Final Project:
Developing a Hypothetical Research Design with ANOVA
Research methodology, Fall 2022

WORKPLACE BULLYING AND HARASSMENT: IMPACT ON THE PERFORMANCE OF EMPLOYEES

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1. INTRODUCTION

1.1 Background and context:

Workplace bullying is defined as the recurrent maltreatment of one employee by one or more workers using a malicious combination of humiliation, intimidation, and performance sabotage (Margaret, 2007). It involves being mocked in front of other colleagues, being lied about to others, feeling constantly on guard, being unable to focus on work responsibilities, losing self-confidence on the job, and experiencing out-of-control anxiety. According to Sansone and Sansone (2015), at least 11% of workers are bullied at work. It is possible that one out of every five people worldwide is subjected to workplace bullying (Rayner et al., 2002).

Workplace bullying can cause anxiety and job discontent among coworkers (Hoel & Cooper, 2004). Workplace bullying causes psychological and physical harm to victims, as well as increased turnover rates and lower organizational performance (Einarsen & Hoel, 2001; Hutchinson et al., 2008).

The project is organized as follows: section 2 describes the overview of previous study and research methodology in section 3. Section 4 present the empirical results and section 5 draw the conclusion.

1.2 Problem Statement:

The research problem statement was created following a thorough evaluation of the literature and an in-depth examination of previous research and studies on workplace bullying and harassment. Following a thorough evaluation of the literature on the effects of workplace bullying and harassment, the study problem "***Workplace Bullying and Harassment: Impact on The Employees Performance***" has been selected.

1.3 Research Question:

The research topic created for this project is:

* *How does Insulting Behavior (bullying) impact on employees' work performance?*
* *How does Isolation and Exclusion (bullying) impact on employees' work performance?*

* *How does Isolation and Exclusion (bullying) impact on employees' work performance?*

These three questions will be responded after finding the results achieved through 'One Way Repeated Measures One- Factor ANOVA' test using SPSS.

1.4 Relevance and Importance:

* The goal of this study is to determine whether workplace bullying and harassment affect employee performance.

* Workplace bullying is a serious problem that has a negative impact on organizational productivity. Harassment in the workplace has an impact on both individual performance and the overall performance of the company.

* Bullying in the workplace is certainly a major issue for companies, regardless of the source of information. As a result, workplace harassment and bullying are major issues in every firm that must be detected and prevented.

* Workplace bullying hurts a person in every way; it not only harms their job but also jeopardizes their health.

* Workplace culture is important because it has a direct influence on employee performance. An employee will be able to provide his or her best in an organization if the work culture is healthy and good, but if the work culture is unhealthy, it will affect his or her performance in the organization as well as in his or her family.

* Bullying in the workplace is not only associated with poor health and well-being in those who are bullied, but it is also associated with poor individual, unit, and organizational outcomes in terms of performance and productivity, poor patient care outcomes, increased absenteeism, increased turnover intentions, and poor job satisfaction and engagement.

2. LITERATURE REVIEW

Over the last decade, bullying has garnered more attention in organizational research, with analysts reporting troubling findings concerning the bad outcomes associated with harassment, both for the people and the organizations involved. It is a pattern of action that is intended to damage someone who feels helpless to resist. Teasing and threatening to do damage are

examples of verbal bullying, whereas social bullying occurs in the workplace and might occur by leaving someone out of a meeting with the intent of publicly reproaching someone. Tormenting has been linked to increased turnover and plans to quit the association, more absenteeism, and less dedication and efficiency in terms of the association's outcomes (Salin, 2003).

Workplace bullying: Bullying is defined as the use of strength or force to harm a weak employee. It can also include online bullying and subtle bullying inside friendships such as manipulation, intimidation, social isolation, and the propagation of destructive rumors. It is defined as the recurrent abuse of an individual or group in the workplace by one or more perpetrators. According to Namie (2007), abusive or insulting language, spreading gossip or rumors, harmful or offensive initiation practices, physical assault or unlawful threats, giving too much workload to the person, setting difficult deadlines for the employee, assigning tasks that are beyond a person's ability, continuously ignoring a person at the workplace, and purposefully denying access to information are all examples of workplace bullying.

Employee performance: It is a function of capacity and inspiration, where capacity is defined as the abilities, training, and resources needed to complete a job and inspiration is described as an inner force that motivates an individual to act in the direction of an organizational objective (Kiruja and Mukuru, 2018). Employee performance is defined as the outcomes and accomplishments achieved at work. Performance relates to sticking to plans while striving for results. Although performance evaluation is at the center of performance management, an individual's or an organization's performance is significantly dependent on all organizational rules, practices, and design elements (Anitha, 2014).

According to Kiruja and Mukuru (2018), organizations would be more effective, efficient, flexible, committed, and profitable as a result of a focus on trust, which correlates with productivity; a less hierarchical and bureaucratic structure; and a high level of worker involvement, all of which would result in employee and organizational management systems. Workplace bullying is a serious problem that has a negative impact on organizational productivity. Harassment in the workplace has an impact on both individual performance and the overall performance of the company. Targets of workplace bullying have reported lower commitment to their jobs and organizations, worse job satisfaction, low morale, lower productivity, greater mistakes, restricted attention, and higher absenteeism.

Einarsen et al. (1994) distinguished between "direct bullying," defined as an explicit verbal or physical attack on the victim, and "indirect bullying," defined as more inconspicuous activities such as removing or isolating the victim from his or her peer group. The most prevalent negative behaviors recorded by 137 Norwegian victims of workplace bullying and harassment were social isolation and exclusion, devaluation of one's work and aspirations, and exposure to mocking, insulting remarks, and upsetting statements. Samnani et al., (2013) discovered significant reasons that may be motivating perpetrator bullying behavior, contextual elements that impact employee perceptions and attributions of the bullying, and disparities in trust and performance results. They stated that firms should also strengthen regulations and consequences against bullying conduct in order to avoid non-work-related bullying, which frequently occurs in the workplace and has a negative impact on employee performance as well as overall organizational productivity.

(Koh, 2016) review paper provides an overview of the current state of knowledge on the work environment antecedents of workplace bullying and proposes an integrative model of bullying applied to registered nurses. A prospective study was conducted in Singapore investigating workplace bullying among nurses in a local tertiary hospital's operating theatre department and reported that 33.7% of the respondents reported having experienced verbal abuse, with 17.6% alleging that they had experienced physical abuse. The survey also discovered that more than 70% of employees choose not to report workplace bullying occurrences.

3. RESEARCH METHODOLOGY

Dummy data has been used as assumed that it has been collected from a famous American company and were analyzed, presented and used to produce the key findings. The collected data were analyzed by using SPSS to interpret the result.

3.1 Variables

* **Performance** is the **dependent variable**. Performance level is measured by "Low" signifies "low performance level" whereas "Mid" indicates "mid performance level" and "High" denotes "high performance level".

∗ The key **independent variables** in my study are "Insulting Behavior", "Isolation and Exclusion" and "Rumors" (Spreading Rumors) which are types of bullying. "Insulting Behavior", "Isolation and Exclusion" and "Rumors" (Spreading Rumors) are measured using values ranging from 1 to 7. 1 to 3.5 signifies "low bullying," 3.5 to 4.5 indicates "mid bullying," and 4.5 to 7 symbolizes "high bullying."

3.2 Hypothesis

A) **Null Hypothesis (H0):** Insulting Behavior (bullying) do not have any significant impact on employees' work performance.

Hypothesis (H1): Insulting Behavior (bullying) have a significant impact on employees' work performance.

B) **Null Hypothesis (H0):** Isolation and Exclusion (bullying) do not have any significant impact on employees' work performance.

Hypothesis (H1): Isolation and Exclusion (bullying) have a significant impact on employees' work performance.

C) **Null Hypothesis (H0):** Spreading Rumors (bullying) do not have any significant impact on employees' work performance.

Hypothesis (H1): Spreading Rumors (bullying) have a significant impact on employees' work performance.

3.3 Population and Sample

The population is 30 employees, and it has been split into three samples. Employees with high performance are in the first category (sample size 10), which means they are less likely to be impacted by bullying than employees in the second group, who have high bullying levels (sample size 12), and the third group with mid performance level (sample size 8).

3.4 Data Collection and Analysis Plan

∗ Dummy data was employed with the assumption that survey data was obtained from an organization's employees.

∗ SPSS will be used to explore the correlation between work performance and bullying.

∗ Because no survey or questionnaire has been developed at this point in the research, a ANOVA was performed on hypothetical data.

* In the current study, a repeated measures one-factor ANOVA test has been performed.

* In case we reject the null hypothesis, a post hoc test (LSD) has also been run.

* The descriptive statistics, multivariate test and a post hoc test (LSD) results will be mentioned and stated in this report.

* F value and p value will be compared with significance level to accept or reject the null hypothesis by running the test.

3.5 Statistical Method

As explained earlier, **repeated measures one-factor ANOVA test** has been performed. The input data table formulated in SPSS is as follows:

Table 1. Input data Table

S.no	Bullying and Harassment			Performance
	Insulting Behavior	Isolation and Exclusion	Rumors	
1	1.00	2.50	5.00	mid
2	2.50	3.30	1.20	high
3	1.20	5.80	7.00	low
4	2.00	1.10	3.90	high
5	2.70	4.90	3.30	high
6	3.00	1.30	6.40	low
7	6.30	5.20	6.80	low
8	1.50	2.50	1.20	high
9	3.40	1.50	2.20	high
10	3.50	6.80	5.50	low
11	4.00	5.60	6.00	low
12	6.20	6.70	6.50	low
13	1.00	1.10	1.05	high
14	2.30	1.50	1.90	mid
15	3.10	5.90	6.30	low
16	2.20	5.90	7.00	low
17	3.50	6.90	2.70	low
18	2.60	1.80	5.10	mid
19	1.20	2.60	6.20	low
20	4.50	2.10	3.30	mid
21	2.00	2.80	4.10	mid
22	1.00	5.20	4.00	mid
23	3.00	1.50	3.50	high
24	1.70	1.40	2.70	high

25	5.20	1.00	6.30	low
26	1.20	6.90	1.30	mid
27	1.90	6.60	3.00	mid
28	6.40	4.40	1.20	low
29	1.00	6.90	2.20	high
30	2.00	3.50	1.10	high

As indicated in *Table 1*, Insulting Behavior level (bullying), Isolation and Exclusion level (bullying) and Rumors level (bullying) were gathered from a broad sample of an organization and were chosen as the independent variable for my research. The dependent variable in the last column is the performance level scores.

A **significance level** of **0.05** has been set for the analysis. Descriptive statistics, multivariate test have been conducted and the null hypothesis will either be accepted or rejected based on the results.

4. RESULTS AND JUSTIFICATION

Using the input data table shown above, repeated measures ANOVA test has been run and on the basis of the results obtained through the three tests, conclusion will be made about the acceptance or rejection of the null hypothesis. Table 2 shows the between-subjects factors below:

Table 2. Between-Subjects factors

Between-Subjects Factors		
		N
Performance	high	10
	low	12
	mid	8

Performance level has been divided into three groups: 'high', 'low' and 'mid'. There are 10,12, and 8 observations taken.

The descriptive statistics' results have been shown in the table 3 below:

Table 1: Descriptive statistics

Descriptive Statistics				
Bullying	**Performance**	**Mean**	**Std. Deviation**	**N**
Insulting_behaviour	high	2.0800	.81486	10
	low	3.8167	1.86247	12
	mid	2.0625	1.15380	8
	Total	2.7700	1.61206	30
Isolation_exclusion	high	2.7700	1.91952	10
	low	4.8417	2.08695	12
	mid	3.6750	2.20891	8
	Total	3.8400	2.18878	30
Rumors	high	2.2350	1.08322	10
	low	5.6583	1.81030	12
	mid	3.4625	1.36794	8
	Total	3.9317	2.08469	30

In the next step, Levene's test of equality of error variances has been performed and the results have been presented in the following table:

Table 2: Levene's test of equality of variances

Levene's Test of Equality of Error Variances[a]		Levene Statistic	df1	df2	Sig.
Insulting_behaviour	Based on Mean	3.591	2	27	.041
	Based on Median	2.687	2	27	.086
	Based on Median and with adjusted df	2.687	2	19.691	.093
	Based on trimmed mean	3.599	2	27	.041
Isolation_exclusion	Based on Mean	.352	2	27	.707
	Based on Median	.062	2	27	.940
	Based on Median and with adjusted df	.062	2	26.481	.940
	Based on trimmed mean	.341	2	27	.714
Rumors	Based on Mean	.437	2	27	.651
	Based on Median	.072	2	27	.930
	Based on Median and with adjusted df	.072	2	16.033	.930
	Based on trimmed mean	.241	2	27	.787
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Performance					
Within Subjects Design: Bullying					

A) The p value for Insulting Behaviour based on mean is **0.041** which is less than the significance level which is **0.05.** Therefore, the null hypothesis will be rejected for this case.

B) The p value for Isolation and Exclusion is **0.707** which is greater than **0.05.** So, the null hypothesis will be accepted for this particular case.

C) The p value for Rumors based on mean is **0.651** which is greater than **0.05.** Therefore, the null hypothesis will be accepted for this particular case too.

In the box's test of equality of covariance matrices (see table 5), p value is greater than the significance level. Hence, we reject the null hypothesis.

Table 3: Box's test of equality of covariance matrices

Box's Test of Equality of Covariance Matrices[a]

Box's M	14.050
F	.970
df1	12
df2	2674.667
Sig.	.475

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Performance
 Within Subjects Design: Bullying

The multivariate test has been conducted and the results are shown below:

Table 4: Multivariate tests

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Bullying	Pillai's Trace	.258	4.530[b]	2.000	26.000	.021	.258
	Wilks' Lambda	.742	4.530[b]	2.000	26.000	.021	.258
	Hotelling's Trace	.348	4.530[b]	2.000	26.000	.021	.258
	Roy's Largest Root	.348	4.530[b]	2.000	26.000	.021	.258
Bullying * Performance	Pillai's Trace	.125	.901	4.000	54.000	.470	.063
	Wilks' Lambda	.876	.886[b]	4.000	52.000	.479	.064
	Hotelling's Trace	.139	.869	4.000	50.000	.489	.065

		.124	1.671[c]	2.000	27.000	.207	.110
	Roy's Largest Root						

a. Design: Intercept + Performance
Within Subjects Design: bullying

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

The test of within subjects' effects is given below in table 7:

Table 7. The test of within subjects' effects

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Bullying	Sphericity Assumed	24.448	2	12.224	3.730	.030	.121
	Greenhouse-Geisser	24.448	1.879	13.011	3.730	.033	.121
	Huynh-Feldt	24.448	2.000	12.224	3.730	.030	.121
	Lower-bound	24.448	1.000	24.448	3.730	.064	.121
Bullying * Performance	Sphericity Assumed	10.312	4	2.578	.787	.539	.055
	Greenhouse-Geisser	10.312	3.758	2.744	.787	.532	.055
	Huynh-Feldt	10.312	4.000	2.578	.787	.539	.055
	Lower-bound	10.312	2.000	5.156	.787	.466	.055
Error(bullying)	Sphericity Assumed	176.966	54	3.277			
	Greenhouse-Geisser	176.966	50.735	3.488			
	Huynh-Feldt	176.966	54.000	3.277			
	Lower-bound	176.966	27.000	6.554			

Finally, to obtain the final results Tukey HSD post-hoc test has been run and the results have been stated below:

Table 8: Tukey's Post Hoc test

Multiple Comparisons

Measure: MEASURE_1

	(I) Performance	(J) Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Tukey HSD	high	low	-2.4110*	.34117	.000	-3.2569	-1.5651
		mid	-.7051	.37796	.168	-1.6422	.2321
	low	high	2.4110*	.34117	.000	1.5651	3.2569
		mid	1.7059*	.36369	.000	.8042	2.6077
	mid	high	.7051	.37796	.168	-.2321	1.6422
		low	-1.7059*	.36369	.000	-2.6077	-.8042
Bonferroni	high	low	-2.4110*	.34117	.000	-3.2818	-1.5402
		mid	-.7051	.37796	.219	-1.6698	.2597
	low	high	2.4110*	.34117	.000	1.5402	3.2818
		mid	1.7059*	.36369	.000	.7776	2.6342
	mid	high	.7051	.37796	.219	-.2597	1.6698
		low	-1.7059*	.36369	.000	-2.6342	-.7776

Based on observed means.
 The error term is Mean Square(Error) = .635.
*. The mean difference is significant at the .05 level.

5. DISCUSSION AND CONCLUSION

a. Discussion

Workplace bullying has many types, such as Insulting behavior, Isolation and Exclusion, Spreading rumors and so on…. Work performance will be influenced by those bullying behaviors. For example, Insulting behavior might have highly negative affect employee's performance while Isolation and Exclusion and Rumors might mildly effect or slightly effect to their performance. It might be due to their personality, like some people prefer to be alone most of the times and while some people don't care what is happening around them, like rumors about them.

The graph of Performance vs marginal means plotted using SPSS will show whether the null hypothesis or alternate hypothesis is true (see graph 1).

Estimated Marginal Means of MEASURE_1
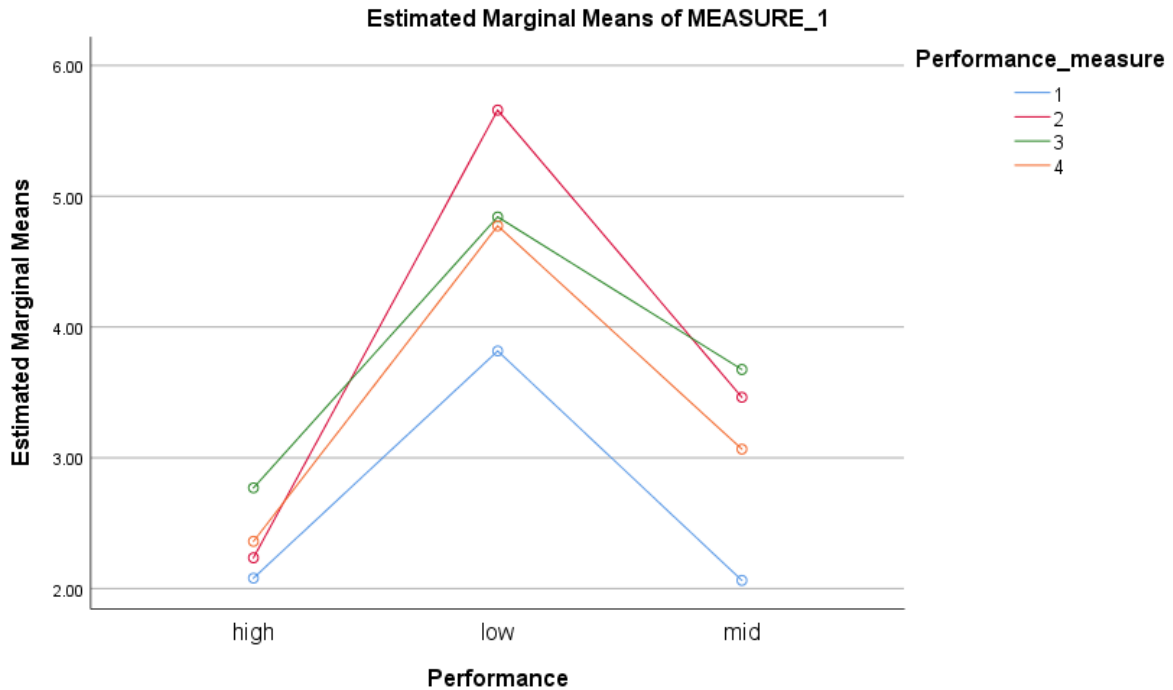
Note: Blue-Insulting Behavior, Red-Isolation and Exclusion, Green-Rumors, Yellow-Overall Bullying

Figure 1: Graph of Performance level vs marginal means

As shown in Figure 1, we can clearly state that as marginal means of Insulting Behavior is increasing from 2 to 3.8 representing high to low performance, while it reaches 3.8 to 2 which is the low to mid performance.

Marginal means for Isolation and Exclusion, it increases sharply as it moves to low performance level and similarly it decreases as it moves from low to mid performance.

For Rumors, marginal means are slightly increasing as it moves from high to low, and it is decreasing to 3.8 as it moves from low to mid performance.

Overall, Marginal means for overall bullying, it increases sharply as it moves from high to low performance. We can say that as bullying values increase, performance level decrease from high to mid and to low.

b. Conclusion

To conclude, the alternate **A) Hypothesis (H1):** Insulting Behavior (bullying) have a significant impact on employees' work performance proved to be true as a result of the test. Further, **B) Null Hypothesis (H0):** Isolation and Exclusion (bullying) do not have any

significant impact on employees' work performance failed to reject as a result of the test based on mean.

Lastly, **C) Null Hypothesis (H0):** Spreading Rumors (bullying) do not have any significant impact on employees' work performance failed to reject.

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