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Duration of Sexual Harassment and Generalized Harassment in the Workplace Over Ten Years: Effects on Deleterious Drinking Outcomes

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Abstract

While harassment in the workplace has been linked to deleterious drinking outcomes, researchers have yet to examine the long-term effects of chronic workplace harassment. During a ten year longitudinal mail survey, university employees ($N = 2265$) were administered measures of sexual harassment, generalized workplace harassment, and problematic drinking. Using growth mixture modeling, two latent classes of workplace harassment emerged: infrequent and chronic. Demographic characteristics (gender, age, and race) predicted the shape of the trajectories and likelihood of class membership. As hypothesized, membership in the chronic harassment classes was linked to future problematic drinking, even after controlling for previous drinking.

Keywords

problem drinking; workplace harassment; growth mixture modeling

The proliferation of sexual harassment lawsuits has been accompanied by a sizable literature demonstrating negative mental health and drinking effects of harassment experiences. A more limited but increasing literature has also shown that more general abusive or bullying experiences in the workplace are associated with deleterious mental health and drinking outcomes. However, the longitudinal research that has demonstrated causal relations among harassment and problematic outcomes has been limited to two timepoints (with exceptions¹). By contrast, this paper utilizes a dataset encompassing a longitudinal study of a cohort of current and former university workers surveyed over ten years. State-of-the-art statistical techniques were used to 1) depict latent classes of harassment over time, 2) demonstrate the relationship of class membership with deleterious drinking outcomes and 3) examine sociodemographic correlates of these latent classes.

Workplace Harassment and Deleterious Drinking

Generalized Workplace Harassment (GWH) encompasses any negative or hostile workplace interpersonal interactions experienced by an employee that do not make explicit reference to a legally protected social characteristic, such as gender, race or ethnicity. These behaviors,

which can include humiliation, offensive words or gestures, exclusionary behaviors, and yelling, can subsequently cause psychological distress in the individual, including fear, anxiety and depression.²⁻⁴ Consequently, individuals may turn to alcohol consumption as a method of coping with subsequent anxiety or negative emotions that may arise from their GWH experiences (i.e., tension-reduction hypothesis).⁵ Supporting this perspective, Richman and colleagues found that distress mediated the relationship between chronic GWH and drinking outcomes.⁶ Links between GWH and problematic drinking have also been established in a number of studies.^{1,7-11}

In contrast to GWH, one form of harassment based on a legally protected social characteristic is sexual harassment (SH), a type of sex discrimination. It is characterized by “unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature” that affects the terms, conditions or employment decisions related to an individual's job (quid pro quo harassment) or creates an “intimidating, hostile, or offensive working environment”.¹² Similar to GWH, individuals who experience SH may engage in drinking behaviors to cope with distress that stems from this type of harassment. Accordingly, SH has been consistently linked to psychological distress and subsequent drinking.^{6,9-11,13-16}

Chronic Stressors and Workplace Harassment: Measurement Concerns

Chronic stressors, or stressors that continually reoccur over an extended period of time,¹⁷ are one way of defining or categorizing harassment experiences at the workplace. However, research has often ignored the potential chronicity of stressors, and has traditionally focused on understanding the impact of *acute* stressors on health and behavior. Scholars have addressed this research gap by studying the joint impact of chronic and acute stressors, as well as supporting the notion that we need to further understand the impact of chronic stressor. Understanding reoccurring stressors is necessary in order to develop interventions for problematic behaviors, such as alcohol use and dependence, that may be associated with stress levels and can persist even after treatment.¹⁷⁻²¹ Notably, research has shown that chronic stressors significantly predict outcomes even after taking acute stressors into account.²²

Similarly, a defining element of workplace emotional abuse or harassment is its long-term or persistent nature.²³ Previous research has demonstrated that GWH and SH experiences have a demonstrable impact on health and drinking behaviors over time. For example, GWH and SH previously experienced in the workplace have predicted drinking outcomes in retirees.²⁴ Additionally, GWH and SH experienced cumulatively (i.e., chronic harassment) have been associated with varied outcomes such as: seeking the use of professional services,^{1,25} future illness, injury and assault,²⁶ and problematic drinking.^{6,27,28}

However, these studies have defined chronic workplace harassment as experiencing GWH or SH at two, or at the most, three, timepoints; research has yet to consider *long term* effects of GWH or SH, which is currently lacking in the existing literature on workplace harassment.²³ Moreover, there are additional underlying problems with measuring the construct of “chronic stressors” or chronic workplace harassment in general; these measures are developed by researchers, who have defined chronicity solely as the daily occurrence of the stressor during a limited period of time (e.g., over the past six or twelve months).^{23,29} Thus, little attention has been given to capturing the extended, temporal nature of the construct.¹⁹ Given that scholars have argued for the need of different research methods for different types of stressors, new ways of measuring this construct are needed.³⁰ One emerging technique that may more accurately capture chronic stress *as defined by the individual* is latent class growth mixture modeling (GMM). GMM requires the use of

multiple time points in a longitudinal structural equation modeling framework to identify potential stable classes of harassment that exist over time.³¹ With GMM, researchers can extract latent subpopulations that exist in the observed data, as well as understand both the predictors and consequences of being a class member.

Three studies have employed GMM to examine victimization trajectories, although in children and adolescents. One study examining middle school peer victimization revealed four trajectories: non-victims, desisters, late onset victims, and stable victims. Stable victims reported the highest levels of anxiety and withdrawal.³² Barker and colleagues reported three unique trajectories of bully-victimization in adolescents: low, high/decreasing, and high/increasing.³³ A second study by Barker and colleagues similarly found three classes of victimization in preschoolers: low/increasing, moderate/increasing, and high/chronic. The high/chronic and moderate/increasing groups were defined by more risk factors (e.g., harsh parenting, physical aggression) than the low/increasing group.³⁴

However, no research has been conducted using GMM techniques with chronic types of stressors in adults. Those who have examined the occurrence of stressors over time using other types of data analysis techniques have found that the occurrence of certain stressors tends to remain stable across time.²⁰ Thus, it is likely that the growth trajectories that may define the latent classes of chronically stressed adults in the workplace may yield very minimal growth, linear or quadratic. It is unknown what the trajectories may look like for those in classes not marked by consistently high levels of GWH or SH. Additionally, the number of classes is unknown. Given the work cited above on victimization in children and adolescents,³²⁻³⁴ it is likely that three classes will characterize the longitudinal data for both GWH and SH, but given that prior studies focused on 1) a different type of chronic stress (peer victimization), and 2) a much younger population, we are unsure about the number of harassment classes that will provide the best fit to the data. Still, for both GWH and SH, we expect at least one class of chronically harassed adults and at least one class of less frequently harassed adults to emerge, along with a class representing a moderate level of harassment between these two extremes.

Sociodemographic correlates

Another purpose of this study was to understand the role of gender, race/ethnicity and age in predicting growth in harassment. Reports on the relationship between gender and harassment have been mixed. While several studies have found that men are more prone to experiencing GWH,^{35,36} and women to experience SH,³⁷⁻³⁹ other studies that have examined multiple types of workplace mistreatment have found that, overall, women are more likely than men to experience some type of workplace harassment.^{3,40} Thus, it is important to understand how gender may influence long term harassment. Additionally, worker age may be importantly linked to harassment; studies have shown an inverse relation between age and harassment.^{10, 40-43} Finally, minority workers have reported higher rates of workplace harassment than their white counterparts,^{44,45} though this finding may be moderated by gender.^{10,46}

Hypotheses

1. Based on the literature to date on victimization, we hypothesize that three classes of SH and GWH will emerge: infrequent, moderate, and chronic.
2. Individuals experiencing chronic harassment will manifest significantly higher problematic drinking outcomes compared to individuals experiencing infrequent or moderate harassment.

3. Although not testing explicit hypotheses related to these factors, we will also examine whether sociodemographic characteristics (gender, race/ethnicity, and age) predict SH and GWH latent class membership and individual class growth parameters.

Method

Sampling and Data Collection

Data were obtained from a longitudinal mail survey of employees initially selected from a Midwestern urban university in the United States during the fall semester of 1996. The sample was stratified by occupation at Wave 1; groups included faculty, graduate student workers/trainees, clerical/secretarial workers, and service/maintenance workers. The sample was further stratified by gender, for a total of eight strata. To ensure adequate representation and generalizability of these strata, 4832 employees (2416 men and 2416 women) were sampled from the university payroll database. Data collection encompassed Dillman's total design method for mail surveys,⁴⁷ but additional follow-up strategies were utilized (supplementary reminder postcards, two additional mailings, reminder e-mail messages, and follow-up phone calls). Respondents were compensated for their time and effort (\$20 at Waves 1-2 and \$30 at Waves 3-8).

The final Wave 1 sample comprised 2492 employees (54% female; response rate = 52%). The lower than desired response rate is reflective of questionnaires which are self-administered and contain sensitive material and identifiers for subsequent tracking.⁴⁸ Initial response rates by occupational groups were as follows: faculty, 53% (females, 60%; males, 48%); student workers, 59% (females, 64%; males, 54%); clerical workers, 49% (females, 50%; males, 47%); service workers, 38% (females 39%; males, 38%). Comparisons of the final sample with known characteristics of the total population revealed an acceptable match in terms of race and gender composition within each occupational stratum.

Ethnicity was reported as the following: white (52%), African American (21%), Asian/Pacific Islander (17%), Hispanic (8%), and Native American/Alaskan, mixed/other (2%). Additional details about the sample may be found elsewhere (Richman et al., 1999). Retention rates for the next years were as follows: Fall 1997 (Wave 2): 82%; Fall 2001 (Wave 3), 70% (of eligible living respondents from Wave 1); Fall 2002 (Wave 4) 67%; Fall 2003 (Wave 5): 59%; Fall 2005 (Wave 6): 62%; Fall 2006 (Wave 7): 61%; and Fall 2007 (Wave 8): 60%. A total of 2265 participants were retained in the final analysis because of modern missing data analysis techniques (Enders, 2006) and by excluding 227 retirees (i.e., it would not make conceptual sense to model the "missing data" of their workplace harassment experiences after retirement as they are no longer working). At Waves 3 and 6, respondents were asked about their harassment experiences during years they were not surveyed (due to gaps in funding for the study). Respondents were not asked about harassment at Wave 8; thus, respondents provided ten points of data regarding their harassment experiences (1996-2005). We included these retrospective measures as this is a common practice in the workplace harassment literature.³⁷

Measures

Sexual Harassment—Sexual harassment (SH) was measured by a modified version of the Sexual Experiences Questionnaire (SEQ).⁴⁹ This questionnaire includes 19 items that inquire whether three types of sexual harassment have occurred in the last 12 months: gender harassment (6 items; e.g., "*told suggestive stories or offensive jokes*"), unwanted sexual attention (6 items; e.g., "*made unwanted attempts to stroke or fondle you*"), and sexual coercion (6 items; e.g., "*implied faster promotions or better treatment if you were*

sexually cooperative). Sexual assault was measured by a single item (“*made unwanted attempts to have sex with you that resulted in you pleading, crying or physically struggling*”). Responses were on a three-point scale (0=Never, 1=Once, 2=More than Once). The alpha coefficients from all years ranged from .80-.88.

Generalized Workplace Harassment—A 29-item instrument developed from focus group transcripts measured generalized workplace harassment (GWH).⁵⁰ The instrument assesses whether five dimensions of harassment took place at work in the past 12 months: verbal aggression (9 items; e.g., “*yelled or screamed at you*”), disrespectful behavior (9 items; e.g., “*humiliated or belittled you in front of others*”), isolation/exclusion (5 items; e.g., “*ignored you or your work contributions*”), threats/bribes (3 items; e.g., “*pressured you to change your beliefs or opinions at work*”), and physical aggression (3 items; e.g., “*pushed you or grabbed you*”). Responses were on a three-point scale (0=Never, 1=Once, 2=More than Once). The alpha coefficients from all years ranged from .90-.95.

Alcohol outcomes—Alcohol outcomes were assessed at the final two waves of data collection. These outcomes included: 1) Quantity of Drinking (“*When you drank any type of alcoholic beverage during the last 30 days, how many drinks did you usually have per day?*”), 2) Binge Drinking (“*During the last 12 months, how often did you have 6 or more drinks of wine, beer or liquor in a single day?*”),⁵¹ 3) Drinking to Intoxication (“*During the last 12 months did you drink enough to feel drunk, that is, where drinking noticeably affect your thinking, talking and behavior?*”),⁵¹ 4) MAST scores, and 5) Escapist Drinking. A past year version of the Michigan Alcohol Screening Test (MAST),⁵² a 24 item instrument screening for alcohol abuse or dependence, assessed problem drinking. Escapist Drinking captured escapist motives for drinking (5 items; e.g., “*to feel less tense*”).⁵³ Responses ranged from 0 (“*I am unlikely to drink alcohol*”) to 3 (“*I am very likely to drink alcohol*”). Alpha coefficients for both waves were .90. Since these alcohol outcomes were generally positively skewed, a square root or 1/x transformation was applied.

Data Analysis Plan

In order to identify potential subgroups of individuals with different developmental growth trajectories (i.e., person-centered approach) of both GWH and SH,³¹ latent class growth mixture modeling (GMM) in Mplus was used. Mplus can estimate the number of latent classes/subpopulations, the parameters that define these classes, the size of these classes, and covariates of class membership in a GMM.⁵⁴ Moreover, Mplus implements full-information maximum likelihood estimation, a missing-data method that can take advantage of all cases providing at least one datapoint and efficiently produce acceptable (i.e., less biased) model estimates as compared to more traditional methods of treating missing data.⁵⁵

First, latent class growth analysis (LCGA) was implemented to obtain starting values for these parameters. LCGA constrains within class variation to be zero, and thus it is easier for Mplus to compute the trajectories for each class.⁵⁶ Once starting values were obtained, a GMM was estimated in piecemeal fashion by freeing variance parameters (e.g., intercept, slope, quadratic, intercept and slope covariance, etc.) However, we set any parameters to zero if the model suggested that the variance was essentially zero.⁵⁶ After model fit was obtained, we regressed the latent class onto gender, race (white vs. nonwhite) and age in order to determine the probability of being classified into a latent trajectory class. All growth parameters were also regressed onto gender, race and age within each class.

In order to determine the best fitting GMM model, we used several assessments: the Log Likelihood, the Bayesian information criterion (BIC), the Sample Size Adjusted BIC (SSABIC), the Akaike Information criterion (AIC), entropy, and posterior class

probabilities.^{57,58} Lower BIC, SSABIC, and AIC values indicate better model fit, and are appropriate indicators to use when comparing GMMs that vary in the number of classes being estimated. Similarly, higher Log Likelihood values are a descriptive way to identify the best fitting model.⁵⁸ Entropy values and posterior class probabilities (along the diagonal) closer to 1 indicate better classification by the model.⁵⁷ Additionally, we also determined the best model based on the uniqueness and stability of the emerging classes and the predictive utility of the classes. Predictive utility was examined by separately regressing W8 alcohol outcomes onto GWH or SH classification while controlling for W7 drinking and demographic variables.

Growth Mixture Modeling Results

GWH—A two-class linear growth model representing those who were *chronically* or *infrequently* harassed fit the data best. The BIC, SSABIC, and AIC were lower for the unconditional 2-class model when compared to the 1-class model. Comparing the 2- and 3-class models, the 3-class model had a slightly lower values for the BIC, SSABIC, and AIC than the 2-class model. Similarly, the increase in the Log Likelihood was minimal when comparing the 2-class and 3-class model solutions. However, the 2-class model had slightly higher entropy than the 3-class model, and the average posterior probabilities were lower for in the 3-class model than the 2-class model, suggesting more accurate classification for the 2-class model. Thus, the 2-class GWH model was retained as the best fitting model (see Table 1).

Next, a conditional GMM (i.e., a model incorporating covariates) for GWH was examined (Figure 1). The BIC, SSABIC, and AIC values for the conditional 2-class model were lower than the unconditional 2-class model, the Log Likelihood value was higher, and entropy was the same for both models, suggesting that the conditional 2-class model fit well. Approximately 32.7% of the sample was classified into the chronic class, and the remaining 67.3% were classified into the infrequent class.

Both the intercept and slope terms in the chronic GWH class were significant. The chronic class intercept was significantly related to race, such that whites had a lower intercept than nonwhites. The chronic class also experienced a linear decrease in GWH over time. Both the intercept and slope terms were also significant in the infrequent GWH class. The intercept for the infrequent GWH class was significantly and negatively related to age. Similar to the chronic class, the infrequent class experienced a linear decrease in GWH over time. Additionally, gender significantly predicted class membership; being female was associated with increased probability of membership in the chronic GWH class relative to the infrequent GWH class (Table 2).

SH—A two-class quadratic growth model representing those who were *chronically* or *infrequently* harassed fit the data best. The BIC, SSABIC, and AIC values were lowest for the unconditional 2-class model when compared to the 1-class model and 3-class model. Additionally, the increase in the Log Likelihood was minimal when comparing the 2-class and 3-class model solutions. The 2-class model moreover had a higher entropy value than the 3-class model, and the average posterior probabilities were lower for in the 3-class model than the 2-class model, suggesting more accurate classification for the 2-class model (see Table 1). Thus, the 2-class model was retained as the best fitting model.

Next, the conditional 2-class GMM for SH was examined (Figure 2). The BIC, SSABIC, and AIC values were lower for the conditional 2-class model than the unconditional 2-class model, the Log Likelihood value was higher, and entropy was the same for both models, suggesting that the conditional model fit well. Approximately 32.5% of the sample was

classified into the chronic class, and the remaining 67.5% were classified into the infrequent class.

Only the intercept term in the chronic SH class was significant. This intercept was significantly related to race, such that whites had a lower intercept than nonwhites. Both the intercept and quadratic terms were significant in the infrequent SH class. The quadratic term was positive, indicating that this class experienced a decrease and eventual increase (i.e., acceleration) in their SH experiences over ten years.

The intercept in the infrequent SH class was predicted by both sex and race, such that women and whites had higher intercepts. Additionally, gender was significantly related to the slope and quadratic terms; women had a less negative slope (i.e., less decline at the first time point) and a more positive quadratic term (i.e., greater acceleration). Additionally, being white was related to an increased probability of membership in the chronic SH class, whereas being older was associated with a decrease in the probability of belonging to the chronic SH class (relative to the infrequent SH class). Thus, whites and younger adults had a higher risk of belonging to the chronic SH class (Table 2).

Regression Results

As hypothesized, both chronic GWH class and chronic SH class predicted more problematic drinking outcomes, after controlling for previous drinking (Table 2). Belonging to the chronic GWH class significantly predicted higher escapist drinking ($p = .022$), binge drinking ($p = .024$), and MAST scores ($p = .027$). Additionally, belonging to the chronic SH class significantly predicted greater escapist drinking ($p = .002$), drinking to intoxication ($p = .017$), and quantity of drinking ($p = .004$).

Discussion

This study examined the long-term duration of generalized workplace harassment and sexual harassment experienced by current and former university workers, and their effects on drinking outcomes. Using growth mixture modeling, two general classes of victims emerged for both types of harassment: infrequent and chronic. Gender, race, and age were found to predict both the risk of belonging to the chronic class (relative to the infrequent class) and various aspects of growth. Finally, as hypothesized, experiencing chronic GWH or SH significantly predicted problematic drinking outcomes. Thus, this study expands on previous research demonstrating short-term consequences of GWH and SH on problematic drinking to delineate the continuing impact over a ten year period.

As noted, this was the first known study to examine workplace harassment using latent class growth mixture modeling. Unlike previous GMM studies on peer victimization which uncovered 3-4 latent classes,³²⁻³⁴ our current study found that 2 classes of harassment (infrequent and chronic) best fit the data. The fact that fewer classes were uncovered than in the previous studies employing GMM could be explained by two factors. First, these studies focused on peer victimization, whereas the current focus of our study was on two types of workplace harassment. Second, the peer victimization studies focused on growth during childhood and adolescence, which may introduce more variability relative to examining growth in an adult population because of ongoing developmental processes. Lastly, the nature of harassment itself has been found in previous studies to be somewhat stable over time and defined by others as persistent in nature,^{18,20,23} so the emergence of only two classes could be expected when examining a construct that is inherently invariable over time.

Additionally, the use of GMM to study chronic harassment was further supported by the predictive validity of the latent classes with regards to deleterious drinking outcomes. Belonging to the chronic GWH or SH class predicted several problematic drinking outcomes, even after controlling for prior drinking and sociodemographic correlates. This finding corroborates and builds upon earlier studies examining previous waves of data from this sample as well as other samples.^{6-8,10,11,14,59} Given such strong support for the tension-reduction hypothesis,⁵ researchers should continue to examine the detrimental effects of long-term, chronic interpersonal stressors such as harassment on drinking behaviors.

Being female was generally associated with higher or chronic levels of both GWH and SH. Women were more likely to experience chronic GWH, as well as exhibit a higher initial GWH score in the infrequent class. Similarly, women were subjected to more SH in the infrequent class, both initially and over time. These latter findings suggest that even for those working adults experiencing infrequent harassment, women still experience more harassment. Yet, women are more often at risk for experiencing chronic GWH. Scholars have posited that since women have less societal power, they are less likely to be taken seriously in the workplace if they complain about workplace harassment, and thus may be less likely than men to affect a successful resolution to GWH experiences.⁵⁰ Overall, our results suggest that women bear a disproportionate burden of workplace harassment, putting them at greater risk for experiencing problematic drinking behaviors.

Race/ethnicity was generally found to be a risk factor for harassment in the current study, although the pattern of relation varied. Being nonwhite was found to relate to higher initial scores in both the chronic and infrequent GWH classes, as well as the chronic SH class. Notably, whites were found to have higher initial scores in the infrequent SH class, and had a higher risk of belonging to the chronic SH class. This set of complex findings reflects inconsistent findings in the race and harassment literature as aforementioned.^{10,44-46} Notably, individuals from certain racial/ethnic groups may see some types of harassment (e.g., sexual) as “normal”, and may report fewer harassment experiences than their white counterparts,^{36,41,44,60} or no difference at all.^{61,62} Differential labeling of personal sexual harassment experiences as a function of race/ethnicity may thus explain this set of findings.

Younger workers were consistently at higher risk of experiencing greater harassment. Supporting previous research,^{10,40-43} being younger carried a higher risk of belonging to the chronic SH class, and had higher initial harassment in the infrequent GWH class. Indeed, research has indicated that older adults may engage in more effective methods of coping (e.g., problem focused), and may subsequently be less likely to report this type of victimization.¹³ Older cohorts may also be less inclined to report such experiences because they were in the workforce before laws were implemented, and may be less apt in identifying or labeling behaviors as harassing.⁶³ Alternatively, older workers may be more respected and have more power than younger workers, and are thus less likely to be targeted victims of workplace harassment.

Limitations of this study should be noted. First, at waves 3 and 6, participants were asked to recall workplace harassment experiences that had occurred two or three years earlier, unlike at other waves which only asked participants to recall harassment over the past year. As a result, participants may have incorrectly recalled experiences of harassment, limiting our ability to accurately capture latent growth trajectories. Second, the sample in the current study is limited to current and former employees of an urban university workplace in the Midwestern United States, and thus the results may not be generalizable to other populations and across societies. Third, while our study suggests that there are predictive relations between long-term chronic workplace harassment and subsequent drinking, we cannot make definite causal statements with our data given that it is not truly experimental data. For

example, life changes experienced over this time period not accounted for in the current study may have also affected alcohol use. Individual or family level stressors such as divorce, death, or injury could have significantly increased both the experience of workplace harassment and alcohol consumption. Changes at a macro-level, such as a catastrophic natural event or a downturn in the local or national economy could also explain changes in the main study variables. Unfortunately, this data would have been impossible or too complex to incorporate as we either did not have this information, or the multiple categories need to accurately capture these life changes would have resulted in the model not running properly. One commonly noted limitation of GMM is that the analysis itself is computationally taxing, and the analysis should be limited to a priori (i.e., theoretical) conceptualization of the model.⁵⁶ Given that this was the first study to examine harassment using this technique (i.e., we were unsure of the nature or the number of the latent classes) we focused on incorporating established predictors of harassment that presented limited complexity. Also related to the nonexperimental nature of the data is the lack of a control group. While we did uncover an infrequently harassed group, we were not able to manipulate the theorized causal variable (i.e., workplace harassment) and compare those who experienced infrequent or chronic workplace harassment to those who experienced no workplace harassment.

Nonetheless, this is the first study to examine the long-term growth of SH and GWH, latent classes of SH and GWH, predictors of classification and growth, as well as consequences of class membership using a growth mixture modeling approach. The current findings demonstrate that membership in a chronic harassment class is positively related to a number of problem drinking outcomes, and can be predicted by several risk factors (e.g., being younger and female). Using this information, researchers may be able to develop targeted interventions in order to allay chronic class membership or the associated negative outcomes with belonging to this chronic class. Moreover, workplaces can similarly use this information in order to focus resources on or assign mentors to those more likely to be victimized over time.

Conclusion

Using Growth Mixture Modeling analytic techniques, the current study examined what latent classes of workplace harassment (generalized and sexual) emerged over a period of ten years of self-reports. Two latent groups of workers emerged for both types of harassment: those who had been chronically harassed and those who had been infrequently harassed (see Figures 1 and 2). These groups had distinct growth patterns: the two classes of generalized workplace harassment demonstrated linear decreases over time, the infrequently sexually harassed group experienced quadratic growth, and the chronically sexually harassed group experiencing high, but stable levels of harassment over time (Table 4). Demographic characteristics (gender, age, and race) predicted these patterns of growth, as well as the probability of belonging to one class versus another. Finally, harassment class membership predicted drinking behaviors at the final wave of data; generalized workplace harassment predicted self-reported escapist drinking, binge drinking, and MAST scores, and sexual harassment predicted escapist drinking, drinking to intoxication, and quantity of drinking per day (Table 4).

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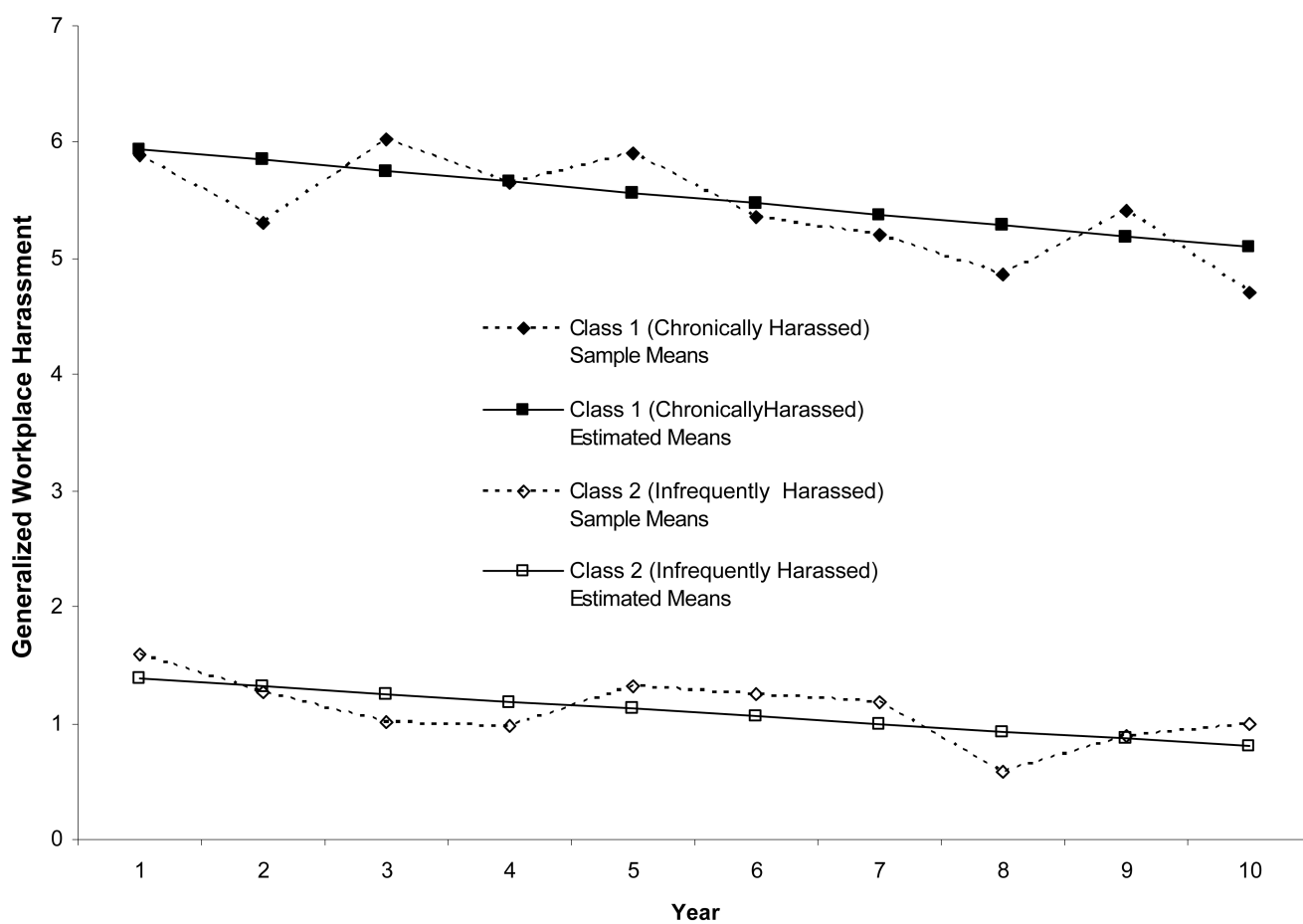


Figure 1. Growth Mixture Model Classes (with Estimated and Sample Means) for Generalized Workplace Harassment

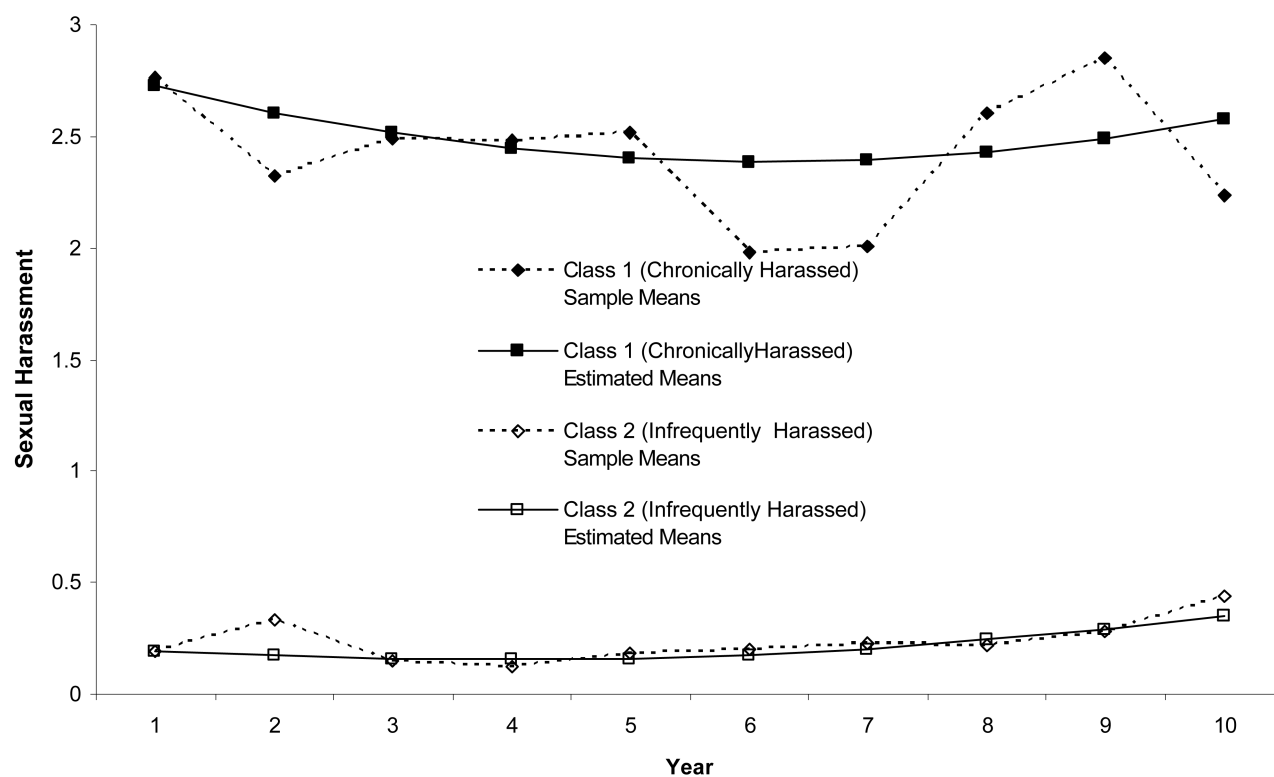


Figure 2. Growth Mixture Model Classes (with Estimated and Sample Means) for Sexual Harassment

Table 1
Growth Mixture Model Fit Indices for Generalized Workplace Harassment and Sexual Harassment

	Log Likelihood	Number of parameters	BIC	SSA BIC	AIC	Entropy	Posterior Possibilities
<i>Generalized Workplace Harassment (GWH)</i>							
Unconditional Models							
1 class	-31253	15	62623	62575	62537	--	--
2 classes	-30277	19	60701	60641	60592	.68	.93/.91
3 classes	-30207	21	60576	60509	60459	.66	.87/.90/.66
Conditional Model							
2 classes	-29455	34	59170	59062	58977	.68	.93/.91
<i>Sexual Harassment (SH)</i>							
Unconditional Models							
1 class	-25522	19	51191	51131	51082	--	--
2 classes	-23556	21	47274	47207	47154	.88	.98/.97
3 classes	-23605	25	47403	47323	47260	.78	.85/.89/.93
Conditional Model							
2 classes	-22881	42	46084	45951	45845	.88	.98/.97

Bold values indicate lowest BIC, SSABIC, or AIC value, or highest Log Likelihood, Entropy or Posterior Possibilities value.

Table 2
Growth Mixture Model Parameters for the 2-class Solutions (with Covariates) of
Generalized Workplace Harassment (GWH) and Sexual Harassment (SH)

	GWH		SH	
	Infrequent	Chronic	Infrequent	Chronic
Intercept	1.547 *	6.065 *	.189 *	2.962 *
Linear Growth	-.073 *	-.108 *	-.036	-.198
Quadratic Growth	--	--	.006 *	.016
Initial Status on				
Sex	.154	-.632	.054 *	.032
Race	-.158	-.770 *	.067 *	-.440 *
Age	-.016 **	.020	-.001	-.008
Linear Growth Rates on				
Sex	-.001	.067	-.031 *	-.071
Race	.016	.086	-.017	.093
Age	.001	-.001	.000	.008
Quadratic Growth Rates on				
Sex	--	--	.004 *	.007
Race	--	--	.002	-.004
Age	--	--	.000	-.001
Probability of belonging to Chronic Class Versus Infrequent Class				
Sex	--	.241 * (.786)	--	.069 (.934)
Race	--	-.121 (.886)	--	.266 * (1.305)
Age	--	-.010 (.990)	--	-.031 * (.969)

* $p < .05$

Gender coded as 0 = male, 1 = female

Race coded as 0=not white, 1= white

Note. Values in parentheses indicate the corresponding odds ratio.

Table 3
Generalized Workplace Harassment (GWH) and Sexual Harassment (SH) Classes Predicting Drinking Outcomes (Unstandardized Coefficients)

	Drinking Outcome				
	Escapist Drinking	Binge Drinking	Drinking to Intoxication	MAST	Quantity of Drinking
<u>GWH Class</u>					
W7 drinking	.510**	.643**	.721**	.326**	.693**
Education	.003	-.005	.003	-.004	-.005
Age	-.002**	-.002*	-.002**	-.001	-.002**
Race	-.009	-.008	.015	.033	.048**
Gender	-.027	-.042**	-.013	-.029	-.038*
GWH class	.035*	.034*	.026	.045*	.023
<u>SH Class</u>					
W7 drinking	.513**	.643**	.720**	.327**	.687**
Education	.003	-.005	.003	-.005	-.005
Age	-.002*	-.001	-.002**	-.001	-.002*
Race	-.013	-.010	.012	.029	.044*
Gender	-.025	-.040**	-.012	-.027	-.038*
SEQ class	.048**	.022	.032*	.034	.048**

* $p < .05$,

** $p < .01$

Note. Signs of predictors have been reversed for easier interpretation of analyses where the alcohol outcome has been inversely transformed.

Gender coded as 0 = male, 1 = female

Race coded as 0=not white, 1= white

SEQ and GWH class coded as 0=infrequent harassment, 1=chronic harassment (see text)

Table 4
Summary of Overall Significant Findings for the Growth Mixture Model and Multiple Regression Results for Generalized Workplace Harassment (GWH) and Sexual Harassment (SH)

GWH		SH
Best Fitting Solution of the Growth Mixture Model according to fit indices:		2-class solution (Infrequent and Chronic Harassment)
Growth Over Time: Infrequent	Negative linear slope ($p < .001$)	Positive quadratic growth ($p = .049$)
	Negative linear slope ($p = .024$)	n.s. (i.e., stable over time)
Chronic	Younger workers had higher initial harassment scores ($p < .001$)	Women ($p = .017$) and White workers ($p = .006$) had higher initial harassment
	Nonwhite workers had a higher initial harassment scores ($p = .018$)	Women had a greater "uptick" in their SH quadratic growth ($p = .030$)
Predictors of growth parameters: Infrequent	Women (vs. Men; $p = .036$)	White workers had a higher initial harassment scores ($p = .039$)
	White Workers (vs. Nonwhite; $p = .016$)	Younger Workers ($p < .001$)
Chronic	$p = .022$	$p = .002$
	$p = .024$	n.s.
Probability of belonging to Chronic class highest for:	n.s.	$p = .017$
	$p = .027$	n.s.
Chronic class membership predicted: Escapist Drinking	n.s.	$p = .004$
	Quantity of Drinking	

n.s. = not significant