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Trajectories and Predictors of Client Violence Among Child Protection Services Workers

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Objective: This study used social dominance theory and the jobs demands–resources model to (a) examine child protective services (CPS) workers' trajectories of client violence, including yelling, threats, and physical violence over job tenure and (b) assess how demographic characteristics and job attributes contributed to the trajectories. ***Method:*** Using data from a longitudinal study of newly hired CPS workers (n = 837–859 depending on outcome), we examined trajectories of client violence from 6 months to 3.5 years. Multilevel mixed effect logistic regression was used to examine how demographic variables and time-lagged job attribute predictors (e.g., caseload characteristics, time pressure, role demands) contributed to the occurrence of client violence over time. ***Results:*** Over the study period, the experience of being yelled at declined from 80% to 64%. Being threatened declined from nearly 48% to nearly 39%, while physical violence did not change. Younger and White workers as well as women generally experienced higher rates of nonphysical violence. Caseload difficulty, role demands, and time pressure related to higher rates of nonphysical violence, while organizational supports were not significant. Physical violence occurred sporadically; time pressure was the only significant variable. The influence of job attributes on each form of violence did not change over time. ***Conclusions:*** The high rates of nonphysical violence, particularly during early tenure, suggest the need for providing vulnerable workers the skills to assess for and manage client violence. When violence occurs, developing responsive protocols for CPS workers at all levels can nourish a culture of safety thereby reducing future incidents.

Keywords: workplace violence, client violence, child welfare, frontline workforce, longitudinal

Workplace violence, or the act or threat of verbal abuse or physical violence toward workers completing their jobs (National Institute for Occupational Safety & Health, 2021), is rampant and harmful to workers. Frontline child protective services (CPS) workers are one particularly vulnerable group. CPS workers are responsible for investigating and providing services to families with alleged or verified child abuse or neglect. In their positions, they face almost all identified risk factors for workplace violence, including home visits, hostile clients, irregular hours, and independent work (National Institute for Occupational Safety & Health, 1996). Estimates suggest that the vast majority of CPS workers experience violence in their careers (Radey & Wilke, 2021; Robson et al., 2014), and most violent incidents are unreported (McGuire et al., 2021). Yet, reported violence in this sector has risen over the last decade (Bureau of Labor Statistics, 2020). As part of the health care and social assistance work sector, CPS workers face a nonfatal workplace injury rate 5 times the rate of all U.S. workers (10.4 vs. 2.1 per 10,000 workers) and account for 73% of U.S. reported workplace injuries (Bureau of Labor Statistics, 2018, 2020). In addition to physical injury, violence results in costs to workers (e.g., loss to psychological or emotional health; Robson et al., 2014) and agencies (e.g., lost worker productivity, lower service quality; Bowie et al., 2012).

Ensuring child safety and its related tasks make CPS workers particularly susceptible to workplace violence from clients during service delivery, or client violence. The nonvoluntary nature of CPS contact and characteristics often associated with allegations (e.g., mental health problems, drug use, poverty) increase the likelihood of violence, particularly when clients feel threatened with child removal (Radey et al., 2022a). In addition, CPS workers frequently work in dangerous neighborhoods and household conditions including the presence of threatening animals, display of firearms, or illegal activity (e.g., Kendra & George, 2001).

Almost all CPS workers encounter client violence at some point. Statewide data of a cohort of recently hired CPS workers, and the data used in the present study, indicated that 75% of workers experienced verbal abuse (i.e., yelling, cursing, swearing), 37% experienced threats, and 2% experienced physical violence within the first 6 months of hire (Radey & Wilke, 2021). Convenience studies indicate similar high rates of verbal abuse (nearly 100%), threats of violence (11%–33%), and physical attacks (2%–34%; Horejsi et al., 1994; Ringstad, 2009; Robson et al., 2014). Although strong evidence suggests the high prevalence of client violence among CPS workers, few, if any, studies examine client violence trajectories over job tenure. The present study's purpose is twofold:

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(1) to examine CPS workers' trajectories of violence, including yelling, threats, and physical violence, over job tenure from 6 months to 3.5 years and (2) to assess how demographic characteristics and job attributes contribute to these trajectories.

Demographics, Job Attributes, and Client Violence

Social dominance theory coupled with the job demands–resources (JD-R) model provide the theoretical frameworks to consider how violence susceptibility may vary across workers and over time. First, social dominance theory contends that workers are treated unequally based on status characteristics used to classify the social world (e.g., age, race, ethnicity, ability status; Sidanius & Pratto, 2001). Treatment based on status characteristics determines one's social location, which in turn affects one's sense of identity and interactions within an environment. In this sense, clients' perceptions of workers' social locations (e.g., race, ethnicity, age) condition their reactions to worker behavior, facilitate how workers and clients interact with one another (Anderson, 2010), and may influence whether workers perceive client violence. According to social dominance theory, workplace treatment and interactions disadvantage women, younger workers, and minorities compared to majority group members due to social hierarchies and their diminished status. Racism, classism, and ageism in categorizing the world and processes within it may contribute to disparities.

The applicability of social dominance theory to client violence among CPS workers is an open question. Extensions of the theory emphasize the critical role of context in shaping interactions and reactions (Sidanius & Pratto, 2001). The nonvoluntary and invasive nature of CPS contact (e.g., home visits) in combination with the worker's power (e.g., child removal) create unique context. Client violence is commonly spontaneous and reactive, often occurring during child removal or threat of removal (Radey et al., 2022a). Evidence suggests that in conditions of high stress and perceived social threats, people are particularly susceptible to employ biased language or behaviors (Pratto & Shih, 2000). However, the unique racial, gender, and age composition of CPS workers and clients may influence relationships. For example, minoritized workers may pose less threat which could create a context less relevant for social dominance theory.

The importance of context in shaping behavior likely contributes to varied findings in empirical studies. Congruent with social dominance theory, a meta-analytic study of sex and race differences in perceptions of workplace maltreatment more generally indicated that disparities exist such that 55% of women and 56% of racial minorities perceived more workplace maltreatment than the average man or White employee, respectively (McCord et al., 2018). Although the evidence is less established and inconclusive, studies also suggest disparities in some types of client violence susceptibility, particularly nonphysical violence. In terms of racial and ethnic differences, using the same data as the present study, Radey and Wilke (2021) found that Black and Hispanic workers had higher odds of receiving threats compared to non-Hispanic White workers. Yet, counter to social dominance theory, Radey and Wilke's study of child welfare workers (2021) and Bride et al.'s (2015) study of substance abuse workers indicated that the likelihood of verbal violence was lower among racially minoritized workers compared to White workers. Non-Hispanic Black and Hispanic child welfare workers, for example, experienced 66% and 35% lower odds of being yelled at, respectively, compared to their White counterparts (Radey & Wilke, 2021). Other studies have found no significant racial differences in client violence (Jayaratne et al., 2004; Newhill, 1996; Ringstad, 2009), although this may reflect small, racially homogenous samples.

The few studies examining client violence and gender also are inconclusive. In some instances, being a woman increased workers' risk of client violence (Bent-Goodley et al., 2017); yet other studies suggest a decreased risk (Jayaratne et al., 2004; Newhill, 1996) or no relationship (Radey & Wilke, 2021). The nuances of the relationships among gender, violence type, and job conditions along with study attributes likely account for the differences (Jayaratne et al., 2004; Newhill, 1996).

Prior studies suggest the potential importance of worker age in studies of workplace treatment (Barling et al., 2009). Younger CPS and other social service workers experience higher rates of verbal violence than their older counterparts (Bride et al., 2015; Jayaratne et al., 2004; Radey & Wilke, 2021; Ringstad, 2009). For example, Jayaratne et al. (2004) found that younger workers in social service agencies were at higher risk of physical violence, verbal abuse, and sexual harassment compared to older workers.

In addition to the potential importance of worker demographics, a second perspective, the JD-R model, offers that workplace attributes, including job demands and resources, influence worker–client interactions. Job demands include the physical, psychological, social, or organizational climate of the job and the potential costs of this climate (e.g., client violence; Bakker & Demerouti, 2007). High caseloads, difficult clients, and time pressures all contribute to job demands for the child welfare workforce. Job resources, alternatively, nourish worker growth and promote organizational goals thereby counteracting job demands. An experienced workforce, innovative organizations, supportive supervisors, helpful coworkers, and job autonomy can provide resources for workers. The JD-R model highlights the importance of the interplay between and among job factors—including demands and resources—that create (or prevent) negative outcomes among workers. As such, high demands and low resources contribute to violence susceptibility (Bakker & Demerouti, 2007; McPhaul et al., 2010). The model also identifies that various aspects of demands and resources may relate to outcomes differently, or relationships may change over time. For example, time pressure may relate to client violence, and high caseloads may not. Or, caseload size may relate to violence for recently hired workers and lose salience over time.

Supporting the JD-R model, limited prior studies suggest that job attributes shape violence susceptibility. Although studies that examine lifetime prevalence of violence find that longer job tenure relates to higher vulnerability, violence is likely higher due to longer exposure periods (Bride et al., 2015; Shin, 2011). Studies examining 6- to 12-month prevalence rates suggest a negative relationship. For example, Freysteinsdóttir and Sveinbjörnsson Brink (2022) found that years on the job were negatively related to experiencing emotional violence (e.g., yelling) in the past 6 months among Icelandic CPS workers (n = 271), and that new workers were particularly vulnerable to client violence. This may be especially relevant for CPS workers given a steep learning curve for the work, understaffed agencies, and short job tenures (Linehan, 2021; Radey & Schelbe, 2017). Although longitudinal violence trajectories among CPS workers are largely unknown, research found that violence declined over a 2-year period for teachers, a related

vulnerable profession (Melanda et al., 2021). With experience, workers may gain competence at diffusing potentially violent situations. Alternatively, agencies may protect early tenure workers through additional supports and less complex caseloads decreasing risk of client violence. For example, Phillips et al. (2020) found that more recently hired CPS workers reported smaller caseloads, less job stress, and less time pressure than CPS workers with more job tenure. This study will increase understanding of client violence over time.

Complementing job experience, additional job resources, and limited job demands may contribute to lower levels of violence. Although studies are few, a review of workplace violence against health care workers, including social service workers, suggests that working longer hours raises violence susceptibility (Liu et al., 2019). A study of Australian social workers (N = 1,000) also indicated that working longer hours was associated with experiencing verbal abuse (Koritsas et al., 2010). Job position may also matter (National Institute for Occupational Safety & Health, 1996). A study using the same data as this study found that those doing short-term investigations of abuse allegations experienced higher levels of verbal violence, including threats, compared to those providing extended services to families with substantiated maltreatment (Radey & Wilke, 2021). The present study examines additional aspects of demands and resources (i.e., caseload size, caseload difficulty, time pressure, role demands, organizational supports, supervisory supports, social support) that the JD-R model theoretically links to client violence.

The Present Study and Hypotheses

Almost all CPS workers experience client violence. Although accumulating evidence suggest its deleterious consequences, few longitudinal studies measure client violence and its subtypes over time. The current mixed effect analysis provides the opportunity to test components of both social dominance theory and the JD-R model by considering how workers' demographic characteristics and their job attributes contribute to client violence risk and how these relationships may change as workers gain experience. Few have sought to understand how demographic and work characteristics shape violence trajectories by disaggregating changes both between and within workers over time. The present study used a statewide cohort of recently hired CPS workers followed prospectively from 6-months to 3.5 years after hire to consider two research questions: (1) how do types of client violence evolve as workers learn their positions? and (2) how do demographic and job attributes contribute to its prevalence over early job tenure? Based on available theory and limited empirical evidence, our hypotheses are as follows:

Hypothesis 1: Client violence, particularly being yelled at, is high early in job tenure and dissipates over time as workers learn their positions.

Hypothesis 2: Younger, minoritized, and women workers experience higher levels of being yelled at and threatened while demographic characteristics are less predictive of physical violence.

Hypothesis 3: Higher job demands and fewer job resources relate to higher levels of violence, particularly incidents of yelling and threats.

Hypothesis 4: The importance of job attributes for experiences of client yelling and threats are important during early job tenure and decrease in salience over time.

Methodology

Participants

To be included in the analysis, participants were employed in a child welfare position and carrying a caseload, as not all respondents were employed in in the field work with clients (e.g., quality assurance staff). Table 1 displays the total respondents for a given wave, those still employed in child welfare and those carrying a caseload. The sample size declined over time largely due to turnover.

The analysis examined violence trajectories from Wave 3 to Wave 8 due to the timing and availability of measures. Although client violence items were collected at Wave 2, workers had been out of training and engaging with clients for 3–4 months, as compared to the 6-month interval in the remaining waves. To have a common time interval for exposure to client violence, the analysis of trajectories begins at Wave 3, or about 1 year on the job. In addition, the analysis employed time-lagged predictors. Job attributes were first collected at Wave 2 after participants completed training and had responsibilities as case workers for about 3 months. Although data were collected beginning 6- and 12-months post hire for independent and dependent variables, respectively, we consider workers early in their tenure because responses reflect experiences up to 6 months prior to the current wave. In addition, the diversity of CPS worker responsibilities likely means that workers continued to learn their positions at the first included wave of data collection.

Workers were racially and ethnically diverse. Over one third of workers (35.3%) identified as non-Hispanic Black, 17.5% identified as Hispanic, 3.8% identified as non-Hispanic of another race, and 43.4% identified as non-Hispanic White. About 87% of respondents identified as women, 13% as men, and one respondent as

Table 1
Workers Who Stayed in Child Welfare and Carried a Caseload by Wave

n	W1	W2	W3	W4	W5	W6	W7	W8
Total	1,500	1,306	1,277	1,203	1,177	1,161	1,170	1,172
In child welfare	1,500	1,100	859	668	577	497	466	438
In child welfare with caseload	1,500	1,073	816	628	511	425	373	308

Note. W = wave.

transgender. On average, workers were 31 years old at hire with most workers in their 20s (SD = 9.05). Sixty percent of workers served families with substantiated maltreatment as case managers and the remainder worked as child protective investigators (CPIs) assessing for child maltreatment. About 30% of workers were CPIs located outside of sheriff offices, and 10% were CPIs located in sheriff offices.

Procedure

This study used data from the Florida study of professionals for safe families, a prospective, statewide longitudinal study of newly hired CPS workers to learn about workers' experiences on the job, their well-being, and their retention. During mandatory preservice training, all workers hired between September 2015 and December 2016 were invited to participate, and 84% of eligible workers completed the online baseline survey (N = 1,500). Workers received online follow-up surveys every 6 months and were followed for 3.5 years regardless of whether they exited child welfare (see Wilke et al., 2017 for additional study details). The institutional review board at the authors' university approved all study protocol.

Measures

Client Violence

Workers completed the Workplace Violence Scale (McPhaul et al., 2010), a nine-item dichotomous index. Workers indicated whether they had experienced the following forms of behavior from a client or a client's household in the past 6 months: (a) yelled at, shouted at, or sworn at, (b) threatened by a client without physical contact, (c) threatened with property damage or theft, (d) threatened with a weapon, (e) personal or workplace property damage, (f) physical assault without physical injury, (g) physical assault with mild soreness or minor injury, (h) physical assault with pain but no emergency room or physician visit, or (i) physical assault requiring emergency room or physician visit. As is common and empirically supported in measuring client violence (Parveen et al., 2023), workers used their subjective judgment in deciding whether or not an event happened. We grouped items together to form three dichotomous indicators including yelling (that is, yelled at [a]), threats (that is, threatened in any way [b–d]), and physical violence (that is, property damage or assault [e–i]). Many workers experienced multiple forms of violence and were coded as "1" for each form of violence they experienced at each wave, 0 otherwise.

Demographic Characteristics

Age, Gender, Race, and Ethnicity. Age was calculated in years from the worker's birthdate. Respondents were asked to self-identify their gender as male, female, or transgender. One respondent identified as transgender. Due to its problematic nature in combining sex with gender (i.e., a woman or man could be transgender), gender was collapsed into woman (1) or man or transgender (0). For race/ethnicity, workers indicated (a) whether they were of Hispanic/Latino ethnicity and (b) their race from U.S. census definitions. We created four categories: Hispanic, non-Hispanic Black, non-Hispanic White, and non-Hispanic of another race. Due to the small number and diverse identities of workers in the non-Hispanic of another race category, further disaggregation was not possible. Non-Hispanic White was used as the omitted category in regression modeling.

Job Position. Workers also reported their job role as case managers or CPIs. Because workers' apparel and vehicles noted their affiliation with a sheriff's office and clients may have acted differently based on the affiliation, we separated CPIs that worked in sheriff offices from those who did not.

Job Attributes

We included several caseload characteristics and job attributes that may also relate to experiencing client violence. Measures were collected at each wave.

Caseload Size. To measure caseload size, workers reported their current number of cases. Based on the state's recommended caseload size of 12, we distinguished between workers who exceeded the recommended caseload size (1) from those who did not (0).

Caseload Difficulty. Workers indicated the percentage of cases on their caseload that they deemed "difficult," and we included the percentage as a variable.

Hours Worked. Participants reported the number of hours worked in the past week. To avoid undue influence of outliers, we capped the number of hours at 80.

Time Pressure. Time pressure was measured with a five-item scale in which workers noted their agreement on a 4-point scale (*strongly disagree* to *strongly agree*) to items including "I am too busy at work" and "I don't have enough time to do my job effectively" (Butler Institute, 2011). Initial validation of the Time Pressure scale with child welfare workers (n = 1,192) showed excellent reliability (α = .95) and validity (Potter et al., 2016).

Organizational Climate. We used Parker's Organizational Climate scale (Parker et al., 2003) to measure job demands and resources. We included separate indicators from three 12-item subscales to measure role demands (i.e., ambiguity, conflict, overload), organizational characteristics (i.e., innovation, justice, and support), and supervisor characteristics (i.e., trust, goal emphasis, and work facilitation). Respondents rated their level of agreement on a 5-point scale (*strongly disagree* to *strongly agree*) with each statement. Example role demand items included, "There are too many people telling me what to do," and "I have more work than I could ever get done." Higher scores on the Role Demands scale indicated higher levels of role demands. Example organizational characteristic items included "the organization shows little concern for me" and "the organization really cares about my well-being." Items related to the worker's experiences with supervision included "my supervisor treats his/her people with respect," and "my supervisor stresses the importance of work goals." Items were coded such that higher scores on organization and supervisor scales indicated healthier levels of organizational and supervisory functioning. Initial testing in a sample of health care workers (N = 1,692) showed adequate reliability for role demands (α = .79), organizational characteristics (α = .86), supervisor characteristics (α = .87), and acceptable validity (Gagnon et al., 2009).

Social Support. The Caplan's Social Support Index (Caplan et al., 1975) measured social support from three sources: supervisor, coworkers, and friends. The five-item index used a 4-point Likert scale (0 = *not at all* to 3 = *very much*) to assess how much support participants received from each source. Example items asked about

how "easy it is" to talk with each source and the availability of support when "things get tough at work." Higher values indicated greater levels of support. The scale has been used extensively as a reliable (α = .73–.83; Caplan et al., 1975) and valid measure of social support, particularly in the workplace, and among CPS workers (e.g., Mor Barak et al., 2006).

Data Analysis Plan

The analysis consisted of a descriptive analysis followed by a multilevel mixed effects regression analysis. First, we conducted a descriptive analysis to examine client violence of recently hired workers and provide a descriptive picture of work-related characteristics from 6 months to 3.5 years post hire. Second, mixed effects logistic models, including fixed and random effects (Singer & Willett, 2003), examined trajectories of violence over time and how demographic and job attributes shaped trajectories. The models incorporated all available data (e.g., data from workers who contributed data for any model) and accounted for right censoring (e.g., early exits from sample; Singer & Willett, 2003).

Mixed effects models use data in the person–year format in which workers contribute up to six waves of data from Waves 3 to 8 for the violence indicators with time-lagged predictors from the previous wave. The models allow workers to vary in their interview schedules, an inevitability in a large longitudinal project, and we measured time using the number of months since the worker's hire date. Models were estimated at two levels. The first level examined within-worker change (e.g., how much does client violence change over time?). The second level examined each worker's unique change trajectory considering demographic and job characteristics (e.g., how do worker demographics and job attributes influence changes in violence across individuals?). The Level 2 model considers how workers differ in their changes over time to determine each worker's trajectory net of demographic characteristics, job attributes, and the interrelationships among the variables (Singer & Willett, 2003). We tested whether the cluster-based variation of the effect of time improved the model fit for each form of violence through log likelihood tests and included time when appropriate (Bates et al., 2015; Sommet & Morselli, 2017).

Importantly, the measured job attributes overlapped. For example, conceptually, work pressure can include role overload, an aspect of role demands. Initial correlational analyses also indicated overlap among many job attributes. Therefore, we ran separate multilevel regressions examining each job attribute. To test whether the relationship between each job attribute was time contingent, we interacted each job attribute with time. We compared model statistics (i.e., the Akaike information criterion, Bayesian information criterion, and deviance) and added additional variables based on lower scores indicating better model fit. No work attribute–time interaction was significant or improved model fit. We present the best-fitting models. All analyses were conducted in Stata 17.0.

Missing Data

Longitudinal analysis includes missing data due to attrition, nonresponse to a survey, and nonresponse to individual survey items. All Florida study of professionals for safe families participants received surveys at every wave unless they notified us of their withdrawal from the study. About 2% (n = 23) withdrew from the study and nearly 5% (n = 67) did not complete any surveys after baseline. Survey response rates ranged from 77% to 87% (W2: 87%; W3: 85%; W4: 80%; W5: 79%; W6: 77%; W7: 78%; W8: 78%). Across all waves, missing data on survey items ranged from 0% to 5% on all included variables. To retain as many workers as possible, we used person mean substitution to impute scale scores (Dodeen, 2003). For respondents with fewer than 50% missing values on a scale, we computed mean scores and multiplied by the number of items for an overall imputed sum score; otherwise, the scale score was left as missing. Missing data analysis indicated that those with missing data did not differ from those included in the analysis with three exceptions: those without missing data were older (Wave 3), more likely to be White (Waves 4, 5, 7, and 8), and more likely to have experienced yelling (Wave 7).

Power Analysis

The literature lacks consensus about appropriate strategies to estimate power within multilevel models (Bolger et al., 2011). A widely used, respected method noted for its flexibility uses Monte Carlo simulation (Arend & Schäfer, 2019). Monte Carlo simulation suggests that 80% power at α = .05 with a medium-sized intraclass correlation coefficient and Level 1 units = 7, Level 2 samples of at least 200 can detect a .1 minimum effect size for Level 1 direct effects (i.e., changes over time), a .23 minimum effect size for Level 2 direct effects, and .32 for cross-level interactions. The present study (N = 7, n = 837–859) allows for the detection of effects in the small to medium range (Arend & Schäfer, 2019).

Results

Descriptive Results

Table 2 displays the percentage of workers that experienced violent acts in the previous 6 months. The experience of being yelled at declined over time from 80% in the 6- to 12-month period to 64% in the 36- to 42-month period. The experience of being threatened declined from nearly 48% in the first period to nearly 39% in the last period. Physical violence did not significantly change over time. Additional analyses examining within-worker experiences over time suggest that change is more common for being yelled at or threatened compared to experiencing physical violence. For

Table 2
Occurrence of Client Violence Over Time

Variable	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8
Yelled at						
%	80.3	80.0	74.9	73.2	70.1	63.7
n	796	604	486	407	358	300
Threatened						
%	47.9	47.1	42.7	44.6	37.9	38.7
n	800	606	485	408	356	297
Physical violence						
%	4.0	5.7	3.2	3.7	3.4	3.1
n	797	601	476	406	350	292

example, 55% of workers had waves in which they experienced yelling and waves in which they did not; over 60% of workers had waves in which they were threatened and waves in which they were not. In large part due to the low incidence of physical violence, only 15% of workers changed over time in their report of such behavior, with only two individuals reporting a physical incident at every wave.

Table 3 presents percentage/mean distributions, scale reliabilities, and sample sizes for the measures of job demands and resources. Cronbach's α scores were at least acceptable at each wave, all exceeding .8. Table 4 provides correlations and tests of significance with Bonferroni correction for all job attributes at Wave 2, the first wave of analysis for time-lagged variables. On average, correlations were high demonstrating high overlap. The number of hours worked and organizational characteristics significantly correlated with almost all other measures.

Regression Results

Table 5 presents the logistic mixed effects linear regression models of yelling, threats, and physical acts of violence. Examining yelling first, the empty model confirmed sufficient variation between workers to support the appropriateness for mixed effects models. The between-person constant approximates the average odds of reported yelling across workers and time. The constant indicates that the average probability of being yelled at during the 6-wave period was 0.853 ($P = (5.79)/(1 + 5.79)$). Its statistical significance suggests the probability of yelling was not constant across workers

Table 3
Distributions of Time-Varying Predictors Over Time

Variable	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
High caseload size						
%	52.0	69.5	66.0	68.2	63.7	66.0
n	743	567	427	365	306	244
% difficult cases						
M	26.4	26.3	24.4	24.91	28.2	24.08
SD	18.92	20.31	17.43	20.72	23.73	22.39
n	735	564	418	355	295	242
Hours worked last week (range: 0–84)						
M	45.22	44.44	42.91	42.25	42.7	43.0
SD	13.07	14.68	15.42	14.08	14.43	14.66
n	743	590	442	380	333	274
Time pressure (range: 0–15)						
M	10.96	10.95	10.63	10.27	10.04	9.39
SD	3.51	3.90	3.84	3.89	3.49	4.19
Internal reliability	.87	.91	.90	.91	.88	.91
n	749	589	445	384	332	267
Role demands (range: 0–48)						
M	23.85	23.79	23.75	22.92	22.22	21.85
SD	8.15	8.73	8.59	8.10	7.59	8.23
Internal reliability	.86	.87	.88	.86	.84	.86
n	727	585	438	371	329	269
Organization: structure (range: 0–48)						
M	27.88	27.49	26.96	27.75	27.52	26.74
SD	9.14	9.24	9.47	9.24	9.53	10.23
Internal reliability	.92	.92	.92	.92	.93	.94
n	727	585	438	371	329	269
Organization: supervisor (range: 0–48)						
M	34.20	33.98	33.09	33.91	33.60	32.57
SD	10.03	9.76	9.66	9.30	9.36	9.81
Internal reliability	.95	.94	.94	.94	.94	.94
n	727	585	438	371	329	269
Social support: supervisor (range: 0–15)						
M (*SD*)	9.67	9.80	9.45	8.91	9.2	9.41
SD	4.22	4.40	4.56	3.96	3.98	4.72
Internal reliability	.92	.93	.94	.91	.90	.94
n	738	591	440	376	329	269
Social support: coworker (range: 0–15)						
M	10.27	10.37	10.12	8.95	9.01	10.06
SD	3.60	3.74	3.81	3.68	3.74	4.14
Internal reliability	.88	.90	.90	.89	.89	.92
n	738	591	440	376	329	269
Social support: family (range: 0–15)						
M (*SD*)	10.34	10.39	10.37	9.18	8.93	10.13
SD	3.43	3.56	3.42	3.52	3.58	3.72
Internal reliability	.80	.84	.80	.82	.81	.83
n	738	591	440	376	329	268

Table 4
Correlations of Time-Varying Predictors at Wave 2

Variable	1	2	3	4	5	6	7	8	9	10	11
1. High caseload size	—										
2. % cases difficult	−.10*	—									
3. Time pressure (0–12)	.27***	.22***	—								
4. Hours worked last week	.14***	.04	.08	—							
5. Worked late last week	.16***	.09	.21***	.18***	—						
6. Role demands	.17***	.21***	.55***	.08	.21***	—					
7. Organization: structure	−.11*	−.11*	−.33***	−.07	−.17***	−.68***	—				
8. Organization: supervisor	−.05	−.06	−.19***	−.04	−.07	−.48***	.69***	—			
9. Social support: supervisor	−.05	−.06	−.20***	−.03	−.10	−.43***	.59***	.77***	—		
10. Social support: coworker	−.06	−.03	−.13**	−.02	−.08	−.27***	.40***	.33***	.48***	—	
11. Social support: family	−.04	−.05	−.12**	−.02	−.08	−.25***	.28***	.19***	.29***	.39***	—

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

and time. The interclass correlation coefficient ($r = 0.44$) indicated a high degree of residual autocorrelation and that differences between workers accounted for 44% of the total variance in the probability of a yelling incident, with the remainder (56%) due to external circumstances. This significant variance suggested substantial residual variation between workers over time that may be explainable with additional variables.

The unconditional growth model added the time indicator (i.e., No. of months since hire) to capture the rate of change in the odds of a yelling incident, and a random time component. The likelihood ratio test was significant, $\chi^2(2) = 51.45$, $p = .000$, indicating that allowing the specific effects of the independent variables to vary over time improved the model fit. The statistical significance of the within-worker constant means the odds of reporting a yelling incident decreased over time. Coupled with the significant between-worker constant, there is variation in both their initial odds of experiencing a yelling incident and the probability of experiencing such an incident over time.

The empty and unconditional growth model results suggest that workers' experiences of yelling decreased over time and that between-worker differences partially accounted for this decline. Following, the third model examining yelling reflects the best-fitting model. Worker demographic characteristics contributed to the odds that a worker experienced yelling. Women had twice the odds of being yelled at compared to men. Compared to Whites, Black and Hispanic workers had 78% (1–.22) and 66% (1–.34) lower odds of yelling incidents, respectively. CPIs reported higher odds of being yelled at than case managers. Select job attributes also predicted yelling. Workers who classified a higher percentage of their cases as difficult and those who experienced higher levels of time pressure had higher odds of yelling incidents.

The middle columns of Table 5 report parallel results for threats. The constant indicates that the average probability of being yelled at during the six-wave period is 0.42 ($P = (.73)/(1 + .73)$). Similar to yelling, the odds of being threatened was not constant across workers and time. The interclass correlation coefficient of .40 indicated a high degree of residual autocorrelation such that worker characteristics accounted for 40% of the variation in experiencing a threat. The unconditional growth model for threats also indicated that the odds of an experience decreased slightly over time. The likelihood ratio test was significant, ($\chi^2(3) = 23.06$, $p = .000$), indicating an improved model fit. The failure of the between-worker constant to achieve statistical significance suggested that the average probability of change did not vary over time. In other words, although workers varied in their initial odds of experiencing a threat, the typical worker did not change in the probability of experiencing a threat over the observed period. However, as indicated in the best-fitting model, variables related to important between-worker differences in change trajectories. Black and older workers experienced lower odds of experiencing a threat compared to their younger and White counterparts. Also, perceiving additional time pressure and more work demands increased the odds of experiencing a threat.

For the third series of models, the rightmost columns of Table 5 present the findings for physical violence. The empty model for physical violence confirmed sufficient variation between workers making mixed effects models appropriate. The between-worker constant suggested that the probability of experiencing physical violence over the study period was 0.03 ($P = (.03)/(1 + .03)$). The much smaller interclass correlation coefficient (.14) indicates a little autocorrelation, and worker characteristics account for a smaller proportion of the variation in experiencing physical violence. Put simply, physical violence is a more random event than yelling or threats. Also, unlike the earlier models, the introduction of time did not improve model fit. The likelihood ratio test was not significant, $\chi^2(3) = 1.57$, $p = .666$, and, thus, the best-fitting model did not include time as a random effect. Reflecting the low correlation coefficient, no worker demographic characteristic was significant in predicting physical violence. However, CPIs located in sheriff's offices had 69% (1–.31) lower odds of experiencing physical violence than case managers. A post hoc comparison test indicated that the comparison between CPIs in sheriff offices to those in social services offices approached significance (*Odds Ratio* = .36, $p = .06$). Time pressure was also significant: congruent with yelling and threats, perceiving higher levels of time pressure related to higher odds of exposure to physical violence.

Discussion

This study examined the prevalence of three types of client violence (i.e., yelling, threats, and physical violence) over early CPS job tenure from 6 months to 3.5 years and examined how demographic characteristics and job attributes contributed to these trajectories. Consistent with previous research (e.g., Horejsi et al.,

Table 5
Mixed Effects Logistic Regression Models of Client Violence: Florida Study of Professionals for Safe Families Waves 2–8

Variable	Yelling			Threat			Physical violence		
	Empty	Growth	Best fitting	Empty	Growth	Best fitting	Empty	Growth	Best fitting
				Fixed effects					
Between-worker constant (initial status)	5.79*** (4.69–7.15)	13.1*** (7.6–22.7)	13.22*** (5.05–34.60)	.73*** (.64–.85)	1.08 (.79–1.48)	0.49 (.20–1.20)	.03*** (.02–.05)	.05*** (.03–.09)	.02*** (.01–.06)
				Demographic characteristics					
Age (in years)			.98 (.97–1.00)			.98* (.98–1.00)			.99 (.96–1.01)
Woman (yes)			2.04** (1.23–3.39)			1.40 (.88–2.22)			1.04 (.54–1.99)
Race/ethnicity Hispanic			.34*** (.21–.56)			.75 (.49–1.15)			1.45 (.82–2.56)
Race/ethnicity Black			.22*** (.15–.33)			.49*** (.35–.70)			1.16 (.72–1.86)
Race/ethnicity other, non-Hispanic			.51 (.21–1.26)			.85 (.39–1.87)			1.36 (.50–3.72)
				Work attributes					
% of difficult cases			1.01** (1.00–1.02)						
Time pressure			1.08*** (1.04–1.12)			1.04* (1.00–1.08)			1.08* (1.02–1.15)
Role demands						1.03** (1.01–.105)			
Position: CPI, social service agency			1.75** (1.19–2.55)			1.27 (.92–1.76)			.84 (.53–1.33)
Position: CPI, sheriff's office			2.06*			1.18			.31*
Reference: case manager			1.11–3.85			.71–1.98			.11–.87
Within-worker constant (rate of change)		.97** (.96–.99)	.97** (.96–.99)		.98** (.97–.99)	.99* (.98–.100)		.99 (.97–1.00)	
Random effects									
Variance: initial status	2.60*** (1.89–3.58)	4.97*** (2.53–9.75)	4.16*** (1.99–8.67)	2.16*** (1.64–2.84)	5.53*** (3.15–9.71)	4.85*** (2.71–8.65)	.51 (.11–2.39)	.38 (.04–3.50)	.40 (.05–2.96)
Variance: annual change		.006	.004		.004	.003			
Covariance		−.100	−.094		−.103	−.088		.002	
Model statistics									
Interclass correlation coefficient	.44	.60	.56	.40	.63	.60	.14	.10	.11
Log likelihood ratio test compared to empty model (χ^2)		51.48, $p = .000$			23.06, $p = .000$			1.57, $p = .666$	
Deviance	2549.91	2498.44	2390.70	3385.45	3362.39	3301.80	889.29	887.72	871.71
AIC	2553.91	2508.44	2418.70	3389.45	3372.39	3329.80	893.29	897.72	893.71
BIC	2565.57	2537.59	2500.33	3401.20	3401.76	3412.05	905.06	927.16	958.47
n	837 workers, 2,517 observations			849 workers, 2,630 observations			859 workers, 2,663 observations		

Note. CPI = child protective investigator; AIC = Akaike information criterion; BIC = Baysian information criterion.
* $p < .05$. ** $p < .01$. *** $p < .001$.

1994; Robson et al., 2014), workers experienced high 6-month prevalence rates with four out of five workers experiencing yelling and nearly one-half experiencing threats 18-months post hire. Supporting Hypothesis 1, although still high, yelling and threats significantly decreased over time to 64% and 39%, respectively. A notable minority of workers experienced physical violence with prevalence ranging from 3% to 6% across waves. The level of physical violence remained steady during the study period.

In support of Hypothesis 2, social dominance theory, and prior work (Bride et al., 2015; Jayaratne et al., 2004; Radey & Wilke, 2021; Ringstad, 2009), younger workers and women experienced higher levels of nonphysical violence than their older counterparts and men. Black workers, and Hispanics to a lesser extent, however, had lower odds of a nonphysical incident compared to their White counterparts. Although these findings may appear counter to social dominance theory, this may be due to the context of worker–client interactions (Sidanius et al., 2016). The unique context of the child welfare system, which includes a majority of minoritized parents and workers (U.S. Department of Health & Human Services, 2023) may contribute to disparate rates of client violence. Perhaps, minoritized workers perceived less threat from clients translating to higher thresholds for considering behavior as violent. Our finding that race and ethnicity did not relate to physical violence, perhaps a less subjective form of violence, supports this possibility. Examining the intersection of race and ethnicity and violence type is important for future research.

Results also supported parts of the JD-R model, particularly for the demands portion of the model and for nonphysical violence. In support of Hypothesis 3, the percentage of difficult cases, role demands, and time pressure related to higher rates of violence, supporting the idea that job demands contribute to nonphysical client violence (McPhaul et al., 2010). Conversely, organizational supports did not influence prevalence of violence. This may reflect the high percentage of unreported violent events (McGuire et al., 2021) suggesting that organizations may lack opportunities to provide guidance to prevent future incidents. Or, organizational supports may be more important in the aftermath of violence than in prevention. This is consistent with a qualitative study of CPS workers (n = 33) that found a responsive agency could dampen the incident's impact on worker health (Radey et al., 2022b). Congruent with earlier work (Bride et al., 2015; Radey & Wilke, 2021) and Hypotheses 2 and 3, physical incidents were more irregular than nonphysical ones with fewer significant predictors (i.e., time pressure, position).

In terms of trajectories, workers were less likely to report being yelled at or threatened later into their work tenures. This supports an earlier study that reported similar findings with student-initiated verbal aggression among teachers (Melanda et al., 2021) and the JD-R model's premise that gaining work skills can reduce stress and violence (Bakker & Demerouti, 2007; McPhaul et al., 2010). In contrast to forms of nonphysical violence, the prevalence of physical violence did not change over time again indicating its largely unpredictable nature.

Counter to Hypothesis 4, the influence of job attributes did not change over time. Instead, time pressure was consistently associated with all three forms of client violence and high caseloads and difficult cases were associated with nonphysical forms of violence. Congruent with Phillips et al. (2020) findings regarding burnout, the positive relationship between job demands and violence is persistent over job tenure. This suggests that workers do not adjust to the job's high level of demands to decrease their violence susceptibility. Instead, workers may face new demands as they gain seniority and experience, particularly in fields with high turnover, including child welfare (Radey & Schelbe, 2017).

Limitations

This study has several limitations. First, the study relied on perceived violence. Subjectivity is important in defining violence and its consequences (Barth et al., 2013), yet multiple workers may classify a single incident differently. Second, the sample was a statewide sample of CPS workers hired during one period in one state. Although theory and prior research (e.g., Bakker & Demerouti, 2007; Bride et al., 2015) suggest similarities between CPS workers and others in vulnerable positions (e.g., home health, substance abuse, health care), results may not generalize to other types of frontline workers or to CPS workers in other states. Third, due to available data, analyses did not include measures of client violence during workers' first 6 months on the job, including roughly the first 3 months of casework. Findings do not contribute to understating trajectories during this time. Fourth, although the data set provided a unique statewide sample, we collapsed races and ethnicities other than non-Hispanic Black, Hispanic, and non-Hispanic White into one category due to small sample sizes. Data did not allow for analyses of races and ethnicities other than the three groups. In terms of gender, the options for gender did not follow best practices; respondents were restricted to three inaccurate options (i.e., male, female, transgender) that did not cover all gender identities. The sample included only one self-identified transgender person; therefore, findings cannot inform how gender operates for transgender or other gender diverse groups. In addition, minoritized workers were more frequently excluded from the sample due to missing data, a common problem in longitudinal research (Yancey et al., 2006). Missing data also related to age and yelling at single waves, potentially overrepresenting older workers and those who experienced yelling. Fifth, the study did not test reciprocal associations between job attributes and client violence. Considering potential bidirectionality is important for future work.

Future Research Directions

Future studies can build upon the current one in several ways. First, the consistency of job demands in predicting nonphysical violence suggests examining how these demands relate to conflictual client engagement, given the connection between job stress, emotional dissonance, and burnout in other helping fields (Bakker & Heuven, 2006). Next, current findings indicate that high rates declined over time for yelling and threats, yet a similar proportion of workers experienced physical violence regardless of tenure. Future work can examine why this is the case. Workers may become more effective at dissipating situations that could result in yelling or threats or workers' thresholds for what constitutes these forms of nonphysical violence may change over time. Further, the present study's results suggest that worker demographic characteristics matter for violence. Worker–client dyad data could provide insight into the mechanisms through which worker demographic characteristics operate. Perhaps, race, age, or gender worker–client differences increase the likelihood of nonphysical violence.

Alternatively, perhaps cultural definitions of violence contribute to disparate rates. Minoritized workers, for example, may hold higher thresholds for yelling or verbal aggression (Phelps et al., 1991) or value more direct approaches to dealing with client conflict (Shuter & Turner, 1997). Finally, the persistent rates of physical violence, coupled with few significant predictors, call for more research to understand the context in which these incidents occur to inform prevention strategies. Also, understanding why sheriff office affiliation may be one of few protectors of physical violence is important.

Policy and Prevention Implications

The present study provides important insight into trajectories of client violence among CPS workers, one vulnerable group in the social services employment sector, that has implications for both policy and prevention. First, child welfare services are a state responsibility overseen by federal mandates. State or federal agencies can provide organizations guidance to promote worker safety and system level changes. For example, the Department of Labor Occupational Safety and Health Administration (2016) voluntary guidelines provide a starting point for protection (e.g., management commitment to worker safety, hazard identification protocol) and model policy development.

Second, organizations can support their staff through developing policies that offer protocol to guide reporting of violent incidents and proscribe effective responses. Developing responsive, transparent procedures for social service workers at all levels to guide client interactions can nourish a culture of safety. The lack of protection that job resources offered workers suggests that articulating clear steps for workers and agencies to prevent violence and handle the aftermath of unavoidable incidents, particularly given the high unpredictability of physical violence, is also important.

Finally, it is notable that rates of nonphysical violence are highest during early careers as case workers learn their positions. This argues for the need to provide effective training and skill development to assess for the potential for client violence and de-escalate situations when possible. Moreover, this study's finding that job attributes, particularly demands, continue to contribute to client violence in spite of experience suggests the importance of workplace supports that address significant job demands. Child welfare and related professionals susceptible to client violence operate in fast-paced, unpredictable, volatile, and stressful environments (National Institute for Occupational Safety & Health, 2021). Organizational policies or practices that allow supervisors or other team members to step in and assist workers with time-sensitive tasks during highly stressful times can promote worker safety and well-being.

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