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**The Effect of cyber Loafing on the relationship  
between Workplace Ostracism and Organizational  
Citizenship Behavior  
"An Empirical study on Private Universities in Egypt"**

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**Abstract**

Workplace ostracism is a situation in which employee is rejected by his colleagues this situation could affect the performance of the employee, also the rapid changes in the nature of work environment due to the technological advances and the change in nature of organizations could affect the employees' performance. These technological changes could benefit the organizations however some employees could use the technological changes in a bad way. Thus, this research aims to determine the effect of cyber loafing on the relationship between workplace ostracism and organizational citizenship behavior at private universities in Egypt.

After reviewing previous studies in this regard, a model for the research hypotheses was developed, and primary data was collected through designing a questionnaire with scales for workplace ostracism, cyber loafing and organizational citizenship behaviors and by using a sample of (289) units of teaching staff and teaching assistants at private universities in Egypt.

The model was tested using the structural equation model and path analysis was used to assess the strength of the relationships among the research variables by using (AMOS) program. The necessary tests were conducted to assess the validity of the research variable models. The questionnaire was distributed to the sample through google form.

The researcher concluded that there is a negative effect of workplace ostracism on organizational citizenship behavior, the results also shows that workplace ostracism affects cyberloafing positively, furthermore cyber loafing has a negative effect on organizational citizenship behaviors which supports the third hypothesis, also cyberloafing mediates the relationship between workplace ostracism and organizational citizenship behavior.

**Keywords:** workplace ostracism, cyber loafing, organizational citizenship behaviors

## 1- Introduction

The environmental growth of an organization depends on the discretionary behaviors of its employees since they are the ones who undertake organizational strategies. Owing to the long time spent by employees in the workplace, interpersonal relations cooperation, and the way they treat each other help in boosting their performance and productivity. The extent of inter-social relationship among the organizational members considerably influences their behaviors and attitudes.

Recently the term workplace ostracism became wide spread; several studies have reported workplace ostracism to negatively influence the social association among members of the organization. (Chung,2018).

In the last couple of decades, the great technological advances caused big changes throughout the world. Internet technology became an important part of both personal and business lives of people. A lot of organizations started to identify and use the internet as a platform for conducting business in nontraditional ways, and using it as a tool for enhancing employees' performance.

The effective use of the Internet has a significant impact on employees and the organization's productivity, since it reduces time and cost, and is a better way to interact with other stakeholders. However, many employees use it for relaxation during working hours and spend working hours while utilizing the Internet for non-work purposes in an organization this is known as cyberloafing which affects the job roles and responsibilities and results in wasting time. Consequently, the organization suffers a lot due to employees' online engagements other than their job roles (Lim et al., 2020).

The main purpose of this study is to identify the effect of cyber loafing on the relation between workplace ostracism and organizational citizenship behaviors.

## 2-Literature Review

**The literature review is divided into four main parts according to the nature of the study:**

### 2.1: Literature review of workplace ostracism:

There are several studies that were interested in studying workplace ostracism and its antecedents and consequences. In Table (1) below, some of these prominent researchers and their contributions are outlined.

**Table (1):** Literature review of workplace ostracism

No.	Author/year	objectives	Results
1	Naoreen, etal.,( 2023)	Examined the impact of workplace ostracism on stress and work engagement among university teachers	Workplace ostracism was found to have a detrimental effect on stress levels and work engagement.

No.	Author/year	objectives	Results
2	Sahoo, et al., (2023)	Explores the relationship between workplace ostracism, emotional intelligence (EI) and organizational change cynicism. This paper also aims to examine how dimensions of (EI) moderate the relationship between workplace ostracism and organizational change cynicism).	Workplace ostracism was positively related to organizational change cynicism. However, only two dimensions of (EI) , namely, appraisal and regulation of self-emotion (ARSE) and other's emotional appraisal were negatively related to organizational change cynicism. The positive relationship between workplace ostracism and organizational change cynicism is stronger for employees with low (ARSE) and other emotional appraisals than those with higher scores.
3	Zafar,& Mahmood, (2022)	Analyzing the relationship between workplace ostracism and two types of workplace deviance, i.e., interpersonal deviance (workplace incivility, workplace bullying, violence, workplace harassment, social undermining, organizational mobbing) and organizational deviance (work behavior deviated from certain norms), and examines the unexplored moderating role of self-esteem between these relationships.	Ostracism is a significant factor in interpersonal and organizational deviance, but it seemed that organizational deviance is more strongly affected by ostracism. The subsequent results also justify that self-esteem is a valuable factor for these circumstances of deviance and ostracism.
4	Preena et al., (2021)	Explored the moderating role of psychological capital on the relationship between perceived workplace ostracism and deviant workplace behaviors among software engineers in the Information Technology (IT) sector in Sri Lanka	Perceived workplace ostracism positively impacts deviant workplace behavior, and psychological capital moderates the association between perceived workplace ostracism and deviant workplace behavior.

**Source:** adopted by the researcher.

## 2.2 : Literature review of cyber loafing:

There are several studies that are interested in studying cyber loafing, its dimensions, and measures. Some of these researchers will be described in the following Table (2).

**Table (2):** Literature review of cyber loafing

No.	Author/year	Objectives	Results
1	Kamila,&Muafi,(2023).	Examining and analyzing the effect of job stress and job boredom on employee performance mediated by cyber loafing behavior	There is a positive and significant influence of job stress on cyber loafing behavior, there is a positive and significant influence of job boredom on cyber loafing behavior, there is a negative and significant influence of cyber loafing behavior on employee performance, there is a significant influence between cyber loafing behavior mediating stress on employee performance, and there is no significant influence between cyber loafing behavior mediating job boredom on employee performance.
2	Korzynski, & Protsiuk, (2022)	Examining the direct and indirect relationships between workload, self-efficacy, time management skills, and cyber loafing through the mediating effect of job satisfaction.	Job satisfaction mediates the relationship between workload, time-management skills, self-efficacy, and cyber loafing. there is also no direct effect of workload and self-efficacy on cyber loafing. Results revealed that time management skills are negatively associated with cyber loafing.

No.	Author/year	Objectives	Results
3	Khan, et al., (2021).	Investigating the influence of abusive supervision on cyber loafing, also, studying whether the emotional exhaustion generated due to abusive supervision behavior, motivates employees towards cyber loafing (i.e. the mediating role of emotional exhaustion on the relation between of abusive supervision and cyber loafing)	Findings demonstrated that abusive supervision significantly and positively affects cyber loafing and also emotional exhaustion mediates this relation significantly. Therefore, the researchers concluded that abusive supervision is the main factor for employees to be exhausted and ultimately move towards cyber loafing.

Source: adopted by the researcher.

### 2.3 Literature review of organizational citizenship behavior

There are several studies that are interested in studying organizational citizenship behavior its dimensions, and measures. Some of these researchers will be described in the following Table (3).

**Table (3):** Literature review of organizational citizenship behavior

No.	Author/year	Objectives	Results
1	Abbasi and Wan Ismail, 2023)	Investigating the impact of trust and citizenship behavior on workplace deviance. It further investigates the mediator effect of organizational citizenship behavior between organizational trust and workplace deviance	Reveals the high impact of organizational trust on organizational citizenship behaviour and the contrary effect of trust on deviant behaviour in organizations. Significant impact of citizenship behaviour as a mediation between organizational trust and workplace deviance,
2	Soleton, et al,(.2023)	determining the influence of self-efficacy and knowledge sharing on Organizational Citizenship Behavior and testing the mediating role of job satisfaction.	Self-efficacy has no effect on OCB, knowledge sharing has a positive and significant effect on OCB, in addition self-efficacy has a positive and significant effect on job

No.	Author/year	Objectives	Results
			satisfaction also, knowledge-sharing affects job satisfaction. Job satisfaction influences OCB, and job satisfaction can partially mediate the influence of knowledge sharing on OCB, and job satisfaction can mediate the influence of self-efficacy on OCB.
3	Alshihabat , Atan , (2020)	Investigating the mediating effect of organizational citizenship behavior (OCB) in the relationship between transformational leadership (TLS) and corporate social responsibility practices (CSR).	The overall assessment of the model was accepted and transformational leadership (TLS) was found to indirectly and significantly impact CSR practices through OCB, where the direct effect was significant, though lower than the indirect impact. This means that TLS is a good predictor of CSR practices, especially with the mediation of OCB.
4	Hermawan,et al., (2020)	Analyzing the relationship between Organizational Citizenship Behaviour (OCB) and Employee Engagement (EE) on Employee Performance (EP) in the manufacturing industry in Tangerang.	OCB has a significant effect on EE and EP. This study also found that employee engagement has a significant effect on employee performance and can mediate the relationship between OCB and EP.

**Source:** adopted by the researcher.

#### **2.4 Summary of literature review and research gab:**

- 1- From the literature review of workplace ostracism, we can notice that it has positive effects on each of turnover intentions, deviant workplace

behavior, knowledge hiding, organizational inertia, job tensions, job stress and employee silence.

- 2- It negatively affects in-role job performance, innovation, loyalty.
- 3- Workplace ostracism also plays an important role as a mediator or moderator between different variables
- 4- Also, there are different variables that affect workplace ostracism and mediates or moderates its relationship with different variables such as organizational politics, organizational cronyism, burnout, psychological capital, and job tension.
- 5- Concerning cyber loafing it affects innovation, productivity, information security awareness, organizational commitment and performance.
- 6- There are different variables that affect cyber loafing such as work stressors, leader member exchange, big five personality traits, meaningful work content and job embeddedness.
- 7- From the previous studies of organizational citizenship behavior, the researcher noticed that it can be affected by several variables such as emotional instability, organizational justice, affective wellbeing, organizational commitment and the style of leadership.
- 8- It also mediates the relationship between various variables.

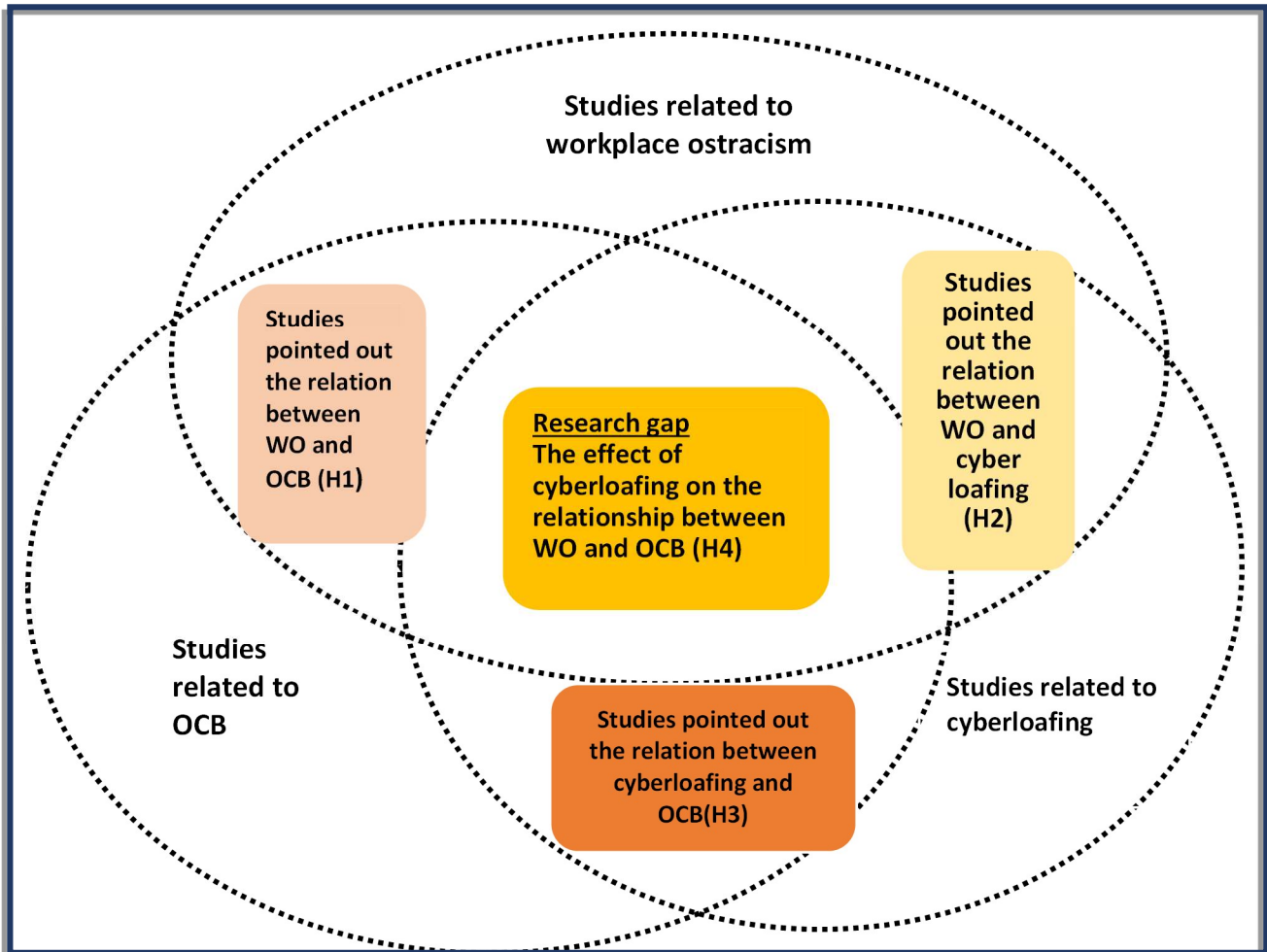
#### **The Research Gap:**

Consequently, the following point represent this research gap:

- 1- There is scarcity in the studies concerning workplace ostracism in Arabian countries to the best of the researcher knowledge.
- 2- To the best of researcher knowledge cyber loafing didn't get a lot of attention in Arabian studies.
- 3- To the best of researcher knowledge there are no studies that tested the effect of cyber loafing on the relation between workplace ostracism and citizenship behavior in the Egyptian environment figure (1).
- 4- Workplace ostracism will be measured depending on three dimensions which are (social ostracism, physical ostracism and cyber ostracism).
- 5- The four dimensions to measure cyber loafing are personal information research, personal communication, personal e-commerce, and personal downloading (Ramayah,2010)
- 6- Organizational citizenship behavior will be measured through five dimensions proposed by (Organ,1988).



Figure(1) research gap



Source :made by the researcher

### 3- Research Problem

The essential purpose of this research is to propose a model for the effect of cyber loafing on the relation between workplace ostracism and organizational citizenship behavior in some private universities in Egypt. The design of this research is aimed to answer the following questions:

#### ***Research Problem Statement:***

***To what extent does workplace ostracism affect citizenship behavior through the effect of cyber loafing?*** In order to answer this question, the following set of questions arise (The sub questions):

- a) To what extent do employees perceive workplace ostracism in private universities in Egypt?
- b) To what extent do employees do cyber loafing in private universities in Egypt?

- c) What is the effect of workplace ostracism on organizational citizenship behavior?
- d) What is the effect of workplace ostracism on cyber loafing?
- e) What is the effect of cyber loafing on organizational citizenship behavior?
- f) What is effect of cyber loafing in the relation between workplace ostracism and organizational citizenship behavior?

#### **4- Research Objectives**

Based on the study problem, a set of objectives have been formulated that the study seeks to achieve:

- a) Determining to what extent employees perceive workplace ostracism in private universities in Egypt.
- b) Determining to what extent employees do cyber loafing in private universities in Egypt.
- c) Determining the effect of workplace ostracism on organizational citizenship behavior.
- d) Determining the effect of workplace ostracism on cyber loafing.
- e) Determining the effect of cyber loafing on organizational citizenship behavior.
- f) Determining the effect of cyber loafing in the relation between workplace ostracism and organizational citizenship behavior.
- g) Measuring the effect of demographic variables (gender, age, tenure, current job) on employees' perception of workplace ostracism, cyberloafing and organizational citizenship behavior.

#### **5- Research hypothesis and model:**

Considering the following conceptual model (figure2), the research *hypotheses* are set as follows:

**H1:** There is a significant negative effect of workplace ostracism on organizational citizenship behavior.

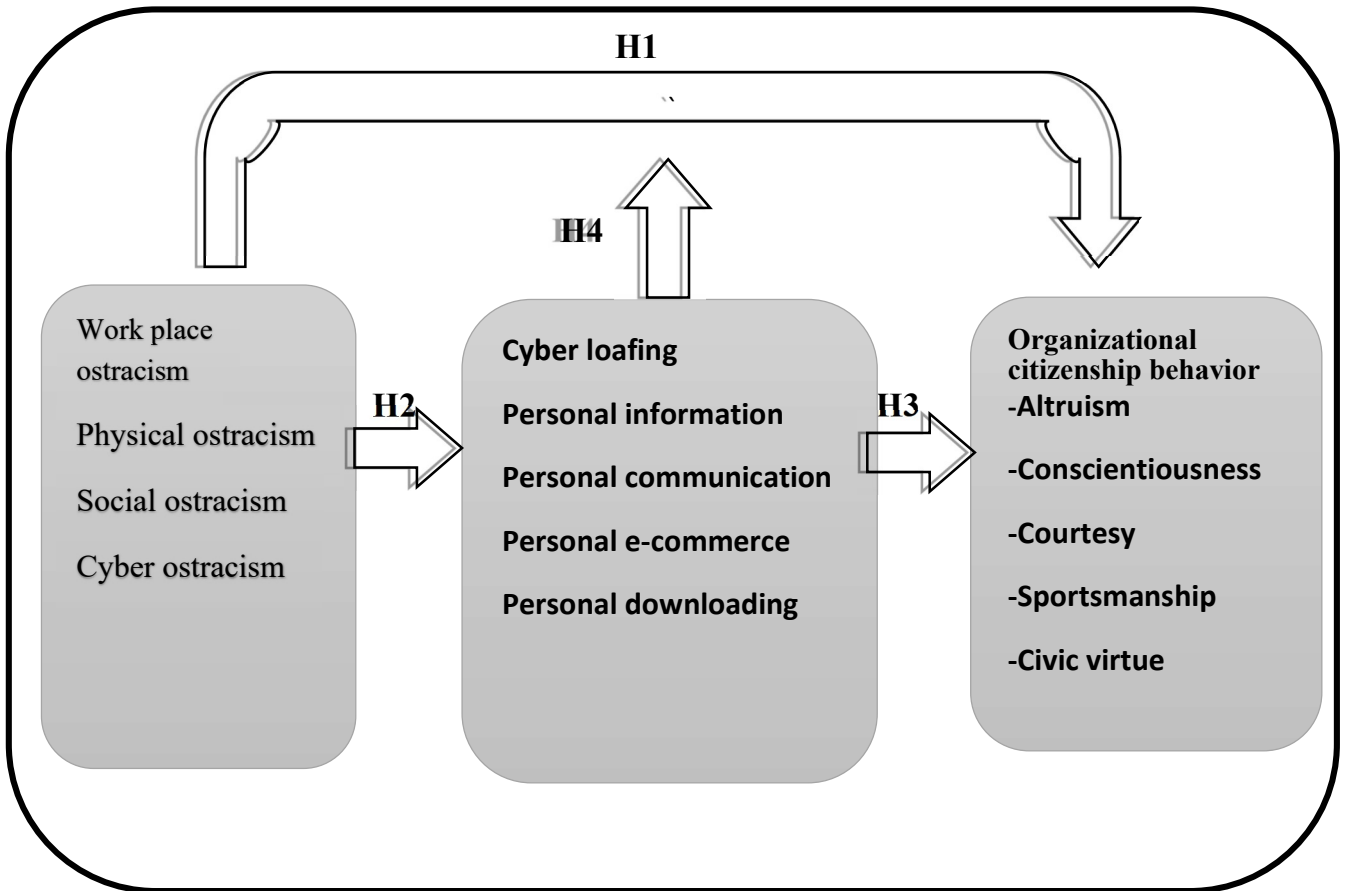
**H2:** There is a positive significant effect of workplace ostracism on cyber loafing.

**H3:** There is a significant negative effect of cyber loafing on organizational citizenship behavior.

**H4** There is an effect of cyber loafing in the relationship between workplace ostracism and organizational citizenship behavior.

**H5:** There is a significant effect of demographic variables in employees' perception of workplace ostracism, cyber loafing and organizational citizenship behavior.

**Figure (2): research model**



**Source:** by the researcher.

## **6-Research Importance**

### **The scientific importance:**

- The effect of Workplace ostracism in organizations could be destructive and as by the knowledge of researcher there are scarcity in the studies of work place ostracism in Arab countries
- Studies that examined the effect of workplace ostracism on organizational citizenship behavior are rare in Arab countries as known by the researcher.
- As by the knowledge of researcher, there are no studies that tested the effect of workplace ostracism on cyber loafing in Arab countries.
- Also, there is scarcity in the researches that tested the effect of cyber loafing on organizational citizenship behavior.
- As known by the researcher there is no Arab or foreign studies tested the direct and indirect relationship between research variables.

### **The practical importance:**

- Determining the reasons that lead to workplace ostracism.
- Try to introduce some recommendations that could reduce workplace ostracism among employees.

- c) Identifying reasons of cyber loafing and trying to recommend how to reduce these reasons.
- d) Determining the effect of workplace ostracism on cyber loafing and organizational citizenship behavior.
- e) The results and recommendations of the research may help future researchers in HRM.

**7- Research Methodology**

The researcher will focus on two types of data to determine and test the research hypothesis.

**7.1 Secondary data**

Secondary data refers to the data that have been previously gathered and have used to illustrate and describe the research variables and their dimensions. Hence, research relies on books, journals, reports, and thesis that related to the research variables (workplace ostracism, cyber loafing, organizational citizenship behavior) to collect these data, to determine the research problem, and develop the hypotheses.

**7.2 Primary data**

Represent the data that will be collected for the first time by the researcher through a survey by using a questionnaire directed to teaching staff and teaching assistants at some private universities in Egypt, and analyzing data to test the hypothesis of the research.

**7.2.1 The questionnaire design**

To collect data, the researcher adopted on a five-point-Likert scale to develop the questionnaire designed for this purpose and consists of 47 questions that fit the Egyptian environment, and divided to three parts to measure the research variables. The major three variables are workplace ostracism, cyber loafing and organizational citizenship behaviors. The following table (4) shows the dimensions of each variable and the sentences range that is used to measure each dimension.

**table (4) dimensions variable and the sentences range for each dimension.**

No.	Dimensions	Sentences	measure
<b>Workplace ostracism</b>	<b>Social ostracism</b>	<b>1-6</b>	<b>Ferris ,2008 Niu,etal.,2018</b>
	<b>Physical ostracism</b>	<b>7-10</b>	
	<b>Cyber ostracism</b>	<b>11-15</b>	
<b>Cyber loafing</b>	<b>Personal downloading</b>	<b>16-17</b>	<b>Ramayah,2010</b>
	<b>Personal e- commerce</b>	<b>18-19</b>	
	<b>Personal communication</b>	<b>20-22</b>	
	<b>Personal information research</b>	<b>23-26</b>	

<b>Organizational citizenship behaviors</b>	<b>Altruism</b>	<b>27-30</b>	<b>Organ,1988</b>
	<b>Courtesy</b>	<b>31-35</b>	
	<b>Sportsmanship</b>	<b>36-39</b>	
	<b>Conscientiousness</b>	<b>40-44</b>	
	<b>Civic virtue</b>	<b>45-47</b>	
<b>Demographic variables</b>	<b>Gender ,Age, years of experience and current job</b>		

**Source:** made by the researcher

### **7.2.2 Research population.**

The target population will consist of teaching staff, and teaching assistants in the private universities in Egypt at the time of conducting the field study where there are 27 private universities available at ([https://scu.eg/pages/private\\_universities](https://scu.eg/pages/private_universities) )

According to the research objectives and hypotheses and due to the limitations of cost, time and efforts, the researcher depended on a sample consists of 8 out of 27 private universities which are located in Cairo and 6th October regions, private universities that are accredited from The Egyptian Ministry of Higher Education and universities that are internationally accredited:

1. **6<sup>th</sup> October university**
2. **Modern Science and Arts University,**
3. **Misr University for Science and Technology**
4. **Al-Ahram Canadian University**
5. **Newgiza University**
6. **Nile University**
7. **Future University**
8. **Modern university for technology and information**

### **7.2.3 The research sample**

According to the research objectives and hypotheses and due to the limitations of cost, and efforts, the researcher employed random sampling from the research population and sampling units consist of teaching staff and teaching assistants in the selected universities **The sample size then equals 358.**

## **8- Theoretical Framework**

In this part, the researcher will deal with the theoretical framework of the research variables in terms of concept and dimensions.

### **8.1 Concept of workplace ostracism and its dimensions:**

Human beings are social creatures with an innate desire to bond and develop interpersonal relationships. The desire to form social relations is a basic human need (Bedi, 2021).

Ostracism is widely prevalent almost everywhere in society, including the workplace ( Yang and Treadway, 2018). At work, an employee may feel ignored or excluded by co-workers' behaviors, such as deliberate ignorance, denying eye contact, leaving the room when he/she comes in, ignoring him/her in the conversation, being unresponsive to his/her greetings, giving him/her the “cold shoulder” or withholding needed information (Chen and Li, 2019; Huertas-Valdivia et al., 2019; Yang and Treadway,2018).

These behaviors are a kind of interpersonal mistreatment that is painful and aversive to the ostracized employees (Chen and Li, 2019).

**Workplace ostracism can be defined as:** *“the social, physical, or cyber actions of exclusion or ignoring that is done by one person or group toward another person or group in workplace whether these actions are intended or unintended”*. There are three dimensions of workplace ostracism that are used in this research :

**Social ostracism:**

Refers to removing oneself or others from the social situation, it also may range from separating oneself from others to only reducing the time spent with some persons, it involves an emotional withdrawal and can start from just removing eye contact or not talking or listening to someone to “silent treatment” In social ostracism, people are treated as if they were “invisible”.

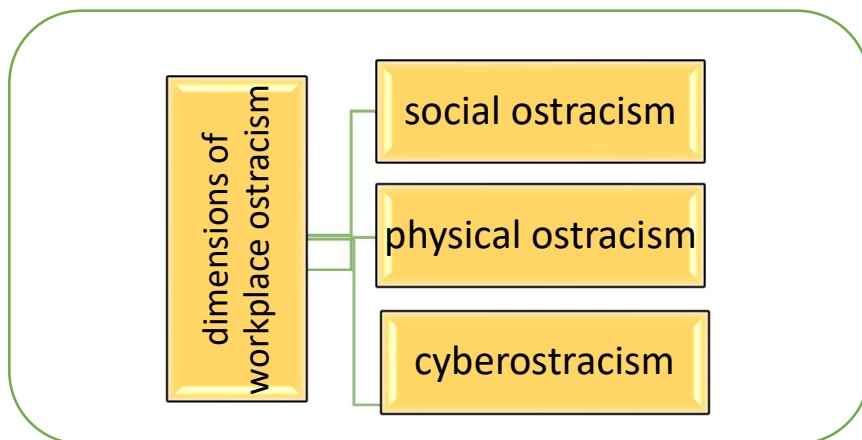
**Physical ostracism:**

Involves removing oneself or others from the social situation, there are many types of physical ostracism such as expulsion, exile, solitary confinement.

**Cyber ostracism:**

Cyber ostracism is referred to as perceived ostracism in non-face to face types of communication ,which include not responding to e-mails, chats social media, Whats app chats, phone calls, or being neglected online (GÖK, 2020).

**Figure (3) dimensions of workplace ostracism**



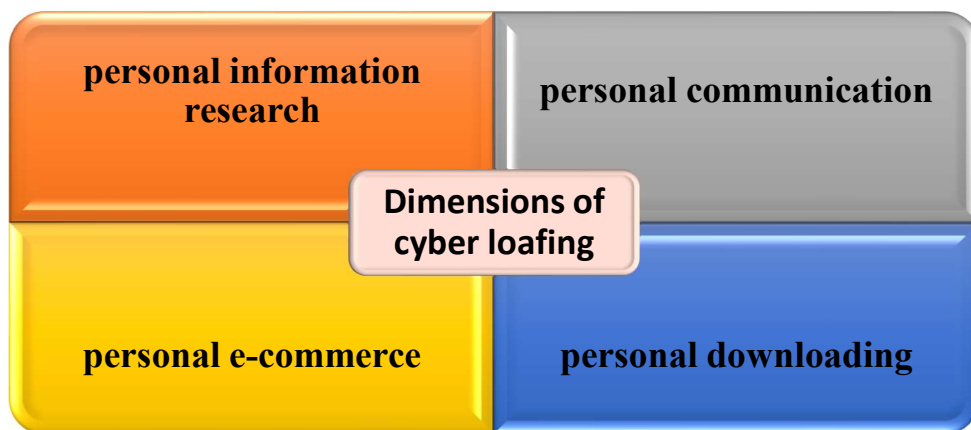
**Source : by the researcher**

## 8.2 Concept and dimensions of cyber loafing:

Cyber loafing could be defined as: “the intentional use of workplace internet connection for personal use while pretending to do legitimate work. The study depends on four dimensions of cyber loafing which are

- a) **personal information research**
- b) **personal communication**
- c) **personal downloading**
- d) **personal e-commerce.**

Figure (4) dimensions of cyber loafing



Source: by the researcher

## 8.3 Concept of organizational citizenship behavior (OCB):

OCB refers” to engaging in behaviours that include benefits for both the *employee and the organization, these behaviours exceed the range of the tasks defined to perform a certain job this include helping burdened co-workers, voluntarily accept additional responsibilities, developing additional skills that are beneficial to the organization, working overtime.*” The study depends on five dimensions of (OCB) which are:

**Altruism:** refers to discretionary actions that have the result of assisting a particular coworker with a task or issue that is vital to the organization.

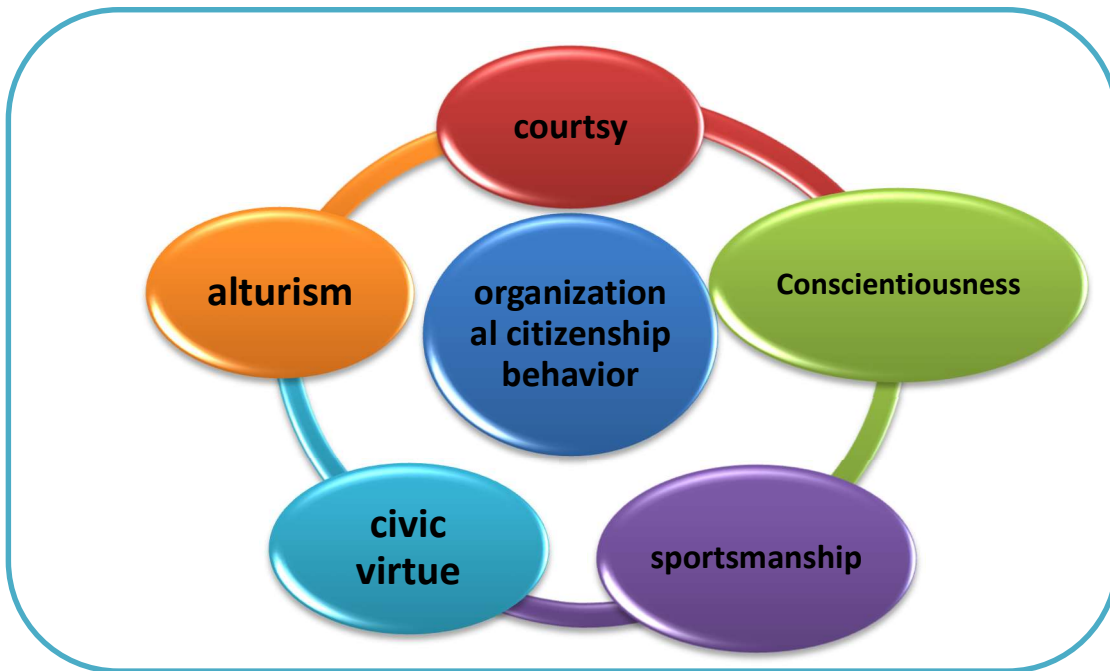
**Conscientiousness:** according to (Law, Wong, and Chen, 2005) it involves acting in ways that go beyond the organizational minimal criteria for a given function. These actions show that employees respect and follow the organization's policies, rules, and processes.

**Civic virtue:** can be observed by actions that indicate that employee is concerned extremely and is actively involved in the operation of the company (Law et al., 2005).

**Courtesy:** as stated by (Law et al., 2005) it is discretionary behaviour in order to prevent work-related conflicts with coworkers."

**Sportsmanship:** is the willingness of the employee to tolerate less-than-ideal organizational conditions without complaining or exaggerating issues (Azmi, et al., 2016).

**Figure(5) dimensions of organizational citizenship behaviour**



Source : made by the researcher

## 9- Field Study

### 9.1 The survey groups

The total sample size can be determined by the following formula (Steven K. Thompson, 2012):

$$n = \frac{Np(1 - p)}{(N - 1) (d^2/ z^2) + p(1 - p)}$$

Where:

$p$	Probability of estimate (obtained from previous studies) $p = 0.50$
$Z_{\alpha/2}$	The standard score corresponds to a certain confidence level (95%) = 1.96
$d$	The error proportion = 0.05
$N$	The study population size
$n$	Sample size = 358



**Table (5):** The sample size from each university.

No	Name of university	No. of teaching staff and teaching assistants	Ratio	Sample	Actual responses
1	6 <sup>th</sup> October university,	934	18.19%	65	52
2	Modern Science and Arts University	995	19.38%	69	55
3	Misr University for Science and Technology	1054	20.52%	73	59
4	Al-Ahram Canadian University	540	10.51%	38	31
5	Newgiza University	239	4.655%	17	14
6	Nile University	152	2.96%	11	10
7	Future University	563	10.966%	39	31
8	Modern university for technology and information	657	12.797%	46	37
<b>Total</b>		<b>5134</b>	<b>100%</b>	<b>358</b>	<b>289</b>

**Source:** Prepared by the researcher.

Collecting data from respondents is considered a very difficult technique in Egypt thus, the incompleteness of responses and lack of respondents are considered the usual problems of collecting primary data. So, the actual responses was 289 which represents 81% of the sample.

#### *9.2 Evaluation of Internal consistency reliability:*

The reliability is an indicator that can be evaluated by Cronbach's alpha, which defines as a criterion for internal consistency reliability that provides an estimation of the reliability for each sub-dimension of the questionnaire based on the intercorrelations of the sub-dimensions of the study variables. The statistically acceptable limit for Cronbach's alpha should not be less than 0.60. Table (6) shows the results of the reliability as follow:

**Table (6):** The results of the internal consistency reliability.

Variables		No. of items	Cronbach's Alpha
<b>Independent variable: workplace ostracism</b>		<b>15</b>	<b>0.954</b>
<i>Dimension one</i>	Social ostracism	6	0.900
<i>Dimension two</i>	Physical ostracism	4	0.893
<i>Dimension three</i>	Cyber ostracism	5	0.904
<b>Dependent variable: Organizational citizenship behavior</b>		<b>21</b>	<b>0.925</b>
<i>Dimension one</i>	Altruism	4	.881
<i>Dimension two</i>	Courtesy	5	.911
<i>Dimension three</i>	Sportsmanship	4	.844
<i>Dimension four</i>	Conscientiousness	5	0.894
<i>Dimension five</i>	Civic virtue	3	0.905
<b>Mediator variable: cyber loafing</b>		<b>11</b>	<b>0.968</b>
<i>Dimension one</i>	Personal files downloading	2	0.672
<i>Dimension two</i>	Personal e-commerce	2	0.891
<i>Dimension three</i>	Personal communication	3	0.778
<i>Dimension four</i>	Personal information search	4	0.858

**Source:** Prepared by the researcher based on the results of the statistical analysis

The previous table shows that the Alpha Cronbach's coefficient is greater than 60% for all the variables and for all the dimension of the study, and therefore can be depended on to measure the study's variables of the questionnaire. **This confirms that** the questionnaire measures what it was built for, and that all items of the study are clear to the respondents and there is no ambiguity and if the researcher applies the questionnaire a second time to the same sample will give almost the same results.

**Goodness-of-fit (GOF) indices:**

GOF illustrates how well the specified model reproduces the observed covariance matrix among the indicator items. The following table(7) shows the most used GOF indices:

**Table (7) GOF indices**

Index	Description	Acceptable Value
Normed Chi-square (CMIN/DF)	a simple ratio of $\chi^2$ to the degrees of freedom for a model.	Less than (5)
Goodness-of-Fit Index (GFI)	It calculates the proportion of variance that is accounted for by the estimated population covariance	More than 0.90
Comparative Fit Index (CFI)	It compares the covariance matrix predicted by your model to the observed covariance matrix of the null model	More than 0.90

Index	Description	Acceptable Value
Root Mean Square Error of Approximation (RMSEA)	It is a “badness of fit” represents how the fitted model approximates per degree of freedom	Less than 0.08
Root Mean Square Residual (RMR)	It is the square root of the average squared amount by which the sample variances and covariances vary from their estimates	zero indicates a perfect fit and the smaller the RMR is, the better.

Source: Prepared based on Hair et al., (2014)

**Table (8) GOF indices for the workplace ostracism**

CMIN/DF	P-value	RMR	GFI	CFI	RMSEA
2.757	0.000	0.036	0.902	0.959	0.078

Source: Prepared based on statistical analysis results

The previous table (8) illustrates that GOF indices indicate an acceptable model fit for workplace ostracism measure and its three dimensions.

**Table (9) GOF indices for cyber loafing**

CMIN/DF	P-value	RMR	GFI	CFI	RMSEA
2.641	0.00	0.042	0.946	0.97	0.075

Source: Prepared based on statistical analysis results

The previous table (9) shows that GOF indices indicate an acceptable model fit for the cyber loafing measure and its four dimensions.

**Table (10) GOF indices for the organizational citizenship behavior**

CMIN/DF	P-value	RMR	GFI	CFI	RMSEA
2.831	0.000	0.04	0.857	0.939	0.08

Source: Prepared based on statistical analysis results

The previous table (10) shows that GOF indices indicate an acceptable model fit for the organizational citizenship behavior measure and its five dimensions.

**Table (11) GOF indices for the proposed structural model**

CMIN/DF	P-value	RMR	GFI	CFI	RMSEA
2.365	0.000	0.028	0.935	0.977	0.069

Source: Prepared based on statistical analysis results

The previous table (11) shows that GOF indices indicate an acceptable model fit for the proposed structural model.

### 9.3 Tests of hypotheses

Structural equation modeling through path analysis is used for analyzing the causal relationships between the study variables (independent, mediator, and dependent). The path coefficients are to be significant if the p-value is less than the level of significance 0.05 and this indicates that there is a significant relationship.

The value of calculated T-test can be used to assess the significance of path coefficients by comparing it with the tabulated T value at the same level of significance, which is equal to 1.96. If the absolute value of the calculated T is greater than the tabulated T, this means that the relationship is significant and vice versa. (Hair et. al., 2014):

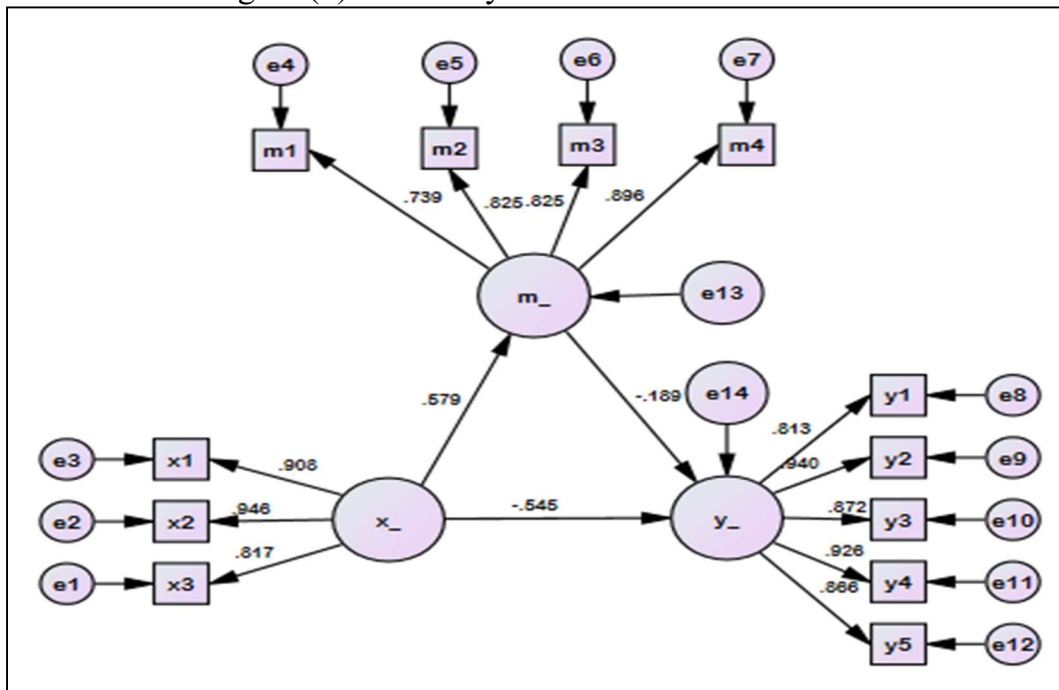
The coefficient of determination ( $R^2$ ) is a measure of the model's predictive power. It indicates the amount of variance (change) in the dependent variable explained by all the independent variables linked to it.

Effect Size  $f^2$  allows evaluating an independent variable's contribution to the  $R^2$  value by calculating the change in the  $R^2$  value when a specified variable is excluded from the model. If the value of  $f^2$  is from 0.02 to less than 0.15, this means a small effect. If the value is more than or equal to 0.15 and less than 0.35, this means a medium effect, while if the value is more than or equal to 0.35, this means a large effect. It can be calculated by the following formula (Hair et. al., 2017):

$$f^2 = \frac{R_{\text{included}}^2 - R_{\text{excluded}}^2}{1 - R_{\text{included}}^2}$$

Figure (6) and Table(12) illustrate the results obtained from the path analysis, which shows the effect of workplace ostracism on organizational citizenship behavior with the roles of cyber loafing as a mediator. The hypotheses from the first to the fourth can be tested through this model.

Figure (6) Path analysis of the structural model



Source: Prepared based on statistical analysis results

Table (12) Path analysis results of the structural model

Hypotheses	Path	Standardized Coefficient	Standard error	T-statistic	P values	R <sup>2</sup>	
H <sub>1</sub>	Direct	x -> y	-0.545	0.072	-7.569	0.000	0.428
H <sub>2</sub>		x -> m	0.579	0.052	11.13	0.000	0.335
H <sub>3</sub>		m -> y	-0.189	0.076	-2.487	0.013	0.255
H <sub>4</sub>	Indirect	x -> m -> y	-0.109	0.046	-2.37	0.012	
	Total	x -> y	-0.654	0.051	-12.82	0.000	0.452

Source: Prepared based on statistical analysis results

**a) Results of the first hypothesis test**

The first hypothesis states: “There is a significant negative effect of workplace ostracism on organizational citizenship behavior”.

Figure (6) Table (12) illustrate the following:

- The direct path from workplace ostracism to organizational citizenship behavior is significant as ( $|T = -7.569| > 1.96$ ) and (P-value = 0.000), at a significance level of 5%.

- The value of the path coefficient was (-0.545). The path coefficient sign is negative, which means that workplace ostracism has a significant negative effect on organizational citizenship behavior.

- The coefficient of determination value was (0.428), which indicates that workplace ostracism explains 42.8% of the changes that occur in organizational citizenship behavior and the rest are due to random changes.

- These results support accepting the first hypothesis.

**b) Results of the second hypothesis test**

The second hypothesis states: “*There is a significant positive effect of workplace ostracism on cyber loafing*”.

Figure (6) Table (12) illustrate the following:

- The direct path from workplace ostracism to cyber loafing is significant ( $|T = 11.13| > 1.96$ ) and (P-value = 0.000), at a significance level of 5%.

- The value of the path coefficient was (0.579). The path coefficient sign is positive, which means that workplace ostracism has a significant positive effect on cyber loafing.

- The coefficient of determination value was (0.335), which indicates that workplace ostracism explains 33.5% of the changes that occur in cyber loafing and the rest are due to random changes.

- These results support accepting the second hypothesis.

**c) Results of the third hypothesis test**

The third hypothesis states: “*There is a significant negative effect of cyber loafing on organizational citizenship behavior*”.

Figure (6) and Table (12) illustrate the following:

- The direct path from cyber loafing to organizational citizenship behavior is significant as ( $T = -2.487 > 1.96$ ) and (P-value = 0.013), at a significance level of 5%.

- The value of the path coefficient was (-0.189). The path coefficient sign is negative, which means that cyber loafing has a significant negative effect on the organizational citizenship behavior.

- The coefficient of determination value was (0.255), which indicates that cyber loafing explains 25.5% of the changes that occur in organizational citizenship behavior and the rest are due to random changes.

- These results support accepting the third hypothesis.

**d) Results of the fourth hypothesis test**

The fourth hypothesis states: “*There is an effect of cyber loafing in the relationship between workplace ostracism and organizational citizenship behavior*”.

Figure (6) and Table (12) illustrate the following:

- The indirect path from workplace ostracism to organizational citizenship behavior with the roles of cyber loafing as a mediator is significant as ( $|T = -2.37| > 1.96$ ) and (P-value = 0.012), at a significance level of 5%.

- The value of the indirect path coefficient was (-0.109) and the direct path coefficient was (-0.545) so the total path coefficient (-0.545 - 0.109 = -0.654). The path coefficients' signs were negative, which means that workplace ostracism has a significant negative effect on the organizational citizenship behavior with the roles of cyber loafing as a mediator.

- The coefficient of determination value was (0.452), which indicates that the independent variable (workplace ostracism) explains 45.2% of the changes that occur in the dependent variable (organizational citizenship behavior) with the roles of the mediator variable (cyber loafing) and the rest are due to random changes.

- The effect size  $f^2$  of the cyber loafing can be calculated as follows:

- $$f^2 = \frac{R^2_{\text{included}} - R^2_{\text{excluded}}}{1 - R^2_{\text{included}}} = \frac{0.452 - 0.428}{1 - 0.452} \approx 0.044$$

- which means that its contribution to the R2 value indicates a small effect.

- Both the indirect ( $p_1 \cdot p_2$ ) and direct ( $p_3$ ) paths are significant and the sign of ( $p_1 \cdot p_2 \cdot p_3$ ) is positive, so it can be concluded that there is a complementary partial mediation according to Hair et al., (2017).

- Note that:  $p_1$  is the path between the independent and the mediator variables,  $p_2$  is the path between the mediator and the dependent variables, and  $p_3$  is the path between the independent and the dependent variables.

- These results indicate that cyber loafing mediates the relationship between workplace ostracism and organizational citizenship behavior and this support accepting the fourth hypothesis).

**e) Results of the fifth hypothesis test**

The fifth hypothesis states: **“There are significant differences between the respondents' perception of workplace ostracism, cyber loafing, and organizational citizenship behavior according to demographic and organizational variables”**.

**Table (13) Differences according to gender categories**

Variable	Categories	N	Mean	Sig.
Workplace ostracism	Male	126	2.00	0.027
	Female	163	2.20	
cyber loafing	Male	126	2.49	0.699
	Female	163	2.53	
organizational citizenship behavior	Male	126	3.99	0.267
	Female	163	3.89	

Source: Prepared based on statistical analysis results

The previous table shows that:

- The significant level of T-test is less than 0.05 for (**workplace ostracism**). Hence, there are significant differences between both males' and females' perceptions of workplace ostracism and females perceive ostracism more than men .

- The significant level of T-test is greater than 0.05 for (**cyber loafing and organizational citizenship behavior**). Hence, there are no significant differences between both males' and females' perceptions toward these variables.

1. According to organizational citizenship behaviors:

There is no significant difference between both males' and females' perceptions of organizational citizenship

#### 5.5.5.2 Age

The differences between respondents' perceptions according to age were tested by one-way ANOVA test

**Table (14) Differences according to age categories**

Variable	Categories	N	Mean	Sig.
Workplace ostracism	Under 30 years	91	2.21	0.279
	From 30-45 years	144	2.08	
	Over 45 years	54	2.02	
cyber loafing	Under 30 years	91	2.61	0.220
	From 30-45 years	144	2.51	
	Over 45 years	54	2.36	
organizational citizenship behavior	Under 30 years	91	3.91	0.873
	From 30-45 years	144	3.95	
	Over 45 years	54	3.97	

Source: Prepared based on statistical analysis results

The previous table illustrates that the significant level of the one-way ANOVA test is greater than 0.05 for all variables. Hence, there are no significant differences between age groups' perceptions toward the study variables.

#### 5.5.5.3 Years of experience

The differences between respondents' perceptions according to years of experience were tested by one-way ANOVA test.



**Table (15) Differences according to years of experience categories**

Variable	Categories	N	Mean	Sig.
Workplace ostracism	Under 10 years	131	2.23	0.053
	From 10-15 years	67	2.02	
	Over 15 years	91	2.01	
cyber loafing	Under 10 years	131	2.60	0.257
	From 10-15 years	67	2.43	
	Over 15 years	91	2.44	
organizational citizenship behavior	Under 10 years	131	3.94	0.857
	From 10-15 years	67	3.97	
	Over 15 years	91	3.91	

Source: Prepared based on statistical analysis results

The previous table illustrates that the significant level of the one-way ANOVA test is greater than 0.05 for all variables. Hence, there are no significant differences between years of experience groups' perceptions toward the study variables.

#### 5.5.5.4 Current job

The differences between respondents' perceptions according to current job were tested by one-way ANOVA test.

**Table (16) Differences according to current job categories**

Variable	Categories	N	Mean	Sig.
Workplace ostracism	Professor	23	1.97	0.407
	Assistant lecturer	33	2.06	
	Lecturer	83	2.03	
	Assistant professor	85	2.23	
	Demonstrator	65	2.14	
cyber loafing	Professor	23	2.52	0.837
	Assistant lecturer	33	2.46	
	Lecturer	83	2.44	
	Assistant professor	85	2.52	
	Demonstrator	65	2.61	

Variable	Categories	N	Mean	Sig.
organizational citizenship behavior	Professor	23	3.90	0.875
	Assistant lecturer	33	3.87	
	Lecturer	83	4.01	
	Assistant professor	85	3.91	
	Demonstrator	65	3.94	

Source: Prepared based on statistical analysis results

The previous table illustrates that the significant level of the one-way ANOVA test is greater than 0.05 for all variables. Hence, there are no significant differences between current job groups' perceptions toward the study variables. **These results support rejecting the fifth hypothesis partially.**

#### 10- Research Recommendations

In light of the research results, the following recommendations can be made:

- a) Enhancing the quality of work environment to reduce workplace ostracism.
- b) Conducting periodical meetings with workers in order to increase connection between workers.
- c) Monitoring workers behavior in order to try to reduce ostracism.
- d) Persons who are ostracized should try to reduce the ostracism.
- e) Reducing the actions of cyber loafing.
- f) Encouraging the positive behaviors of workers to increase organizational citizenship behaviors.
- g) Encourage the positive behaviors of workers toward the organization.

#### 11. Directions for Future Research

Some of the research directions for the future research are illustrated in the following points:

- 1) The research variables can be applied in other sectors such as banking sector.
- 2) Future researches could be conducted to test the effect of workplace ostracism on other variables such as (organizational loyalty, organizational identification)
- 3) There is still significant room for further work that can provide a richer understanding of the organizational and individual factors that may cause or affect workplace ostracism and cyber loafing. The study model can be applied to all banking sector in Egypt.
- 4) Cyber loafing could be tested as an independent variable to show its effect on variables other than organizational citizenship behaviors. Testing the same variables in other sectors such the medical sectors and hospitals.

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