work. In field research, practical challenges can make it difficult or even impossible to randomize remote vs. office groups and control variables like task characteristics, working environment, and other interfering variables.

To gain an understanding of the circumstances under which people behave counterproductively, further research is needed to determine moderating or mediating factors in the relationship between the amount of remote work and the appearance of cyberslacking and CWB. Future research on specific aspects of (un-) productive behavior while WFH is essential, as is communicating these results to managers and entrepreneurs to provide practical insights to support the development and evaluation of working models that can fit different personality traits and enable better organizational outcomes in a digitalized and modern world.

Conclusion

This study supports previous research results indicating that conscientiousness and the proportion of WFH per week increases self-reported productivity. Moreover, the findings enhance our understanding of cyberslacking and CWB in remote work settings, addressing a common concern among many companies. Based on our results, the proportion of WFH does not interact with the conscientiousness personality trait. In summary, we found no indication that higher proportions of WFH generally deteriorate work practices, but future studies using larger samples and longitudinal designs are needed to substantiate this conclusion.

Conflict of Interest

The authors of this article declare no conflict of interest.

Publication Ethics

All participants in the study provided informed consent. The Commission for Impact Assessment and Ethics of the University of Applied Sciences Emden/Leer had no ethical concerns regarding this research project.

Authors' Contribution

Sabrina Heyen: conceptualization, data curation, formal analysis, investigation, methodology, writing—original draft; Christian Spoden: supervision, validation, writing—review & editing. The authors approved the final version of the article.

Open Data

The data needed to reproduce the reported results are available at: <http://doi.org/10.23668/psycharchives.21322>

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Appendix

Experience Sampling Method (ESM)

Table A1. Regression Results for Telework Productivity (TP), Cyberslacking (CS) and Counterproductive Work Behavior (CWB).

DV/ predictor	Estimate	SE	95% CI [LL, UL]	Total adjusted R^2	AIC	BIC
DV = TP				$R^2 = .21$	216.03	229.34
<i>Main effects model</i>						
Intercept	3.08**	0.06	[2.96, 3.21]			
Conscientiousness	0.19	0.10	[-0.01, 0.40]			
Openness	0.13	0.10	[-0.06, 0.32]			
Proportion of remote work	0.01**	0.00	[0.01, 0.01]			
<i>Interaction model</i>				$R^2 = .21$	217.02	233.00
Intercept	3.08**	0.06	[2.96, 3.21]			
Conscientiousness	0.19	0.10	[-0.02, 0.40]			
Openness	0.13	0.10	[-0.06, 0.32]			
Proportion of remote work	0.01**	0.00	[0.01, 0.01]			
Conscientiousness × proportion of remote work	-0.00	0.00	[-0.01, 0.00]			
DV = CWB				$R^2 = .29$	171.61	182.26
<i>Main effects model</i>						
Intercept	1.56**	0.05	[1.45, 1.66]			
Conscientiousness	-0.52**	0.08	[-0.69, -0.36]			
Proportion of remote work	0.00*	0.00	[0.00, 0.01]			
<i>Interaction model</i>				$R^2 = .29$	171.37	184.69
Intercept	1.56**	0.05	[1.45, 1.66]			
Conscientiousness	-0.53**	0.08	[0.00, 0.01]			
Proportion of remote work	0.00*	0.00	[-0.70, -0.37]			
Conscientiousness × proportion of remote work	-0.00	0.00	[-0.01, 0.00]			
DV = CS				$R^2 = .03$	303.20	313.86
<i>Main effects model</i>						
Intercept	2.36**		[2.17, 2.56]			
Conscientiousness	-0.33*		[-0.64, -0.03]			
Proportion of remote work	-0.00		[-0.01, 0.00]			
<i>Interaction model</i>				$R^2 = .03$	304.99	318.31
Intercept	2.37**	0.10	[2.17, 2.56]			
Conscientiousness	-0.34*	0.16	[-0.65, -0.03]			
Proportion of remote work	-0.00	0.00	[-0.01, 0.00]			
Conscientiousness × proportion of remote work	-0.00	0.01	[-0.01, 0.01]			

* $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix

Experience Sampling Method (ESM) (continued)

Table A2. Regression Results for the Dependent Variables (Telework Productivity, Cyberslacking, and CWB) Controlling Demographic Variables.

DV/ predictor	Estimate	SE	95% CI [LL, UL]	R ²
<i>DV = TP</i>				.233 **
Intercept	3.93**	0.71	[2.53, 5.34]	
Conscientiousness	0.26*	0.11	[0.03, 0.49]	
Proportion of remote work	0.01**	0.00	[0.01, 0.02]	
Age	-0.01	0.01	[-0.02, 0.01]	
Gender: female	-0.09	0.14	[-0.37, 0.19]	
Employment: Self-employed	-0.46	0.37	[-1.20, 0.28]	
Education: Medium	-0.55	0.38	[NA, NA]	
Education: High	-0.56	0.34	[-1.90, 0.79]	
Conscientiousness × proportion of remote work	-0.00	0.00	[-1.90, 0.77]	
<i>DV = cyberslacking</i>				.10
Intercept	2.80*	1.07	[0.67, 4.93]	
Conscientiousness	-0.27	0.17	[-0.62, 0.07]	
Proportion of remote work	-0.01	0.00	[-0.01, 0.00]	
Age	-0.01	0.01	[-0.03, 0.01]	
Gender: female	0.07	0.21	[-0.36, 0.49]	
Employment: Self-employed	1.15*	0.57	[0.03, 2.28]	
Education: Medium	0.08	1.02	[-1.95, 2.11]	
Education: High	-0.10	1.01	[-2.12, 1.92]	
Conscientiousness × proportion of remote work	0.00	0.01	[-0.01, 0.02]	
<i>DV = CWB</i>				.338**
Intercept	2.56**	0.50	[1.56, 3.55]	
Conscientiousness	-0.46**	0.08	[-0.01, 0.01]	
Proportion of remote work	0.00	0.00	[-0.02, 0.40]	
Age	-0.00	0.00	[-0.06, 0.32]	
Gender: female	0.06	0.10	[0.01, 0.01]	
Employment: Self-employed	-0.22	0.26	[-0.01, 0.00]	R ² = .03
Education: Medium	-0.94	0.48	[1.45, 1.66]	
Education: High	-0.85	0.47	[-0.69, -0.36]	
Conscientiousness × proportion of remote work	-.00	0.00	[0.00, 0.01]	

Note. Control variables were dummy-coded as follows: Gender (reference = male, 1 = female); Employment type (Employee = reference; 1 = self-employed); Education (Low = no degree or secondary school diploma (reference); Medium = High school diploma, A-levels, college entrance qualification; High = Bachelor's degree, diploma or master's degree, doctorate). Age was included as a continuous variable (in years).

* $p < .05$, ** $p < .01$, *** $p < .001$.