



## Office Clutter: Comparing Lower and Upper-Level Employees on Work-related Criteria

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### ABSTRACT

Office clutter might significantly impact productivity, yet no study examined workers differences across upper and lower employee status. The present study surveyed 202 U.S. on-site workers on work-related variables, including office clutter. Job classifications were aggregated, creating two groups: upper- and lower-level employees. A significant difference in office clutter impacted worker-levels: upper-level workers compared to lower-level workers had higher office clutter scores. Exploratory factor analysis created a two-factor solution (explaining 62.6% of the common variance): satisfaction/pleasure from one's work and risk for work-related burnout/tension. There was a significant difference in office clutter perception: upper-level workers were significantly more likely to report clutter and being at risk for burnout/tension than lower-level workers. Office clutter significantly negatively predicted satisfaction with one's job and positively related with risk for work-related burnout. Frequently reported office clutter items (in order of frequency) were paper, trash (e.g., used coffee cups), and office supplies.

**Keywords:** OFFICE CLUTTER; JOB CATEGORIES; WORKPLACE BURNOUT; ON-LINE SAMPLE

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An overaccumulation of items may impede an individual's well-being and connection with their environment because of the stress and negative stigma associated with excessive possessions (Ferrari et al., 2018; Roster et al., 2016). Roster (2001; 2015) reported that people perceive their possessions as an extension of their identity. Subsequent investigations explored whether an overabundance of possessions, termed *clutter*, had a negative influence on one's well-being (e.g., Ferrari & Roster, 2018; Roster et al., 2016). For instance, Crum and Ferrari (2019a) analyzed whether clutter impacted overall life satisfaction among women of color. Results showed that life satisfaction was higher among women with less clutter. In a separate study, Crum and Ferrari (2019b) analyzed the effects of clutter in a sample of young adults. They found perception of clutter was a significant predictor of attachment to their context. Young persons less affected by clutter reported a higher sense of satisfaction with their setting. These findings are the first to connect physical clutter with a person's health and well-being, providing support that material items may have a profound impact on a person and their reactions to stressors.

Past studies on clutter explored the impact of environmental clutter-items on affect and behaviors across age, race, and varied samples. However, no study asked respondents to list the items that they perceived as clutter. The present preliminary, exploratory study focused on perceived work-related affective and cognitive variables and office clutter among employees at lower and upper management levels. If clutter might influence a person's general well-being, then it may be possible that office clutter affects work outcomes. Recently, Roster and Ferrari (2020b) reported that office clutter results in emotional exhaustion among workers, especially if they are persons with indecisive tendencies. Emotional exhaustion depleted energy and made decisional delays more likely. Roster and Ferrari (2020a) found that office clutter among persons who self-identify as indecisive negatively impacts employee performance when there is a perceived loss of control over one's time.

People spend a significant amount of time at work, so their well-being is not just dependent on their home environments, but their work life as well. Organizations suffer when their employees are unhealthy, unmotivated, or performing at a lower level (Dao & Ferrari, 2020). The impact of clutter on employee well-being may affect profit, staff motivation, the buildup of slack/extraneous resources, interpersonal conflict, attitudes about work, and employee behavior. Identifying a relationship between home-office clutter by remote workers and work-related well-being could inform practitioners on how to reduce their impact on workplace outcomes. An individual's work-related well-being not only impacts their success as an employee, but it may influence their home life and health as well. Higher levels of stress or emotional exhaustion directly harm persons' health and make them more susceptible to illnesses, which will also impact absenteeism and turnover (House et al., 1979).

In the present study we included several affective and cognitive self-report scales hypothesized on work-related perceptions, as well as clutter tendencies. More specifically, we explored how office clutter might relate to engagement with work, job-related tensions, and job satisfaction, as well as workload, and perception of their personal workspace. We also examined the items participants more often identified as clutter in their office. We believe this study extended further the small but growing body of research on environmental clutter and its impact on human behavior.

## Method

### Participants

Data were collected in Fall, 2019, and discussed in a previous study (see Roster & Ferrari, 2020; Ferrari et al., in press); however, the present study focuses on unpublished variables. Participants were adults living in the United States, recruited through an on-line crowdsourcing outlet (*Prolific Academic*: <https://prolific.ac>), designed to connect researchers with a quality group of participants based on specific selection criteria. Participants answered "yes" or "no" to a qualifier item, namely: *Do you spend at least 20 hours per*

*week working in an “office” workspace, meaning a space allocated specifically for you to conduct either self-employed or employer-related (either profit or non-profit) business activities?* Only individuals who spend at least 20 hours per week working/employed were included in the present study. The total number of participants was 290, after excluding ten persons who did not pass the qualifier and did not pass the attention trap question.

While office workspaces might take many forms, we referred to a traditional office space as having at least a desk and a chair designated for use to conduct work-related activities, located in an office building. Consequently, we focused on respondents who indicated “*office building workspace*,” meaning their primary or exclusive site for workspace with a desk and chair was located within an office outside of their home. Out of 290 respondents, 202 individuals self-reported as working from an office building workspace. Most respondents were men (59.9%; 121 men, 78 women) 45 years old or younger (86.6%), held a bachelor’s or master’s degree (64.9%), and self-identified as predominantly White, non-Hispanic (78.7%).

These 202 office building workers reported they most often were employed at their present site for four or less years (60.2%) with a personal income of US\$74,999 or less (76.3%). Respondents indicated, on average, their office space size was 88,611.40 square feet ( $SD = 1,237,370.06$  sq. ft.). Respondents self-identified as top management (e.g., CEO, President, Vice-President, Director, Founder, Owner) ( $n = 13$ , 6.4%), middle management ( $n = 36$ , 17.8%), lower management/ supervisory ( $n = 45$ , 22.3%), staff/administrative ( $n = 66$ , 32.7%), individual contributor ( $n = 40$ , 19.8%), and two participants preferred not to answer (1.0%). For analysis, participants were aggregated into two groups: upper-level employees (top management, middle management, lower management/supervisory) and lower-level employees (staff/administrative and individual contributor).

### **Demographic and Work Characteristics Items/Scales**

All participants completed a set of *demographic questions*, namely: age, race, income level, level of education, length of employment, and gender. Participants also were asked to list up to five categories of items perceived as clutter found most often in their office. In addition, respondents completed general questions about their work context, including their position/job category within the organization.

*Social desirability.* All participants completed the unidimensional 13-item true-false forced-choice SD measure by Reynolds (1982), assessing a respondent’s global tendency to give socially appropriate responses. We used this measure as a response bias “control” factor, to ascertain whether our respondents from a crowd sourcing portal might reflect a biased sample. This well-established measure had a coefficient alpha of 0.766 in the present sample.

*Office clutter.* All participants also completed the 11-item, unidimensional *Office Clutter Impact* scale, adapted from the *Clutter Quality of Life Scale* (Roster et al., 2016) examining the negative impact of workplace clutter on the workability of a space, emotional well-being, and social aspects of work. Initial reliability conducted by Roster et al. (2016) on the *Clutter Quality of Life Scale* showed a Cronbach’s alpha of 0.88 ( $M = 31.55$ ,  $SD = 15.40$ ) and was validated with the original sample of 1,349 adults using both exploratory and confirmatory factor analyses. Reliability analysis conducted for the present study showed a coefficient alpha of 0.954 ( $M$  sum score = 30.94,  $SD = 15.80$ ). Example items from this scale include, “*I have to move things in order to accomplish tasks in my office*,” and “*I feel overwhelmed by the clutter in my office*.” Participants responded by selecting a number on a 7-point Likert scale, from 1 (*strongly disagree*) to 7 (*strongly agree*). This study used a scale that measures the impact of office clutter, rather than the physical amount of clutter, because the term “clutter” is subjective; a messy desk full of files may be clutter to one person but not another (Ferrari & Roster, 2018).

*Indecision.* Participants completed Mann’s (1982) 5-item *Decisional Procrastination Scale*

(*DP*; printed in Ferrari et al. 1995; cf. Ferrari, 2010). Participants reported the degree (5-point Likert scale: 1 = *not at all true of me*; 5 = *always true of me*) to which they engaged in various strategies when making decisions. Sample items include “*I put off making decisions*” and “*I delay making decisions until it is too late.*” *DP* scale scores were related to low self-esteem (Effert & Ferrari, 1989) and high states of interpersonal dependency, self-defeating behaviors (Ferrari, 1992; 1994), distractibility and daydreaming (Harriott et. al., 1996), boredom proneness (Blunt & Pychyl, 1998), a tendency not to focus on the future (Spector & Ferrari, 2000), falsely recalling tasks claimed to be completed (Scher & Ferrari, 2000), and greater self-discrepancies of actual-ought selves (Orellana-Damacela et al., 2000). Experimental studies using this *DP* scale found that persons with indecisive tendencies delay in returning items and completed tasks (Burnett et al., 1989) and search information in restricted ways when making actual decisions (Ferrari & Dovidio, 2000, 2001). Reported internal consistency scores were 0.70 or better, with mean sum score of 12.10 ( $SD = 4.01$ ) Coefficient alpha was 0.893 across the present sample ( $M$  sum score = 11.33,  $SD = 4.72$ ).

*Engagement in work.* Participants completed the 4-item, unidimensional *Engagement in Work Scale* (Britt & Bliese, 2003, adapted from Britt, 1999). Initial reliability studies conducted by Britt and Bliese (2003) showed a Cronbach's alpha of 0.56 ( $M = 16.94$ ,  $SD = 2.44$ ). Reliability analysis conducted for the present study showed a coefficient alpha of 0.728 ( $M$  sum score = 12.71,  $SD = 1.82$ ). Sample items from this scale include “*I feel responsible for my job performance,*” and “*I am committed to my job.*” Participants responded by selecting a number on a 5-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*).

*Job-related tension.* Participants responded to the revised 4-item *Job-Related Tension Index* (Wooten et al., 2010, adapted from Kahn et al., 1964), part of a 12-item scale providing an index on job tension related to role ambiguity because

of performance, workload, and organizational design (Wooten et al., 2010). Initial reliability studies conducted by Wooten showed a Cronbach's alpha of 0.87 ( $M = 25.06$ ,  $SD = 9.03$ ). Reliability analysis conducted for the present study showed a coefficient of 0.913 ( $M$  sum score = 25.34,  $SD = 9.44$ ). Participants responded by selecting a number on a 5-point Likert scale, from 1 (*never*) to 5 (*nearly all the time*). *Emotional exhaustion.* Participants also responded to the 8-item, unidimensional *emotional exhaustion* subscale from the *Maslach Burnout Inventory* (Maslach & Jackson, 1981), which measures tiredness, frustration, and closeness to burnout in individuals. Initial reliability studies by the authors showed a Cronbach's alpha of 0.86 ( $M = 29.70$ ,  $SD = 11.93$ ) and internal consistency of the subscale was supported when tested across occupational groups (Schaufeli & Bakker, 2004). Reliability analysis conducted for the present study showed a Cronbach's alpha of 0.937 ( $M$  sum score = 29.93,  $SD = 12.45$ ). Example items include “*I feel fatigued when I get up in the morning and have to face another day on the job,*” and “*I feel used up at the end of the workday.*” Participants responded by selecting a number from a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). High scores suggest that the person is experiencing emotional exhaustion and is close to burnout.

*Job satisfaction.* Ferguson and Weisman's (1986) unidimensional *Job Satisfaction* scale, a 5-item measure examining how much an individual likes their job and is satisfied, was completed by all participants. Initial reliability studies showed a Cronbach's alpha of 0.85 ( $M = 17.29$ ,  $SD = 4.46$ ). Reliability analysis conducted for the present study showed 0.870 ( $M$  sum score = 17.36,  $SD = 4.47$ ). Sample items include “*I am satisfied with my daily job routine,*” and “*In general I like my job.*” Participants responded by selecting a number from a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

*Quantitative workload.* Participants completed the *Quantitative Workload Index* (QWI), a 5-item unidimensional scale developed by Spector and

Jex (1998) inquiring over the past month, week, or day, how often a person's job required working fast, hard, and well. Respondents completed along a 5-pt frequency scale to such items as "How often does your job require you to work very fast?" and "How often does your job leave you with little time to get things done? Initial reliability analysis by the scale developers showed a coefficient of 0.86 ( $M = 16.01$ ,  $SD = 4.33$ ), and with the current sample alpha was 0.873 ( $M$  sum score = 15.43,  $SD = 5.01$ ).

**Perceived control of time.** Participants completed the *Perceived Control of Time* scale, a 5-item unidimensional scale developed by Claessens et al., (2004) inquiring if participants sense of control and confidence they feel for their time. Respondents completed along a 5-pt frequency scale to such items as "I feel in control of my time" and "I feel confident in that I am able to complete my work on time". Reliability analysis with the current sample yielded an alpha of 0.736 873 ( $M$  sum score = 18.50,  $SD = 3.60$ ).

### Procedure

The self-report survey was created on *Qualtrics* with each scale placed in counterbalanced order and posted on *Prolific Academic* for one day (target sample size = 300 participants). Participants were notified ahead of time that they would be compensated for completing the survey, earning

\$2.60 for filling out the entire survey and at least 21 years old plus a U.S. resident. The survey began with the *qualifier question* (if the individuals spend at least 20 hours working in an office), followed by office space questions, the scales, and lastly, demographic items. It took participants approximately 20-25 minutes to complete the entire survey. Once data were collected, it was examined and cleaned. Responses with mostly missing data or failed attention trap questions were deleted.

### Results

#### Preliminary Analysis: Assessing Social Desirability Tendencies

We initially correlated social desirability ( $M$  sum score = 6.71,  $SD = 3.21$ ) with perceived office clutter to ascertain whether respondents expressed a tendency toward socially appropriate responding. Results yield a significant correlation ( $r = 0.186$ ,  $p < .008$ ). Subsequently, we used partial correlates between perceived office clutter and each of the other seven dependent variables self-reported by participants. Table 1 presents the *partial correlates* (plus mean sum score and standard deviation) between perceived office clutter and work-related variables by traditional office workers. As noted by the table, all but one variable (engagement with work) was significantly related to office clutter scores.

Table 1. *Partial Correlates (controlling social desirability) and Mean Sum Scores Between Perceived Office Clutter and Self-reported Work-Related Measures*

	Perceived Office Clutter	$M$ sum score ( $SD$ )
Indecision	.500***	11.33 (4.72)
Engagement in work	-.023	16.90 (2.32)
Job-related tension	.484***	25.34 (9.44)
Emotional Exhaustion	.414***	29.93 (12.45)
Job Satisfaction	-.140*	17.36 (4.47)
Quantitative workload	.312***	15.43 (5.01)
Perceived control of time	-.249***	11.84 (2.34)

$n = 202$  \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

### Factor Analysis of Work-related Scale Sum Scores

Next, we conducted an exploratory factor analysis (maximum likelihood), to examine if there were different themes or factors underlying the

seven self-reported work-related measures by participants who worked at traditional office settings. A two-factor solution with eigen values greater than 1.00 were extracted, explaining 62.6% of the common variance. After the initial

factor extraction, the common factors were rotated by a varimax transformation. Job satisfaction, engagement with work, and perceived control of time loaded on the first factor using the conventional .40 criteria. Job-related tension, emotional exhaustion, quantitative workload, and indecision loaded on factor 2 with loadings greater than .40. Factors 1 and 2 were related negatively ( $r = -0.269$ ), and each had good internal consistency with coefficient alphas of 0.673 ( $M$  sum score = 46.09,  $SD = 7.48$ ) and 0.733 ( $M$  sum score = 112.97,  $SD = 36.19$ ) for factors 1 and 2, respectively. Table 2 shows the loading and communalities of each of the seven work-

related variables. We interrupted the first factor as reflecting positive perceptions of one's job, a sense of satisfaction and pleasure from work, and control over time on work-tasks. The second factor, in contrast, we interpreted as perceiving one's job negatively, as promoting risks toward work-related tension and burnout. Both factors were significantly related to clutter perception (controlling for social desirability) such that satisfaction/pleasure from work was negatively related ( $r = -0.369$ ,  $p = .0001$ ), while risks of work-related burnout/tension was positively related ( $r = 0.403$ ,  $p = .0001$ ).

Table 2: *Loadings of Two Rotated Factor Patterns (Standard Regression Coefficients: Varimax) and Communalities for Self-reported Work-related Variables*

Variable	FACTOR 1	FACTOR 2	COMMONALITY
Job-satisfaction	.963		.236
Engaged with work	.535		.288
Perceived control over time	.429		.352
Job-related tension		.718	.569
Emotional-exhaustion		.627	.713
Quantity of workload		.557	.314
Indecision		.479	.288
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EIGEN VALUE	2.32	1.15	
PERCENTAGE OF VARIANCE	45.33	17.28	

$n = 202$  Only factor loadings greater than .40 reported

### Perceived Office Clutter between Workers

A general linear model MANCOVA (controlling for social desirability) was conducted to test group differences in office clutter for the two groups: upper-level ( $n = 94$ ) and lower-level workers ( $n = 106$ ). The general linear model concluded that there were significant group differences in office clutter impact ( $p = .005$ ,  $\eta^2 = 0.40$ ). Upper-level workers ( $M = 34.34$ ,  $SD = 16.78$ ) perceived significantly more office clutter than lower-level workers ( $M = 28.00$ ,  $SD = 14.43$ ).

### Office Clutter Predicting Work-related Factors

A simple linear regression then examined if office clutter perception predicted either of the

workplace factor scores. Office clutter significantly negatively predicted job satisfaction/pleasure ( $\beta = -.106$ ,  $R^2 = .050$ ,  $p = .001$ ) and significantly positively predicted risks of work-related burnout and tension ( $\beta = .916$ ,  $R^2 = .348$ ,  $p = .0001$ ). Next, two general linear models (controlling for social desirability) were conducted to test group differences on the two factors for the two worker groups. The general linear model for job satisfaction/pleasure did not result in a significant difference between upper-level ( $M = 46.47$ ,  $SD = 7.22$ ) and lower-level workers ( $M = 45.80$ ,  $SD = 7.76$ ). However, a general linear model for risks of burnout found a significant difference ( $p = 0.12$ ,  $\eta^2 = .032$ ) by work-level category, such that upper-level ( $M = 86.23$ ,  $SD = 27.34$ )

reported more risks of burnout than lower-level workers ( $M = 77.79$ ,  $SD = 20.95$ ). Additionally, four simple linear regressions examined if the relationship between self-reported office clutter and work-related factors remained when ex-

amining upper-level and lower-level workers categories. Office clutter impact and work-related factor relationships remained consistent when examining these two different worker level groups (see Table 3).

Table 3. *Office Clutter Impact and Work-Related Factors for Upper- and Lower-level Workers*

Group	Criterion	Predictor	$\beta$	SE	$t$	$R^2$
Upper-level Workers	Office clutter impact	Factor 1	-.463*	.237	-1.95	.040
		Factor 2	.408***	.048	8.54	.442
Lower-level Workers	Office clutter impact	Factor 1	-.515**	.175	-2.94	.077
		Factor 2	.329***	.059	5.56	.229

= 202 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

### Reported Office Clutter Items: Comparisons between Worker Levels

We also assessed the top three items respondents reported as their most frequent clutter items, from five items listed, to learn more about the items perceived as clutter that they have in their workplace. We focused on the first three of five items listed to capture most respondent listings. That is, we noted that around 90% of the remote workers listed an item in the first three categories with the rate of responding dropping after these listings, yielding 571 items recorded. We sorted these stated items into one of six broad categories. The categories were *office supplies* (e.g., pens, pencils paper clips, scissors, staplers), *office hardware* (e.g., desks, tables, chairs, file cabinets, shredders), *pc and electronics* (e.g., monitors, wires, mice, keyboards, laptops, desktops, phones), *paper* (e.g., note pads, post notes, files, copy paper, binders with paper), *books* (e.g., manuals, reading books novels, magazines), and *miscellaneous and "trash"* (e.g., used coffee cups, clothes, home stuff, toys, Styrofoam containers, dirty forks/spoons/ knives).

Results indicated that the category most often claimed by traditional office workers was *paper* (listed 102 times as the first item, by 52.0% of respondents), followed by *office equipment* (25 times; 12.8% of respondents), and then *trash* (25 times; 12.8% of respondents). The second category most often stated by these on-site workers was again *paper* (69 times; 36.1% of respondents), followed by *trash* (35 times; 18.3% of respondents) and then *pc/electronics* (30 times; 15.7% of respondents). The third category most often reported by on-site workers was *office supplies* (49 times; 26.6% of respondents), followed by *paper* (48 times; 26.1% of respondents) and then *trash* (45 times; 24.5% of respondents).

Finally, we investigated (*chi square* analysis) if there were any group differences on reported clutter item between upper-level and lower-level workers. Results showed no significant differences between upper-level and lower-level workers on what they listed as their top-3 office clutter categories.

### Discussion

The present, brief study assessed perceptions of office clutter's impact on work-related variables

among traditional office workers. Using factor analyses, results yield two themes across self-reported measures: a perception of satisfaction and pleasure for working on one's job, and, in contrast, perceiving work-related burnout and tension at the job. Furthermore, participants reported that office clutter was significantly negatively related to their satisfaction/pleasure from work and significantly positively related to a risk for burnout/tension from work. These results are consistent with previous studies exploring clutter's impact on employee productivity (Roster & Ferrari, 2020a; 2020b). In addition, we compared employees based on their status within an organization, comparing those in higher or leadership positions with associate or lower level positions. Results showed that upper-level workers (managers, company owners) reported more office clutter negatively impacting job-related behaviors compared to lower-level workers (clerical staff, tech support employees). These findings suggest that office clutter contributed to reporting of higher risk for burnout and tension. Finally, the present study found no significant difference between lower and upper employee status on the type of clutter items reported. These results continued the initial line of study by Ferrari et al (in press) exploring the types of clutter and their impact on employees and organizations.

Of course, the present study has limitations in design. For instance, the sample size of 202 on-site workers most participants were White, non-Hispanic (78.7%) and young to middle age workers (45 years old or younger, 86.6%), providing a homogenous sample for research. Future studies should obtain a more diverse sample to increase study power and effect size, and generalizability. Future studies also might obtain a more diverse sample to fully capture the experiences of on-site workers.

The present exploratory study sought to understand how work environment characteristics may be experienced differently by those that are upper-level or lower-level workers. Future researchers might explore worker level groups in

different occupations and how office clutter impacts different occupations differently.

Additionally, the type of on-site work space may be important in understanding how office clutter impacts employees. To build a work environment that promotes work engagement and productivity, employees and employers must recognize environmental aspects that contribute to a worker either loving their job or being at risk of burnout from their job. Specifically, leaders should be critical of clutter and its role in office spaces and its impact on employees. When office clutter observations are made, it is important that fellow workers and leaders within the organization start a conversation with the employee(s) with cluttered workspaces to inform them of the risks associated with office clutter, namely the high risk of burnout. Likewise, employees, regardless of organizational rank, should self-evaluate their office clutter and the impact it may have on their work.

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