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**| RESEARCH ARTICLE**

**Correlation Analysis between Employee Productivity, Absenteeism and Illnesses in BPO Industry.**

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**| ABSTRACT**

With the expansion of Business Process Outsourcing (BPO) in the Philippines, this study was initiated to understand the effect of illnesses on absenteeism and productivity among employees. The secondary data, from January to December 2022, from the onsite clinic of AMAZON was used in this study. The top three illnesses, aggregated illnesses, namely Upper Respiratory Tract Infection, Nervous System Illnesses and ENT Illness data collected, were statistically tested. As a result, it was noted that aggregated illnesses increased the effect on employee productivity based on absenteeism. Also, among the top three illnesses, Nervous System Illnesses increased the effect on absenteeism of employees in the company.

**| KEYWORDS**

Absenteeism, Business Process Outsourcing (BPO), Customer Service Agent (CSA), illnesses, productivity,

**| ARTICLE INFORMATION**

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**1. Introduction**

Business Process Outsourcing attracts a large number of working-age Filipinos because of the variety of occupations it provides, particularly to those whose families rely on them for financial assistance. (Casal, 2018)

Globally Amazon strives to be Earth's most customer-centric company, Earth's best employer and Earth's safest place to work, expanding its operation in Manila. Illness is one of the most commonly reported reasons for an employee being absent from work and thus can impact the productivity of an organization due to fewer working days of employees. Employees are referred to as the best asset of a company as they hold all the skills, experience, knowledge, attitudes and motivations to support the business's success. Just like any other company, BPO management monitored employees' productivity as part of the key performance indicator (KPI). Illnesses can result in employee absenteeism, and this study will analyze if this affects employee productivity in the BPO industry.

**1.1 Background of the Study**

The BPO industry in the Philippines supports the economy annually. The number of Filipinos employed by more than 1000 BPO companies in 2019 was estimated to be 1.3 million, and it is growing by 8–10% annually. Estimates place the country's share of the global BPO market at 10% to 15%. (Talmage-Rostron, 2023)

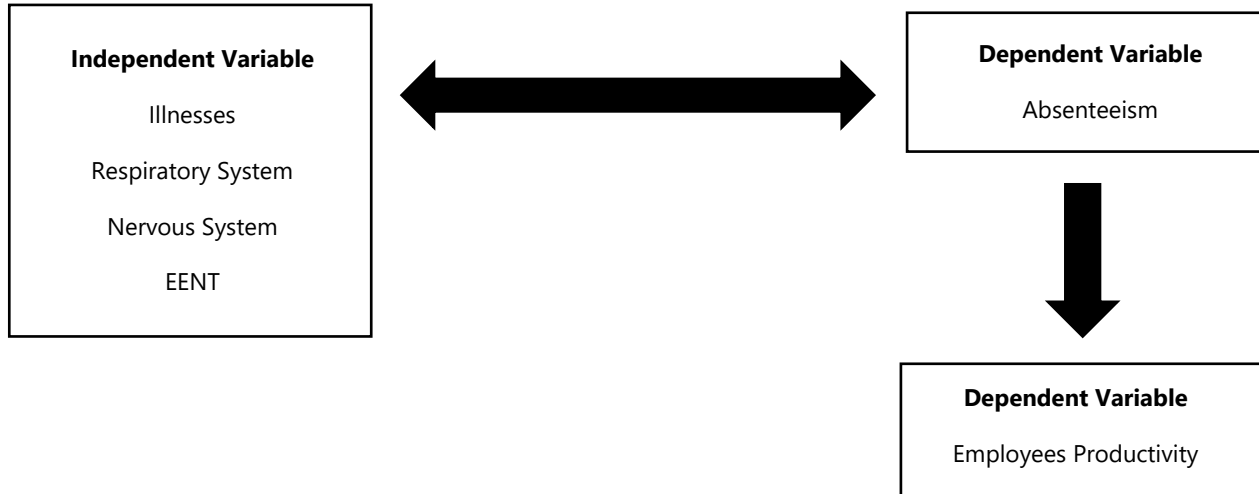
Amazon expanded its business in the Asia Pacific Region, reaching the Philippines in 2018 in Pasay City, Manila. At present, there are five (5) business units in Manila where the Customer Service (CS) business unit is the biggest in population. Amazon CS is located in 3ECOM MOA Complex, Pasay City. MNL12 has its own onsite clinic, which monitors employees' medical concerns but is not limited to onsite consultation, fit to work and medical referrals to specialists.

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Due to the frequently irregular schedules, long hours, and demands for productivity in the BPO sector, many employees are at risk for various health issues. As a result, BPO employees' general health has declined. (Casal, 2018)

**1.2 Conceptual Framework**

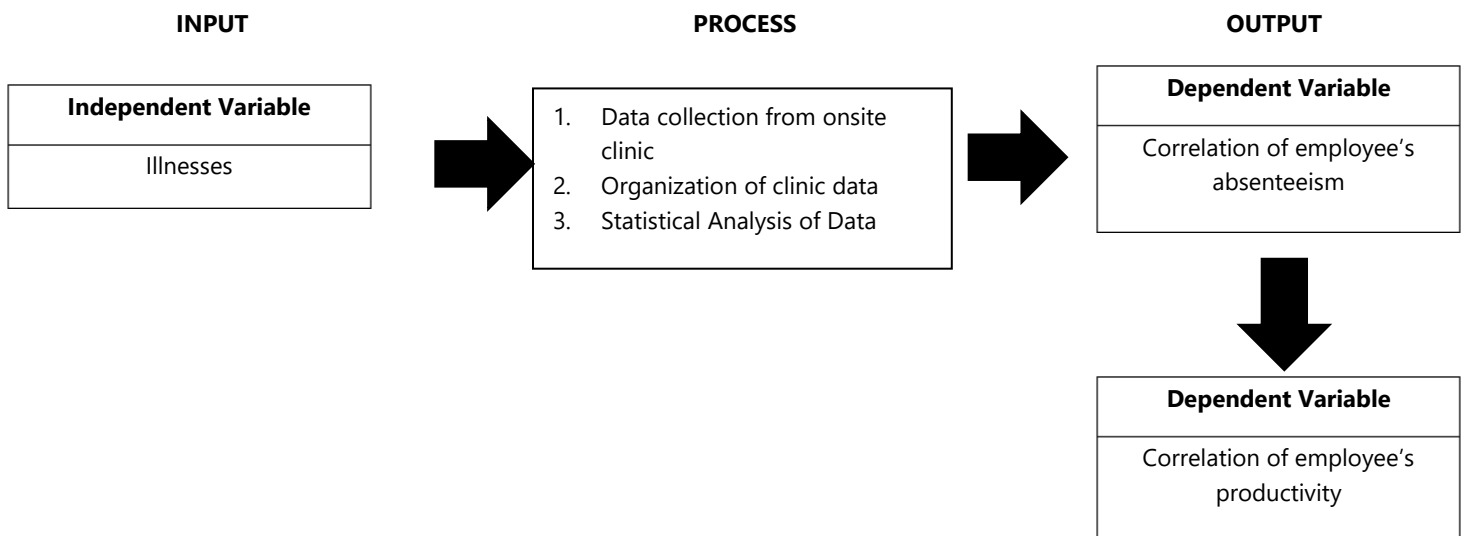
Figure 1  
Conceptual Framework on BPO Employee's Illnesses, Absenteeism and Productivity



The conceptual framework of the study is shown in Figure 1. The top 3 recorded illnesses/injuries in the Amazon site clinic will be gathered and will be correlated to employee absenteeism productivity. The researchers are showing the use of dependent and independent variables as part of the conceptual framework. One of the dependent variables is absenteeism; this is defined as employees not being able to report to work or duty at the scheduled time of work. Personal factors are identified as a common cause of absenteeism which includes the illness of an employee; this will be the focus independent variable in this research. Another dependent variable to associate with is employee productivity; how illnesses and absenteeism will affect productivity will be evaluated. In developing our conceptual framework, it will help us create a hypothesis and further study the relationship between illnesses, absenteeism and productivity at Amazon.

**1.3 Operational Framework**

Figure 2  
Operational Framework on BPO Employees' Productivity, Absenteeism and Illnesses



In Figure 2, the Operational Framework of the research shows that the input will be the independent variable (illnesses). The research process will include data collection, tabulating collected data, statistical data analysis and interpretation. The output will be the correlation of absenteeism and productivity to illnesses.

#### **1.4 Objective of the Study**

In the past literature, there are numerous causes of employee absenteeism; illnesses are just one of them. This study will determine if there is a significant relationship between AMAZON employees' illnesses and absenteeism, thus impacting productivity.

1. To determine a significant relationship between employee productivity and absenteeism.
2. To determine a significant relationship between illness and absenteeism/productivity.
3. To identify programs and procedures to decrease absenteeism due to illnesses.

#### **1.5 Significance of the Study**

This research study will determine how illnesses can affect the performance of Amazon Operation Services Philippines Inc. (AOSPI) employees and will be significant to the following:

**BPO Companies.** This study will help BPO companies to define the effect of employee illnesses on the company objective and targets. It can also help evaluate if there are health risk factors among BPO employees. This will also help create substantial company programs related to employee health and well-being, which will later impact the business.

**Amazon Management.** This study will help Amazon as a company to support two of its fifteen leadership principles of being Earth's best employer and Earth's safest place to work. This will help the company create tailored, fitted health programs for the employees to improve employee's health and wellness.

**Amazon Employees.** This study will help employees to understand how their absenteeism due to illnesses can affect the total company KPI. This will enable them to support the company's health and wellness objectives, programs, and procedures.

**Onsite Clinic (InternationalSOS).** This study will help medical doctors and nurses in the promotion and reinforcement of a healthy lifestyle in a day as a customer agent in the BPO industry.

**Researcher and Future Research.** This research will help the authors expand their understanding of the BPO set-up in the Philippines and learn the current condition of employees in this growing industry, especially on health issues. This study will be used as background reading for subsequent research on illnesses, absenteeism, and productivity in the BPO industry.

#### **Scope and Delimitations of the Study**

This study focuses on the correlation between employee productivity, absenteeism, and illnesses at Amazon Operation Services Philippines Inc. (AOSPI) Customer Service Agents (CSAs). Due to the limited number of years of operation of the onsite clinic, it will focus on the last 12 months, January 2022 to December 2022, onsite clinic records. This study would like to discuss the illnesses that cause AOSPI CSA employees' absenteeism and their impact on employees' productivity. The researchers will use the data collected by the company clinic.

## **2. Literature Review**

### **2.1 BPO Industry in the Philippines**

The first contact center in the Philippines was established by Frank Holz under the umbrella of the Accenture group in 1992. Three years later, in 1995, Congress established the Special Economic Zone Act, which among other things, intends to turn some areas into highly developed ecozones and to encourage the flow of both foreign and domestic investors into these zones. The BPO sector only made up 0.075% of the nation's GDP in 2000, but it has subsequently risen significantly. The sector boosted the Philippine economy by at least 7 percent during the pandemic. The BPO sector has 1.44 million full-time employees and generated \$29.1 billion in revenue during the first half of 2022. This is due to the pent-up demand from international clients, the increased confidence that clients of contact centers and business process services have in work-from-home arrangements, and the growth of e-commerce, financial technology, health care, and technology. Despite being negatively impacted by Covid-19 as well, it quickly adjusted and made infrastructure investments that allowed it to continue operating (Pacete, 2022)

### **2.2 Illnesses in BPO Industry**

Among BPO workers, serious health issues such as noncommunicable illnesses, HIV/AIDS, and mental health issues, particularly depression, have been noted. Nearly 78.3% of call center workers at the graveyard experienced depression in some capacity, with

19.8% experiencing moderate anxiety. Inadequate sleep was the most significant risk factor for anxiety, even after controlling the previous episodes of anxiety in relation to gender, age, civil status, earnings, and overall stress. (Santos-Manangan, 2021)

People who work graveyard and shift rotation frequently have trouble sleeping, and chronic sleep deprivation is known to have detrimental effects on one's health. Inadequate sleep and nighttime wakefulness can damage the structure of the human DNA and lead to many diseases, including cancer, diabetes, cardiovascular, neurological, and pulmonary diseases. This is crucial since many workers are exhibiting signs of various ailments, perhaps because of their hectic routine and erratic sleeping habits. (Torres, 2019)

BPO personnel face a number of health concerns due to the demanding nature of their work. Their work-life balance is disrupted by graveyard shifts. There is an impact of time zone differences on their psychological health. It forces them to adopt bad habits that, over time, may seriously harm their health. Headaches, weariness, eye strain, back discomfort, and voice issues are prevalent for call center employees. However, customer service employees are not conscious of how much could merely be a sign of more serious medical conditions. (Sodexo, 2019)

### **2.3 Absenteeism in BPO Industry**

Employee absenteeism is an expensive yet underappreciated corporate problem. Employee absenteeism has a wide range of implications, both direct and indirect. The time lost at work due worker's absence from the workplace if he is expected to be present is called absenteeism. Absence is defined as a worker's failure to report for work when he is due to do so. Planned hours are those hours during which both the company and the employee know that work will be performed. Because absenteeism is a significant indicator of employee morale, absenteeism above 5% must be considered to be quite significant. (Gupta, 2020)

### **2.4 Absenteeism Effect on Productivity in BPO Industry**

Businesses have difficulty dealing with workers who informed sick or just fail to appear at the office on instances they weren't expecting to be in the office. Absenteeism has far-reaching consequences, impacting workers and businesses. Leaders are forced to bring in fill-in staff; others are asked to assume new responsibilities, and overall output drops as a result. Whether a worker simply doesn't show up for work on the appointed time or fails to notify their superiors to let them know they won't be there due to illness, the superior still has to deal with the effects of the absence. A worker's poor attendance can have implications if the problem isn't addressed.

Absenteeism affects many businesses in a negative way. Salaried workers who frequently miss work nonetheless receive compensation despite not performing their part. They are paid, but no labor is done in return; hence the business loses money. Additionally, it may be more expensive to hire replacement workers than to pay the original employee's wages. A company may need to pay current employees more wages for overtime worked or spend more time and money training new staff. (Natter, 2019)

### **2.4 Synthesis**

The Philippines' BPO industry has grown significantly. However, the sector faces health issues such as depression, anxiety, and sleep deprivation, which can lead to various diseases. The demanding nature of their work and time zone differences also impact their psychological health, forcing them to adopt unhealthy habits. Addressing these issues is crucial for the BPO sector's continued growth and success. Call center employees often experience headaches, weariness, eye strain, back discomfort, and voice issues.

Absenteeism is an expensive yet underappreciated corporate problem, causing higher costs and affecting employee morale. It affects productivity in the BPO industry as businesses struggle to deal with workers who inform sick or fail to appear. Absenteeism negatively impacts workers and businesses, leading to increased staffing and reduced output. It also affects the bottom line, as salaried workers receive compensation but not labor, resulting in increased costs and increased training costs. Addressing this issue is crucial for maintaining a healthy workforce.

With the rate of absenteeism among BPO employees, the company's productivity can be affected significantly. The employees can be a big contributing factor to the success of the company they work for, the same way how the CSAs can help in the progress of the BPO industry in the Philippines.

## **3. Methodology**

### **3.1 Research Design**

The researchers looked into how illnesses affect the productivity and absenteeism of AOSPI employees by utilizing secondary data. The dependent variables were employee productivity and absenteeism in this research. The independent variables were illnesses based on clinic records, including the influencing demographic profile of employees. The researchers considered the gender of employees. The study's findings and the data acquired from our trustworthy sources together address the problem statement.

### **3.2 Sample and Sampling Technique**

The researchers used a purposive sampling technique based on the characteristics of the population. Purposive sampling is a method of sampling whereby the researcher uses his or her own judgment to decide which individuals in the target group to take part in this research. It is also referred to as judgmental, selective, or subjective sampling. A method of non-probability sampling called "purposive sampling" chooses items based on attributes you might want in your sample. In this instance, the items are chosen deliberately by the researchers. In addition, it happens if the researcher's judgment is used to choose the sample's components.

### **3.3 Research Instrument**

To gather information about the impact of illnesses on productivity and absenteeism, the researchers used the AOPSI clinic data of the top 3 illnesses and Fit to Work (FTW) records of employees. The researchers used it as a method of conducting a study that seeks systematic collection of data in order to provide a description of a phenomenon, situation, or population of those who responded. This research method can be used to study one or more variables.

### **3.4 Ethical Consideration**

In accordance with the Data Privacy Act of 2012, the researchers ensured that the clinic numbers of illnesses and FTW, as well as gender of employees provided, remained anonymous. And it was properly used for academic purposes only. All information was used in the research to better understand how employee illnesses currently affect absenteeism and productivity. The information acquired by the researchers does not support any unethical or unlawful activities.

### **3.5 Data Gathering Procedure**

The researcher used the secondary method for data collection. These data collection methods make use of previously obtained and publicized data. The data helped the researchers in gaining insights and drawing conclusions. In this research, the data collected, compiled and summarized by the onsite clinic for the year 2022 was used for the purpose. Lastly, SPSS was used to analyze the data gathered.

### **3.6 Statistical Treatment of Data**

The researchers used the following statistical tools: Pearson's Correlation and Regression Analysis to establish the connection and predictive outcome between a dependent variable and the independent variable. The information gathered was analyzed using The Statistical Package of the Social Sciences (SPSS), a statistical software tool in data analysis, and it was validated by a statistician. The data gathered by the onsite clinic for the year 2022 went through a series of correlational analyses and regression analyses to determine the relationship between employee productivity and absenteeism (dependent variable) and illnesses (independent variable). The analytical procedures involved in the study were measured with the following:

Pearson R Correlation. The correlation coefficient,  $r$ , is a summary measure that describes the extent of the statistical relationship between two interval or ratio level variables. The correlation coefficient is scaled so that it is always between -1 and 1. When  $r$  is close to 0, this means that there is little relationship between the variables, and if the value of  $r$  is far from 0 in either a positive or negative direction, the greater the relationship between the two variables.

## **4. Results and Discussion**

This chapter presents the result, findings, analysis and interpretation of the data collected (secondary data) in the onsite clinic of AMAZON located in Pasay City, Philippines.

With AMAZON's leadership principle of striving to be the best employer on Earth, Health and Wellness is on top priority in all sites across the globe. Thus, the Philippine sites continuously find ways to improve health and wellness programs offered to employees. The results of this research will enable us to prioritize which illnesses highly impact the workers' productivity and decrease absenteeism by creating programs and services readily available for employees.

### **4.1 Pearson Correlation Results**

*Table 1 : Correlation analysis between Absenteeism and Upper Respiratory Tract Infection (URTI, including cough and flu)*

<b>Predictors</b>	<b>Pearson Correlation</b>	<b>r<sup>2</sup></b>	<b>p-value</b>	<b>Interpretation</b>
Absenteeism				
URTI (Including Cough and Flu)	0.115	0.013	0.721	Not Significant

*Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)*

Table 1 shows the correlation coefficient between the dependent variable absenteeism and one of the independent variables, Upper Respiratory Tract Infection (URTI, including cough and flu), recorded in the clinic of AMAZON in YR 2022. With a **Pearson correlation value of 0.115 or equivalent to 11.5%**, the coefficient shows a positive weak significant relationship. Based on the data, we are able to determine that absenteeism contributes to the spread of upper respiratory tract infections (URTIs) like the common cold and the flu by a factor of **11.5%**.

The **r<sup>2</sup> linear value of 0.013** is equivalent to **1.3%** of changing variation represented by Absenteeism towards Upper Respiratory Tract Infection (URTI, including cough and flu).

Based on the result of the statistical test, we can therefore conclude that Absenteeism and Upper Respiratory Tract Infection (URTI, including cough and flu) do not have a significant relationship with a **p-value of 0.721 or 27.9%** confidence level.

As a result of working night shifts and being exposed to cold environments, BPO employees are more vulnerable to disease. Such illnesses typically begin as simple coughs and colds and progress to severe respiratory conditions such as asthma. A lot of signs and symptoms, sadly, are "unnoticed ones, yet they can have tragic consequences in the future. (Gallimore, 2018)

Table 2: Correlation analysis between Absenteeism and Other ENT Illnesses or Injury (Including Sinusitis and Polyps)

Predictors	Pearson Correlation	r <sup>2</sup>	p-value	Interpretation
Absenteeism				
Other ENT Illness or Injury(Including Sinusitis and Polyps)	0.057	0.003	0.860	Not Significant

Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)

Table 2 shows the correlation coefficient between the dependent variable, Absenteeism and one of the independent variables, Other ENT Illness or Injury (including sinusitis and polyps), recorded in the clinic of AMAZON in YR 2022. With a **Pearson correlation value of 0.057 or equivalent 5.7%**, the coefficient shows a positive weak significant relationship. The results show that absenteeism is predicted to be associated with other ENT illnesses or injuries (including sinusitis and polyps) in **5.7%** of the top 3 cases.

The **r<sup>2</sup> linear value of 0.003** is equivalent to **0.3%** of changing variation represented by Absenteeism towards Other ENT Illnesses or Injuries (including sinusitis or polyps).

Based on the result of the statistical test, we can therefore conclude that Absenteeism and Other ENT Illnesses or Injuries (including sinusitis and polyps) do not have a significant relationship with a **p-value of 0.860 or 14.0%** confidence level.

Also, employees in the customer service industry depend on their own voices as their biggest asset in order to carry out their job responsibilities. In addition, they make use of devices such as headsets and monitors in order to converse with those calling. It was demonstrated that customer service employees must utilise their voices extensively in order to improve their productivity and performance, which, according to multiple studies, puts these individuals at risk for a variety of wellness issues. (Hatman, 2022)

Table 3: Correlation analysis between Absenteeism and Other Nervous System Illness or Injury (including migraine)

Predictors	Pearson Correlation	r <sup>2</sup>	p-value	Interpretation
Absenteeism				
Other Nervous System Illness or Injury (Including migraine)	0.805	0.648	0.002	Significant

Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)

Table 3 shows the correlation coefficient between the dependent variable, Absenteeism and one of the independent variables, Other Nervous system illness or Injury (including migraine), recorded in the clinic of AMAZON in YR 2022. With a **Pearson correlation value of 0.805 or equivalent to 80.5%**, the coefficient shows a positive, strong significant relationship. The results show that absenteeism is predicted to be associated with Other Nervous system illnesses or Injuries (including migraine) in **80.5%** of the top 3 cases.

The  **$r^2$  linear value of 0.648** is equivalent to **64.8%** of changing variation represented by Absenteeism towards Other Nervous System Illnesses or Injuries (including migraine).

Based on the result of the statistical test, we can therefore conclude that Absenteeism and Other Nervous System Illness or Injury (including migraine) have a significant relationship with a  **$p$ -value of 0.002 or 99.80%** confidence level.

One prevalent complaint in BPOs is headache, which is commonly labelled as occupational sickness. Employees of call centers spend long hours engaged in endless talks, often while seated in cramped quarters in enormous offices with many coworkers, which adds to the stress and loudness of the workplace. (Alimehmeti, 2018) Many individuals mistakenly assume that migraine attacks are simply unpleasant headaches, but actually, it is a chronic disorder with symptoms that can be much more incapacitating than a typical headache. (Dhaem, 2021)

*Table 4: Correlation analysis between Absenteeism and Top 3 illness*

Predictors	Pearson Correlation	$r^2$	p-value	Interpretation
Absenteeism				
Aggregated Illnesses	0.872	0.760	0.000	Significant

*Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)*

Table 4 shows the correlation coefficient between the dependent variable, Absenteeism and the independent variable, the Top 3 Illnesses (aggregated illnesses) recorded in the AMAZON clinic in YR 2022. It can be seen in the coefficient indicating that there is a positive, strong significant relationship with a **Pearson correlation value of 0.872** or equivalent to **87.2%**. The result suggests we can predict that there is **87.2%** Absenteeism is associated towards the top 3 illnesses recorded in the AMAZON clinic in YR 2022.

The  **$r^2$  linear value of 0.760** is equivalent to **76%** of changing variation represented by Absenteeism towards the Aggregated Illnesses.

As a result, we can draw the conclusion that Absenteeism and Aggregated Illnesses have a significant correlation, with a  **$p$ -value of 0.000 or 100%** confidence level, based on the results of the statistical test.

Customer service employees' illnesses like headaches, panic attacks, stomach problems, and back pain all become more common and serious, as does the period it takes for them to recuperate. Stress can have negative effects on the immune, nervous, respiratory, cardiovascular, endocrine, and gastrointestinal systems of an individual. (Training, 2022)

**4.2 Linear Regression Results**

*Table 5: Predictive analysis between Absenteeism and Upper Respiratory Tract Infection (URTI including Cough and Flu)*

Predictors	R	$r^2$	Sig. Value	Interpretation
Absenteeism				
URTI (Including Cough and Flu)	0.115	0.013	0.721	Not Significant

*Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)*

A simple linear regression was calculated to predict the AOSPI CSA effect on absenteeism by Upper Respiratory Tract Infection (URTI, including cough and flu) with an  **$r$  value of 11.5%**, which indicates the percentage accounted for URTI, including cough and flu.

Based on the result, it indicates that there is no significant relationship between the two variables with a **significance value of 0.721 or 27.9%** predictive possibility that URTI, including cough and flu, increased the effect on absenteeism of AOSPI CSAs. The  **$r^2$  linear value of 0.013** is equivalent to a **1.3%** increase in changing the variation, which is represented by URTI, including Cough and Flu, towards Absenteeism.

A respiratory illness refers to any condition that affects a person's ability to breathe normally. Cough is a common manifestation of lung diseases among people. Dyspnea, also known as shortness of breath, is the second most important symptom of lung illness. Although discomfort in the chest is sometimes the first sign of lung illness, it is more frequently linked to pneumonia. (Bates & Hansen-Flashen, 2023)

Table 6: Predictive analysis between Absenteeism and Other Nervous system illness or injury (Including Migraine)

Predictors	R	r <sup>2</sup>	Sig. Value	Interpretation
Absenteeism				
Other Nervous System Illness or Injury (Including migraine)	0.805	0.647	0.002	Significant

Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)

A simple linear regression was calculated to predict the AOSPI CSA effect on Absenteeism by Other Nervous System Illness or Injury (Including Migraine), with an **r value of 80.5%** which indicates the percentage accounted for Other Nervous System Illness or Injury (Including Migraine).

Based on the result, it indicates that there is a significant relationship between the two variables with a **significance value of 0.002 or 99.8%** predictive possibility that Other Nervous system Illnesses or Injuries (Including Migraine) increased the effect on absenteeism of AOSPI CSA.

The **r<sup>2</sup> linear value of 0.647** is equivalent to a **64.7%** increase in changing the variation, which is represented by Other Nervous System Illnesses or Injuries (Including Migraine) towards Absenteeism.

Another nervous system illness observed in the BPO industry is the mental health issues among employees, thus, affecting employee wellness and is commonly addressed among BPO companies nowadays. Deployment of onsite clinics as a support health system for employees is becoming common in the industry.

Table 7: Predictive analysis between Absenteeism and Other ENT Illnesses or Injury (Including Sinusitis and Polyps)

Predictors	R	r <sup>2</sup>	Sig. Value	Interpretation
Absenteeism				
Other ENT Illness or Injury (Including Sinusitis and Polyps)	0.057	0.003	0.860	Not Significant

Note: > 0.05 Accept HO (Not Significant); <0.05 Reject HO (Significant)

A simple linear regression was calculated to predict the AOSPI CSA effect on Absenteeism by Other ENT Illness or Injury (Including Sinusitis and Polyps), with an **r value of 5.7%** which indicates the percentage accounted for Other ENT Illness or injury (Including Sinusitis and Polyps).

Based on the result, it indicates that there is no significant relationship between the two variables with a **significance value of 0.860 or 14%** predictive possibility that Other ENT Illnesses or Injuries (Including Sinusitis and Polyps) increased the effect on absenteeism of AOSPI CSA.

The **r<sup>2</sup> linear value of 0.003** is equivalent to a 0.3% increase in changing variation, which is represented by Other ENT Illnesses or Injuries (Including Sinusitis and Polyps) towards Absenteeism.

Customer service activities have been linked to physical and mental health problems. The continuous wearing of a headphone for extended periods of time or being subjected to loud noise may lead to hearing loss in workers. Taking regular breaks from calls is an effective way to lessen the period on the phone and the volume of background noise. (Blog, 2023)



**4.3 Multiple Linear Regression**

*Table 8: Predictive analysis between Absenteeism and Aggregated Illnesses.*

<b>Predictors</b>	<b>R</b>	<b>Sig. Value</b>	<b>Decision on H<sub>0</sub></b>	<b>Interpretation</b>
Absenteeism	0.872	0.000	Reject	Significant
Aggregated Illnesses				

*Note: > 0.05 Accept H<sub>0</sub> (Not Significant); <0.05 Reject H<sub>0</sub> (Significant)*

Table 8 shows a multiple regression calculated to predict the effect on employee productivity based on absenteeism towards URTI (including cough and flu), Other Nervous system illnesses or injury (including migraine) and Other ENT Illnesses (injury including sinusitis and polyps) with an **r value of 0.872** or equivalent to **87.2%** which indicates the aggregated percentage accounted for URTI, Other Nervous system illness and Other ENT Illness.

Based on the result, it indicates that there is a significant relationship between absenteeism and aggregated illnesses with a **significance value of 0.000** that there is a **100%** predictive possibility that the aggregated illnesses increased the effect on employee productivity based on absenteeism.

BPO workers make up a significant portion of the labor force in our country, so it is crucial that we address the health risks that they face at work, such as lack of sleep and work-related stress that they try to balance with unhealthy lifestyles. These are all risk factors that can result in real health conditions, like respiratory tract infections, cardiovascular problems and psychological issues. (Rao, 2018)

The company workforce is the heart of any organization. Building and maintaining a culture of employee self-care is essential for workplaces that demand high performance and efficiency, such as businesses in the BPO sector. This is due to the fact that personnel working in customer assistance and content moderation are particularly vulnerable to high levels of stress. (Pilar, 2019)

**5. Summary of Findings**

Table 1 shows the correlation coefficient between absenteeism and upper respiratory tract infection (URTI, Including Cough and Flu).

- R value of 0.115 or 11.5% indicating that there is a positive weak association between independent and dependent variables.
- R<sup>2</sup> linear value of 0.013, which is equivalent to 1.3% of changing variation represented by upper respiratory tract infection (URTI, Including Cough and Flu) towards absenteeism
- A P-value of 0.721 or 27.9% confidence level indicates that there is not enough evidence that the variables have a significant association.

Table 2 shows the correlation coefficient between absenteeism and other nervous system (including migraine).

- R value of 0.805 or 80.5% indicating that there is a strong positive association between independent and dependent variables.
- R<sup>2</sup> linear value of 0.648, which is equivalent to 64.8% of changing variation represented by other nervous systems (including migraine) towards absenteeism
- P-value of 0.002 or 99.8% confidence level indicates that there is strong evidence that the variables have a significant association.

Table 3 shows the correlation coefficient between absenteeism and other ENT illness (including sinusitis and polyps)

- R value of 0.057 or 5.7% indicating that there is a positive weak association between independent and dependent variables.
- R<sup>2</sup> linear value of 0.003, which is equivalent to 0.3% of changing variation represented by other ENT illness or injury (including sinusitis and polyps) towards absenteeism
- A P-value of 0.860 or 86% confidence level indicates that there is not enough evidence that the variables have a significant association.

Table 4 shows the correlation coefficient between absenteeism and aggregated illnesses.

- R value of 0.872 or 87.2% indicates that there is a positive, strong association between independent and dependent variables.

- R2 linear value of 0.760, which is equivalent to 76% of changing variation represented by absenteeism towards aggregated illnesses.
- P-value of 0.000 or 100% confidence level indicates that there is strong evidence that the variables have a significant association.

Table 5 Predictive analysis between absenteeism and upper respiratory tract infection (URTI, including cough and flu)

- R value of 0.115 or 11.5% indicating the percentage accounted for URTI.
- R2 linear value of 0.013, which is equivalent to 1.3% of changing variation represented by upper respiratory tract infection (URTI, Including Cough and Flu) towards absenteeism
- P-value of 0.721 or 27.9% confidence level indicates the predictive possibility that URTI affects absenteeism.

Table 6 Predictive analysis between absenteeism and other nervous systems (including migraine)

- R value of 0.805 or 80.5% indicating the percentage accounted for other nervous system (including migraine).
- R2 linear value of 0.647, which is equivalent to 64.7% of changing variation represented by other nervous system illnesses (including migraine) towards absenteeism
- P-value of 0.002 or 99.8% confidence level indicates the predictive possibility that other nervous system illness (including migraine) affects absenteeism.

Table 7 Predictive analysis between absenteeism and other ENT illness (including sinusitis and polyps)

- R value of 0.057 or 5.7% indicating the percentage accounted for other nervous system illness (including sinusitis and polyps).
- R2 linear value of 0.003, which is equivalent to 0.3% of changing variation represented by other ENT illnesses (including sinusitis and polyps) towards absenteeism
- P-value of 0.86. or 14% confidence level indicates the predictive possibility that other nervous system illness (including sinusitis and polyps) affects absenteeism.

Table 8 Predictive analysis between absenteeism and aggregated illness

- R value of 0.872 or 87.2% indicating the percentage accounted for aggregated illnesses.
- R2 linear value of 0.761, which is equivalent to 76.1% of changing variation represented by aggregated illnesses towards absenteeism
- P-value of 0.000 or 100% confidence level indicates the predictive possibility that aggregated illnesses affect absenteeism.

## 6. Conclusion

BPO Industry is expanding in the Philippines, and employee productivity is a common key performance measure of an individual. Aggregated illnesses were studied in this paper to review their correlation with absenteeism and productivity among employees. The top three illnesses, namely Upper Respiratory Tract Infection (URTI, including cough and flu), ENT Illness or Injury (including sinusitis and polyps) and Nervous System Illness or Injury (including migraine), are the focus of this study.

The results show that only Nervous System Illness or Injury (including migraine), the independent variable, with a *Pearson correlation value of 0.805, or equivalent to 80.5%*, wherein the coefficient shows a positive, strong significant relationship with absenteeism. Furthermore, with a *p-value of 0.002 or 99.80%* confidence level, we can reject the null hypothesis. This is further supported by an *r value of 80.5%* which indicates the percentage accounted for Other Nervous System Illnesses or Injuries (including migraine). Based on the result, it indicates that there is a significant relationship between the two variables with a *significance value of 0.002 or 99.8%* predictive possibility that Other Nervous System Illnesses or Injuries (Including Migraine) increased the effect on absenteeism of employees.

Lastly, the results show that the effect on employee productivity based on absenteeism towards the aggregated illnesses shows an *r value of 0.872 or equivalent to 87.2%*. With this, we can reject the null hypothesis. This is further supported by the *significance value of 0.000*, concluding that there is a *100%* predictive possibility that the aggregated illnesses increased the effect on employee productivity based on absenteeism.

However, the results are based on the independent variables (aggregated illnesses) records only of the onsite clinic. Collection of intervening variables which can include employee demographic data such as age, gender (male or female), years of service, and job level, from employees who secure Fit to Work (FTW) certifications after sick leaves, can be a. These data can be used for further analysis and identification of any potential trends or patterns related to specific demographic groups and their recovery from illnesses.

Lastly, with the expansion of the BPO industry in the Philippines, a priority should be placed on the health and wellness programmes offered to employees. This is important not only for the employees' own benefit but also for the long-term success of the company.

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