

Construction and Validation of Workplace Harassment Strains Scale

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Abstract

This study was conducted to develop a psychometrically sound tool to measure strains of workplace harassment. For this purpose, the present study was completed in four phases. Phase I was composed of the development of items. Exploratory factor analysis on a sample of 200 teachers with an age range twenty four to sixty ($M=32.83$, $SD=7.04$) was completed in Phase II. Findings showed 5 well-defined factors. Phase III was comprised of CFA. The sample for confirmatory analysis was taken from seven universities. The purposive sampling was used to gather a sample. Results confirmed a good fit model. In Phase IV, validity analysis (both convergent and discriminant) of the newly developed workplace bullying strains scale was conducted. The value of the alpha coefficient of the workplace bullying strains scale is .94. Furthermore, discriminant validity - .61, and convergent validity .76 confirmed that the workplace bullying strains scale is a valid and reliable measure with $p<.01$. Future research may be conducted to quantify the measurement scale developed by the authors.

Keywords: Workplace Harassment, Job Satisfaction, Psychological Problems, Strains.

Introduction

Harassment at the workplace occurs when an employee shows negative behavior towards their co-worker continuously. Harassment in the workplace not only increases victims' levels of stress and aggression but also creates a hostile work environment in any organization (Anjum & Shoukat, 2013). Harasser uses various tactics and a variety of negative behaviors. These negative behaviors might be humiliation in front of people, coercion, verbal exploitation, wrong allegations, excluding colleagues from groups without any firm reason, and reiterating one's errors (Anjum et al., 2019). Harassment is a grave dilemma that is not only dangerous for the employees but their workplace as well. Since the last decade, much debate has been done on this issue. Harassment has attracted public attention and researchers' concentration arenas (León-Pérez et al., 2015). Harassment causes severe instability in emotions, feelings of helplessness, anxiety and fears, and major depression (Bano & Malik, 2013). Victims also suffer from decreased levels of work motivation and job satisfaction level (Beavers et al., 2013).

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According to Anjum and Shoukat (2013), strains that occur as a result of workplace harassment behavior are called harassment-related strains. These strains are observed in one's profession (less level of satisfaction in job, remaining absent from institution, and increased turnover), mental health (anxiety, depression, and lethargy), physical fitness (constant headache, cardiovascular problems, and sleep disturbances) relationships (isolation, and withdrawal towards others), and victims' behavior (aggression, nail-biting, and substance abuse). A study conducted in the UK described that 42 percent of bullied employees left their workplace, and 60 percent of harassed workers reported that their productivity was affected (Bernotaite & Malinauskiene, 2017). So, the issue of workplace harassment certainly cannot be ignored.

As per our knowledge, no psychometrically sound instrument is available for the assessment of harassment consequences particularly workplace harassment. Several instruments assess the level of stress at a job. Due to unavailability, researchers use these scales to assess harassment consequences as well. While harassment is not similar to other work-related issues, harassment occurs continuously (weekly basis) and continues for a long time (almost for six months) (Cohen et al., 1983). Furthermore, harassment is not specific to one occupation and one negative behavior. This is a continuous and systematic targeting of any employee with verbal and sometimes physical negative behaviors, e.g., overly criticizing, name-calling, and sneering (Gregory, 2015). So, keeping all the views, it is worth mentioning to conduct and develop the prescribed measuring scale.

In addition, cultural background is significant in developing various psychological tests and tools. Identification and understanding of psychological problems or complaints may be similar in all cultures. Still, an expression of behavioral and emotional complaints is more probably the result of one's exposure, social contacts, and culture (Gable & Wolf, 2012). So, differences in cultural norms raise questions about the use of particular measures that are developed in a dissimilar setup and languages and on the basis of different phenomenological exposures. Therefore, our motive to develop harassment strains scale arouse for these aims:

- To develop a tool for the measurement of strains, particularly arise in the consequence of harassment at work.
- To investigate harassment strains comprehensively.
Most available tools only focus on job-related stress and psychological problems. Whereas workplace harassment strains scale (aimed to develop in the present study) will also focus on the physiological, behavioral, and interpersonal consequences of harassment.
- Another aim to develop this scale was that workplace harassment strains should have sound psychometric properties.

Methods and Material

This study consisted of four phases. The development of items and pilot study were part of phase I of this study. Phase II, composed of EFA, to establish workplace harassment strain scale psychometric properties. Confirmatory analysis was conducted in Phase III. The purpose of the confirmatory analysis was to conform the factor structure of the workplace harassment scale attained through exploratory analysis (completed in Phase II). Convergent validity and discriminant validity analysis of the newly developed workplace harassment scale were conducted in Phase IV.

Phase-I

Step I: Item development of workplace harassment strains

Items of workplace harassment strains scale were generated through (a) previously developed tools, (b) interviews of teachers (n=20) of universities, and (c) addition, detailed interviews were conducted with department executives (n=5) to inquire about harassment strains they usually examine in the consequence of harassment. Open-ended questions were used in these interviews. Particular new items explored from these interviews were like "I feel fear that people will label me complaining about little things" and "I develop habits like knuckles cracking and nail biting". A list of items was prepared and collected from the abovementioned sources

Step II: Empirical validation through experts

A list of items gathered in step I was carefully analyzed by psychologists (n=6). All had experience in workplace harassment research. Items were analyzed on the basis of clarity, fidelity, redundancy, and comprehensibility. After restructuring some items, 32 items were retained.

Step III: Scoring of workplace harassment strains scale

This was a 5-point Likert-type scale with options never=1, sometime=2, often=3, most often=4, and always=5. The Likert format was considered appropriate because it provides adequate possibility to choose the appropriate option. Furthermore, because of the neutral option, these scales are considered balanced on both sides (Henseler et al., 2015). A high score will show severe harassment strains.

Step IV: Pilot Study

The purpose of conducting the pilot study was to make sure statements were compressed, identify redundant statements, compression, identify redundant statements and check the scale layout. With the written consent of authorities, 30 participants (14 male and 16 female) were collected with their willingness. Their age ranged from 24 to 60 years (mean= 34.73, standard deviation= 5.95). A convenient sampling technique was employed to gather participants. Guidelines to complete research scales were provided to the sample. Participants were also told that their provided information would be confidential and utilized only for research goals. Participants were given 32 items list finalized by experts. They were asked to report strains they face after harassment exposure. Additionally, they were asked to point out ambiguous or unclear items of scale. All 32 items were found clear and finalized for EFA.

Phase II: Exploratory Factor Analysis

Phase II was designed to find out the factorial validity of 32 items of workplace harassment strains. Factorial validity helps to select truly representative items for the construct and its factor structure. Cronbach Alpha was also determined in this phase. In addition, item-total correlation and sub-correlations among subscales were analyzed to test the internal consistency and reliability of workplace harassment strains.

Sample

200 employees were collected with equal numbers of males and females. The data was collected through purposive sampling from the age group of 24 years to 60 years (mean=32.83, standard deviation=7.04). The sample consisted of employees with different job ranks, education levels, marital statuses, and socioeconomic backgrounds. Participants were collected from different

universities in Lahore with the permission of authorities. Only teaching staff was part of this study. All those employees who had less than 1 year of teaching experience were excluded from this study. With surrender the of the sample, workplace harassment strains were filled individually. Written guidelines were provided to all participants. 93% of questionnaires were returned and found complete in all manners. Confidentiality of participants' data was also assured.

Phase-III: Confirmatory Factor Analysis (CFA)

In this phase, items of workplace harassment strains attained through EFA were further confirmed using CFA.

Sample of study

A sample of 400 teachers (male teachers= 200, female teachers=200) was selected from various universities in Lahore. A purposive technique was employed to collect the sample. Teachers' age was 23 to 60 years (mean=32.95, standard deviation= 7.0). 75% of married and 25% of unmarried teachers were included in the study. Teachers with master's degrees, MS/ M. Phil degrees, and Ph. D holders were included in the study. Participants with at least 1 year of teaching experience were part of the study. Only those teachers were included who agreed to take part and had no history of clinical problems.

Measurement

The workplace harassment scale finalized in the EFA phase was used to check the dimensions and scale factor structure. This scale consists of five clear factors. These factors are, i.e., job problems, psychological strains, physical problems, interpersonal problems, and behavioral problems.

Procedure

The factors of the workplace harassment strains scale were confirmed in CFA. A variety of indices and criteria, e.g., The Tucker-Lewis Index (TLI), Comparative fit Index (CFI), and root mean square error of approximation (RMSEA), were used to describe the good model fit.

Phase- IV: Validity test

This phase was designed to test the further validity of the harassment strains scale. A sample of 50 employees, including 30 women and 20 men, was collected. The age was between twenty-four to sixty years (mean= 32.70, standard deviation= 6.83). Employees were taken from the universities of Lahore.

Measurements

Workplace harassment strains

This scale was developed in Phase- II. The workplace harassment strain scale possesses 32 items. The workplace bullying strains scale assesses strains that take place as a consequence of harassment. This scale is rated on a five-point scale (never=1 to always=5). Workplace harassment strains scale alpha reliability is .94.

Job Satisfaction Survey (JSS)

This scale is used to examine employees' level of satisfaction in their jobs (Katrien et al., 2016). JSS is composed of 36 items. JSS is rated on a 6-point scale. The response choices are "strongly agree" to "strongly disagree". The possible scores range from 36 to 216. The alpha reliability of JSS acquired in the present study was .87.

Perceived Stress Scale (PSS)

Saleem and Mahmood (2009) used to measure employees' psychological stress. This scale is used in various populations and settings, i.e., police, athletes, and hospital settings. There are 14 items on this scale. The lowest score on the scale is 0, and the highest score is 56. A higher score means an elevated level of stress. The PSS alpha reliability was .79.

Procedure

Participants were requested to complete the questionnaire. They were assured of the confidentiality of their responses. To check the convergent validity of the newly developed scale, correlations between workplace harassment strains and PSS were tested. Furthermore, the workplace harassment strains scale was also compared with JSS to establish discriminant validity.

Results

Workplace bullying strain scale factors were explored through the Varimax rotation method. 5 factors emerged. Findings showed 5 factors with eigen value greater than 1 and theoretically clear (see table 1). A variance of 63.90% was found for these well-defined 5 factors.

Table 1: The factor loadings for 32 items of workplace harassment strains scale with its five factors (400)

Item number	Items	I	II	III	IV	V
1	b14	.677	.242	.164	.135	.375
2	b15	.653	.160	.235	.198	.283
3	b16	.696	.172	.212	.227	.139
4	b17	.735	.198	.089	.175	.251
5	b18	.705	.267	.200	.198	.211
6	b19	.727	.310	.217	.207	.137
7	b20	.766	.188	.242	.286	.156
8	b7	.294	.762	.228	.225	.128
9	b8	.226	.786	.238	.195	.095
10	b9	.058	.752	.217	.183	.261
11	b10	.313	.674	.240	.253	.270
12	b11	.242	.589	.131	.051	.308
13	b12	.269	.655	.193	.082	.122
14	b13	.150	.611	.199	.075	.381
15	b21	.236	.299	.593	.075	.212
16	b22	.130	.243	.707	.081	.227
17	b23	.217	.254	.754	.091	.180
18	b24	.263	.294	.690	.186	.204
19	b25	.155	.067	.784	.163	.121
20	b26	.148	.169	.719	.119	.240
21	b1	.172	.265	.066	.573	.064
22	b2	.077	.064	.064	.714	.209
23	b3	.239	.065	.038	.681	.276
24	b4	.309	.096	.099	.778	.040

25	b5	.229	.103	.159	.773	.077
26	b6	.051	.169	.183	.738	.000
27	b27	.385	.184	.152	.169	.699
28	b28	.244	.164	.160	.017	.710
29	b29	.101	.184	.232	.161	.644
30	b30	.242	.188	.257	.060	.651
31	b31	.141	.283	.183	.169	.587
32	b32	.187	.190	.209	.240	.450

In table 1 item loadings with .40 or above are boldfaced.

Table 2: Eigen values with variance of workplace harassment strains scale (N = 200)

Factors	Factor's labeling	Item in each factor	Variance percentage
1	Psychological strains	14,15,16,17,18,19,20	14.75
2	Interpersonal strains	7,8,9,10,11,12,13	13.84
3	Physical strains	21,22,23,24,25,26	12.31
4	Job strains	1,2,3,4,5,6	11.85
5	Behavioral strains	27,28,29,30,31,32	11.13

There is significant amount of variance among factors. Above table also shows that total variance is 63.90 percent.

Table 3: Item correlation with total score of harassment scale (N= 200)

Item numbers	Correlation
1	48**
2	45**
3	55**
4	56**
5	57**
6	47**
7	73**
8	68**
9	61**
10	76**
11	58**
12	59**
13	62**
14	76**
15	72**
16	70**
17	70**
18	76**
19	77**
20	78**
21	62**

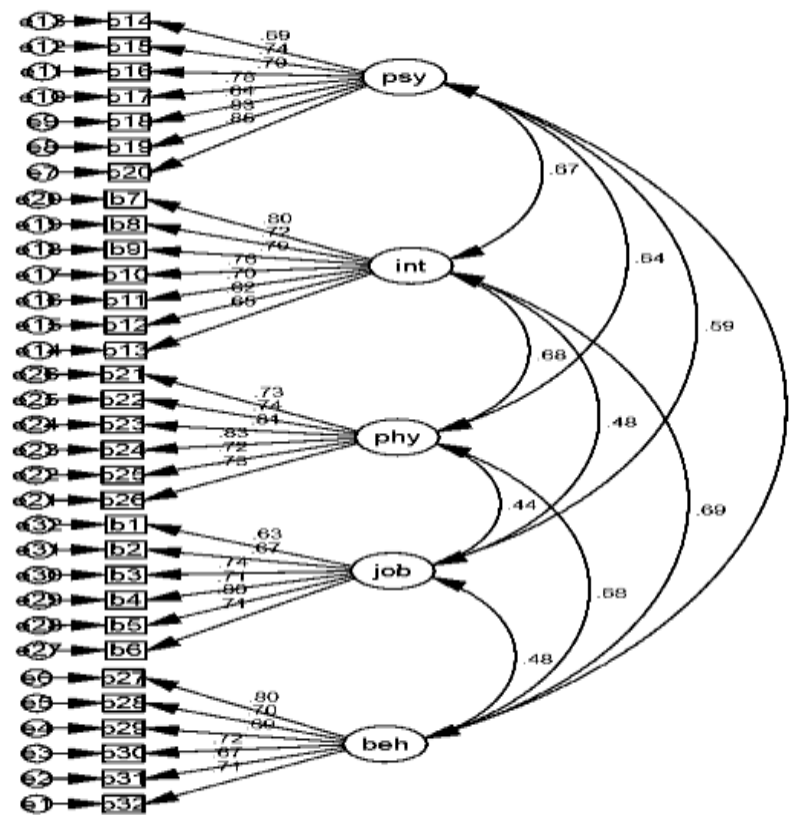
22	60**
23	65**
24	62**
25	56**
26	60**
27	70**
28	57**
29	56**
30	61**
31	58**
32	55**

**P< .01

Confirmatory Factor Analysis (CFA)

Items (32) of harassment scale finalized in EFA were confirmed using Confirmatory analysis (N= 400).

Figure 1: CFA Model of workplace harassment strains scale with 5 sub-scales



The subscales in above figure are labeled as psychological interpersonal, physical, job-related, and behavioral strains. Above figure depicts CFA factor loadings for harassment strain scale. All items have factor loading greater than .35. The final model conforms 32 items. Job strains factor consists of 6 items, interpersonal strains factor 7 items, physical complaints 6 items, psychological strains 7 items, and behavioral strains 6 items. Items' factor loading consists of .62 to .85. Furthermore, results shows good fit model with chi square (χ^2) 2.20, comparative fit index .91, Tucker-Lewis Index .92, root mean square error of approximation .05. Confirmatory factor analysis shows a good model fit under the threshold values and the model fit value is 2.20.

Table 4: Inter-correlation matrix and Alpha coefficient (N= 400)

Subscales	1	2	3	4	5	6	α
Psychological strains	-	.60**	.56**	.51**	.63**	.88**	.89
Interpersonal strains	-	-	.59**	.42**	.60**	.79**	.87
Physical strains	-	-	-	.38**	.60**	.79**	.89
Job-related strains	-	-	-	-	.40**	.66**	.85
behavioral strains	-	-	-	-	-	.80**	.86
Workplace harassment total	-	-	-	-	-	-	.94
M	33.32	17.54	13.71	15.77	15.56	84.04	
SD	6.27	3.73	4.62	3.79	3.97	18.67	

**P < 0.01

Table 5 shows workplace bullying strains scale is highly reliable tool with alpha coefficient of .94. Furthermore, findings show that subscales of workplace harassment strains scale are also significantly correlated with total score of workplace harassment strains scale.

Validity Analysis (Convergent and discriminant)

Table 5: Convergent and discriminant validity analysis of workplace harassment strains scale with job satisfaction and job stress tool (N=50)

Workplace Bullying Strains Subscales	Job Satisfaction	Job Stress
1. Job strains	-.64**	.76**
2. Interpersonal strains	-.65**	.74**
3. Psychological strains	-.42**	.59**
4. Physical strains	-.41**	.61**
5. Behavioral strains	-.53**	.68**
Total workplace bullying strains scale	-.62**	.76**

Note. ** $p < .01$

Findings show that workplace harassment strains with their subscales and total score have a significant positive correlation with the job stress scale ($r=.76$). Furthermore, analysis shows a significant negative correlation of the harassment strains scale with the job satisfaction scale ($-.61$). So, the newly developed scale possesses discriminant validity.

Discussion

Present research aimed to develop a tool that can assess harassment complaints comprehensively. Not a single tool to measure harassment consequences was available, so this study was planned to construct a psychometrically sound harassment strains scale. This study comprised four phases. Harassment strains items were explored through literature and interviews of teachers in order to identify factors exploratory factor analysis was employed. Results depicted five distinctive and interpretable factors consisting of 32 items. All factors also showed a significant amount of variance. Our findings match with the described amount of variance in previous studies. The alpha reliability of the newly developed workplace harassment strains scale was also found to be high. Findings also showed significant items of total correlations and inter-correlations among all 5 factors.

Factors retrieved in EFA, with 32 items, were confirmed through CFA. Results showed a good fit model (see Figure 1). These good fit indices are according to Gable and Wolf criteria (Smith, 2020). In addition, convergent and discriminant validity were also found using Pearson correlation. Participants' responses on the workplace harassment strains scale were correlated with the scores of the job satisfaction scale and stress scale. The results of the present study show a significant positive correlation between the workplace harassment strains scale and the job stress scale, which means the newly developed workplace bullying strains scale possesses high convergent validity. Another aim of this study was that workplace bullying strains scale should possess discriminant validity. For this purpose, workplace harassment strains were correlated with a theoretically discriminant scale, i.e., Job Satisfaction Survey (JSS). A significant negative relationship was found between the workplace harassment strains scale and the Job Satisfaction Survey (table 5). These findings are according to Henseler, Ringle, and Sarstedt criteria described in previous studies (Strandmark & Hallberg, 2007).

Study Implications

The newly developed scale will be helpful in measuring strains of harassment comprehensively. Harassment not only destroys the health of employees but also causes poor work performance. So, this study can also help administrators employ policies that promote a harassment-free environment. Furthermore, the findings of this study could assist clinicians in assessing and treating strains of harassment.

Study Limitations

The main drawback of our study was the size of the sample. Furthermore, participants were selected from one city. In the future, research should be conducted on a large number of samples and gathered from various geographical areas.

Conclusion

Despite its drawbacks, the workplace harassment strains scale appears to be a valid and reliable tool. The workplace harassment strains scale developed in this study will be useful for measuring the harmful consequences of workplace harassment comprehensively. A true picture of these

harmful consequences will be helpful in getting rid of these strains and enhancing the work efficiency of higher education institutions. Future studies may be conducted to validate the prescribed scale in quantitative form. There may be cross-sectional or longitudinal studies to validate and confirm the proposed scale.

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