

## Assessment of the Occupational Health and Safety Conditions and Short-Term Project Implementation in a Business Process Outsourcing Company in Metro Manila

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**Abstract:** Since the 1990s, there has been a tremendous demand for Business Process Outsourcing (BPO) workers in the Philippines. Related studies show that the occupational health and safety of these workers are placed at risk due to night work or shift work schedules, working cultures, repetitive tasks, among others. This study aimed to describe and assess the occupational health and safety conditions in a BPO company in Metro Manila, Philippines. It also intended to propose a project that addresses the prioritized issues and implement it on a short-term basis. Monitoring and implementation were performed as well. The protocol of the program was adapted from University of the Philippines-College of Public Health. The situational analysis was conducted using a walk-through survey. Interviews with key informants, review of relevant documents, work environment measurement (WEM) particularly for illumination and Focus Group Discussion (FGD) among the rank and file employees were also employed. Problems identified were classified into three: hazards (health and safety), health outcomes and health system. Based on a decision matrix criterion comprising of the magnitude of the problem, urgency, impact, feasibility and presence of a policy, the non-compliance to some provisions of Occupational Safety and Health (OSH) Standards on Occupational Health Services under the health system category was acknowledged as the urgent concern. A project titled: Project "CALL": Compliance with OSH Standards for ALL was then planned. Implementation and evaluation of the project were not broadly realized attributable to the company's restrictions. Despite that, the partial success rate was achieved (25%). This paper recommends to conduct a rigorous study on the BPO firms nationwide of which results of the present study, although small-scale, might have baseline implications.

**Keywords:** occupational health and safety practices; Business Process Outsourcing; contact center; call center; Occupational Safety and Health Standards

## 1. INTRODUCTION

### 1.1 Background

The country's business process outsourcing (BPO) industry began in the 1990s and since then become a significant contributor to the export revenues and economic growth worldwide. Due to the increasing

demand for BPO services from English-speaking countries, the Philippines recently overtook India in the voice operations (Lal, 2010). As most global companies focused on operational efficiency and cost reduction, it is highly expected that they will continue to tap the country's BPO providers. Furthermore, the growing thrust for more value-added services heightens the demand for non-voice services such as knowledge process outsourcing (KPO). The escalating growth of the industry, not just regarding demand for call center agents but also of broadening of certain skills, is an intense indicator of favorable economic investments in the years to come. This continued growth is predicted with a yearly increase of 25 to 30 percent in financial benefits (Bajaj 2011).

In the last decade, the booming sector which employs typically shift workers has expanded at a fast rate contributing revenues of 350 million U.S. dollars (USD) in 2001 to 7.2 billion USD in 2009 (University of the Philippines Diliman Population Institute/International Labor Organization (UPDPI/ILO, 2010). The number of institutions involved in this economic segment was placed at 891 as of June 30, 2014, and is still expanding. These establishments were mostly engaged in call center activities (49.1% or 429) and computer-related activities (47.1% or 420) (Philippine Statistics Authority (PSA), 2014). Philippine BPO industry currently employs around 400,000 employees (Bajaj, 2011) of which nearly 5 out of every six employees (84.6% or 389,752) worked as call center agents (PSA, 2014). It provides services which include medical transcription, computer animation, software development, engineering and architectural design, back office operation, human resource management services, and other professional services, with the contact center or call center sector as the largest division (Sibal, 2011).

A call center or contact center is a central customer service operation where agents, often called customer care specialists or customer service representatives (more popularly known as BPO or call center or contact center agents) manage telephone calls on behalf of a client (Department of Labor and Employment (DOLE), 2008). A highly standardized and controlled working environment is present in such industries (BPO Workers Association of the Philippines (BWAP), 2014).

Health ailments concerning the eyes, cough, voice disorders and insomnia are prevalent in call centers (Occupational Safety and Health Center (OSHC) 2003, Asis et al. 2006, Ho et al. 2008). Eye strains are associated with the physical environment such as poor lighting conditions and uninterrupted use of computers (BWAP, 2014). One factor which contributes to voice issues is the high demand on the vocal system because of the interactive nature of the task of contact center operators. The employees also often report pains in the neck, shoulder, wrist and back areas. These issues were associated with poor workstation

design such as computer monitors placed above eye level, work surfaces that were too high or non-adjustable chairs. Development of muscle and joint pains were attributed to long uninterrupted hours of work with the computer, invariable and sedentary work and low job satisfaction (OSHC, 2007). The study of Dela Cuesta (2004) has shown that the work-rest ratio among outbound call center employees is a significant predictor of the likelihood of workers' health complaints. An increase in shift length and more work days (i.e., 6:1 work: rest ratio) both increased the said probability.

Occasional exposure to higher noise levels, for instance from fax tones, holding tones, and high-pitched tones from mobile telephones have been documented in contact center employees. High sound levels in the room may also occur from their simultaneous talking. Many agents were concerned that their hearing was being damaged because of exposure to noise at work though it is known that normally, the levels of noise transmitted through the headsets or levels present in the contact centers are incapable of damaging the ear directly (BWAP, 2014).

Major psychosocial and work organization stressors identified were very little job security fearing that their call center might close suddenly; dealing with rude clients; unrealistic performance quotas assessed regarding call rates, call times, sales quotas; constant electronic performance monitoring; and random taping of phone conversations. Work schedules that interfere with family and social life; very early or late shifts created transportation problems and concerns for safety and performing simplified, highly fragmented, repetitive, fast-paced workloads were mentioned as well (OSHC, 2007). Manuel and Ramos (2008) similarly confirm the difficulty of maintaining work-life balance among BPO employees. Furthermore, night shift call center employees have been described to have lower general well-being compared to day shift employees (Geronimo et al. 2009). The effects of shift work which have been shown in several studies include acute health concerns (e.g., sleep and digestive disturbances), chronic effects (e.g., metabolic and cardiovascular pathologies and increased cancer risk) and social effects have also been testified (Kantermann et al. 2010).

The growing demand for workers in the Philippines specifically in the BPO industry indicates positive financial effects. However, it also poses several issues and concerns (Lozano-Kühne, et al., 2012). The interaction of the above mentioned psychosocial, work-related and non-work-related factors have been related to injury and health problems in the workplace.

BPO X is one of the country's leading contact center companies today. A global company which is unlike the traditional BPO whose focus is on process expertise, they strive to be more competitive and expand knowledge services (KPO). This company utilizes knowledge expertise which requires people with highly specialized skills, superior

educational qualifications, and extensive training particularly for knowledge-intensive sectors such as financing, healthcare, information technology, and engineering.

As in the time of analysis and implementation of the project, there has been limited published studies on the occupational health and safety conditions of BPO industries in Metro Manila, more so on a national scale. Therefore, the research intended to describe and assess those conditions in a contact center in the area. It must be noted that the World Health Organization (2008) recommends that before having interventions to achieve a cultural change in an organization, its current state of safety and health culture must be evaluated beforehand. In July 2016, the Philippine Statistics Authority published its 2014 INDUSTRY PROFILE: Business Process Outsourcing (First of a Series) update. However, data were limited to the years mentioned. Moreover, this study aimed to propose, implement, monitor and evaluate a project to address the prioritized problems on a short-term basis. A major information gathering limitation is the company's constraints as it observes the highest concern on statistics security. This study might provide baseline implications for the regulatory bodies to bring up-to-date development, supervision, and assessment of the existing occupational health and safety policies, particularly in call centers.

## **2. METHODOLOGY**

The parameters and the program outline were adapted from the University of the Philippines Manila – Occupational Health Program Protocol (2015). The situational analysis was conducted using a walk-through survey in June 2015. Other methods of data gathering included interviews with key informants in BPO X, review of relevant documents, work environment measurement specifically for illumination and focus group discussion among its rank and file employees. Due to the company's high esteem to confidentiality and data security, extensive observation of the workers in the production area was not realized. Necessary permit and consent were secured for the conduct of this study.

The analysis was comprised of the following: Statement of the Mission of the Company, Description of the Location and Land-Use around the Industry, Description of the Activities of the Industry, Demographic Profile of the Workers, Description of the Health Status of the Workers, Occupational Health Services, Health and Safety Policies/Programs, Process Flow, Workplace Environment, Sanitary Facilities, Safety Provisions and Specific Safety and Health Hazards. Then, identification, prioritization and analysis of the problems were performed. A decision matrix criterion (Table 1) was used to prioritize the identified problems through collaboration with the stakeholders.

The core problem recognized was analyzed using the problem, objective and alternative trees. A project plan consisting of the implementation and time target for activities, budget plan, and budget monitoring tool was then proposed and implemented. Monitoring and evaluation were performed on a short-term basis (four weeks). After the partial execution, a disengagement report was endorsed by the company for the continuation of the project.

### 3. RESULTS AND DISCUSSION

#### 3.1 Situational Analysis

##### 3.1.1 Statement of the Mission of the Company

The company's mission is to provide a safe and healthy workplace for all its employees and stakeholders globally. By integrating economic and social progress with environmental conservation and sustainability, the company aims to improve their quality of life. They are committed to providing resources to meet environmental health, safety, and sustainability goals.

##### 3.1.2 Description of the Location and Land-Use around the Industry

The company is in the commercial and business zone of Metro Manila. It occupies four floors of a thirteen-story building facility. It has a total floor area of 4,320 square meters of which the largest allocation is approximately 2,000 square meters each for the 12<sup>th</sup> floor and penthouse where the operation area, command center, cafeteria and various sanitary facilities of the company is located. The ground and ninth floor serve as the company's recruitment area.

Table 1. Decision matrix criterion for BPO X, June 2015

Criteria	Grade			
	1	2	3	4
Magnitude of the problem	< 25% are affected	26-50%	51-75%	76-100%
Urgency	>12 months	7-12 months	1-6 months	<1 month
Impact	< 25%	26-50%	51-75%	76-100%
Feasibility	Not feasible	Feasible with restrictions	Feasible	Highly feasible
Presence of Policy	No policy present	Policy present	Policy implemented	Relevant policy implemented

The parameters are defined as:

- Magnitude – pertains to the percentage of workers affected by the problem,
- Urgency- pertains to the period on how soon to address the problem to prevent further complications,
- Impact – measures the percentage of workers who will benefit when the problem is addressed,
- Feasibility – relates to the availability of resources to address the problem, and
- Presence of Policy- refers to the presence or absence of a policy related to the problem

Table 2. Floors, Land Use, and Land Area Occupied by BPO X in a Building Facility, June 2015

Floor	Areas Present	Floor Area (square meters)
Ground	Recruitment Area	38
9 <sup>th</sup>		282
12 <sup>th</sup>	Operations Area, Cafeteria, Command Center	2,000
Penthouse	Operations Area, Sanitary Facilities, and Support Services	2,000

### 3.1.3 Description of the Activities of the Industry

In the ground floor, the initial recruitment area of the company is located where new applicants are screened. While in the 9<sup>th</sup> floor the second step in the recruitment process is continued. In the twelfth floor and penthouse, the operations happen in the production areas.

### 3.1.4 Demographic Profile of the Workers

The production workers of BPO X are composed of 808 call center agents of which 88% are regular employees with full benefits. The remaining 95 employees are on a probationary period for six months before they become regular employees. All workers in the non-production areas are outsourced (Table 3). BPO X is classified as a large-scale establishment.

Table 3. Employment Status Distribution of Workers per Area in BPO X, June 2015

Employment Status	Number (%)
Regular (Production area)	713 (82.14%)
Probationary (Production area)	95 (10.94%)
Outsourced (Non-production area)	60 (6.91%)
Total	868 (100%)

The human resource and recruitment department has the highest number of employees among the outsourced services of BPO X followed by security control then housekeeping, IT department, medical team and lastly facilities management (Figure 1).

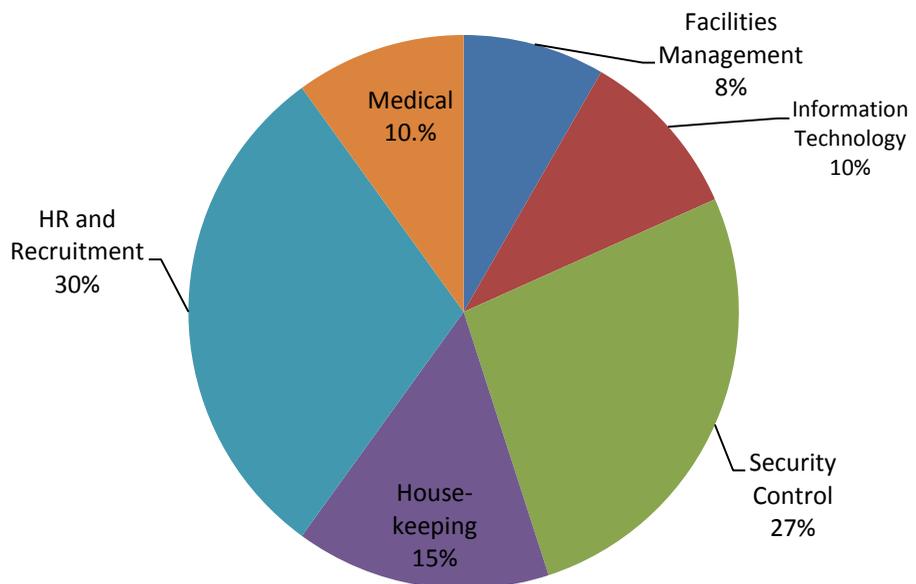


Fig. 1. Distribution of Outsourced Services in BPO X, June 2015

The employee distributions according to sex; the majority of which is female shares 55% while male shares 45% (Table 4).

Table 4. Sex Distribution of Workers per Area in BPO X, June 2015

Area	Male	Female
Production area	310	403
Non-production area	34	26
Total	344 (45%)	429 (55%)

### 3.1.5 Description of the Health Status of the Workers

The ten leading causes of morbidity among BPO X employees based on the latest submitted Annual Medical Report to Department of Labor and Employment from clinic consultation are as follows: (1) Tension Headache, (2) Rhinitis/Colds, (3) Neuromuscular Disorders, (4) Respiratory infections: Cough, (5) Gastritis/Hyperacidity, (6) Tonsillopharyngitis, (7) Allergy, (8) Bronchitis, (9) Gastroenteritis/Diarrhea, and (10) Meniere's disease/Vertigo.

The fact that the top ten causes of morbidity among employees in BPO X are mostly non-infectious/non-communicable necessitates to address them equally together with the infectious diseases in future health projects of BPO X (Table 5). Ranked number one is a tension headache and fifth is gastritis or hyperacidity which can be attributed to the stressful work environment together with night work or shift work, which are important occupational safety and health issues in call center work affecting performance and efficiency, increased use of caffeine and various health problems which needs to be addressed to with stress reduction and management policy in the workplace (DOLE, 2013).

Table 5. Top Ten Leading Causes of Morbidity based on the Annual Medical Report, 2014 of BPO X

Rank	Disease	Total Number of cases
1	Tension Headache	2683 (20.8%)
2	Rhinitis/Cold	2214 (17.2%)
3	Neuromuscular - Others: NWR	1698(13.2%)
4	Respiratory - Others: Cough	1114 (8.7%)
5	Gastritis/ Hyperacidity	1005 (7.8%)
6	Tonsillopharyngitis	914 (7.1%)
7	Allergy	637 (5%)
8	Bronchitis	590 (4.6%)
9	Gastroenteritis/Diarrhea	546 (4.2%)
10	Meniere's disease/ Vertigo	343 (2.7%)
Total Number of Consultation		12,851 (100%)

*Occupational Health Services*

Occupational Safety and Health Committee composition:

- Chairman: Country Manager
- Assistant Chairman: Assistant Vice President, Logistics
- Secretary: Company nurse
- Members:
  - Vice President, Human Resources
  - Assistant Vice President, Logistics
  - Occupational Health Physician (4): Quezon City, Makati, Alabang branches
  - Environment, Health, and Safety Manager
  - Procurement officer
  - Inventory officer
  - Company nurse (4): Quezon City, Makati, Alabang branches

The company has a health and safety committee. The following occupational health services facilities are present in BPO X: emergency treatment clinic, first aid kits containing basic medicines located on every floor and oxygen tanks and nebulizer available in the clinic. It has a partnership with a private ambulance provider and a nearest private tertiary hospital not more than 5 kilometers away from the company.

The medical team is composed of a doctor, nurse, first aiders, and dentist, all of which are trained as reported and are outsourced. They have two part-time occupational health physicians who report on duty four hours per day three times a week. They have three full-time nurses and one reliever who render six to twelve hours of duty every day three times a week. A part-time dentist reports on duty for four hours once a week. The seven outsourced security guards were trained on basic life support by the Philippine National Red Cross as first-aiders are also provided with first aid kits during their duty every work shift.

The status of compliance of occupational health services personnel based on the standards needs improvement specifically during the work shift with the most number of workers, the doctor and nurse should be both on duty on the said work shifts (DOLE, 2013).

Table 6. Profile of Occupational Health and Safety (OHS) Personnel in BPO X, June 2015

OHS Personnel	Employment status	No.	Duty schedule	Trained (Y/N)	OHS Standard
Doctor/ Occupational Health Physician (OHP)	Part-time	2	4hours Three times/week	Yes *	Full-time OHP 8 hours/day or 2 Part- time OHP 4hours/day 6 times/week
Nurse	Full time Part-time	3 1	6-12 hours/day; 3 times/week; >40 hours/week	Yes*	every work shift
First aider	Full time	7	Every work shift	Yes*	Every work shift
Dentist	Part-time	1	4 hours once/week	Yes*	Full time

*\*As reported all with training*

The pre-employment medical examination includes medical history, physical exam and ancillary laboratory work –up like complete blood count, urinalysis, drug testing and chest x-ray. Annual Physical Examination among BPO X employees are conducted by accredited HMO provider with additional ancillary work up in the form of blood chemistry, ECG and ECG for employees over 35 years old. There are neither special tests conducted nor separation physical examinations. Medical records of employees are kept in the clinic. The occupational health service personnel regularly submit annual medical report and work accident and illness report to the Department of Labor and Employment which is in accordance with the regulations.

Table 7 shows the health examinations conducted among the workers. Both pre-employment and periodic health examinations are provided by an external healthcare provider. Also, BPO X does not offer special tests and exit examinations which are also required by the Philippine OSH Standards (2013).

Table 7. Health Examinations Conducted Among Workers of BPO X, June 2015

Type of Health Examination	Service Provider
Pre-employment	External Health Care Provider
Periodic	Accredited Health Maintenance Organization (HMO)
Regular Medical consultation	Company Physician
Transfer	Company Physician

### 3.1.6 Health and Safety Policies/Programs

The Department of Labor and Employment prescribed health programs currently implemented by the company includes the following: (1) Hepatitis B Workplace Policy, (2) Workplace Policy and Program on Tuberculosis Prevention and Control, (3) Breastfeeding/Lactation Policy and Promotion Program, (4) Smoke-free Workplace Policy and Program, (5) HIV and AIDS Policy in the workplace, and (6) Drug-free Workplace Program.

Although BPO X has policies and programs for health and safety, they still lack some DOLE mandated policies on stress management and anti-sexual harassment program in the workplace (DOLE, 2008).

### 3.1.7 Process Flow

The company handles different accounts with required transactions for each. However, the general process flow is illustrated below:

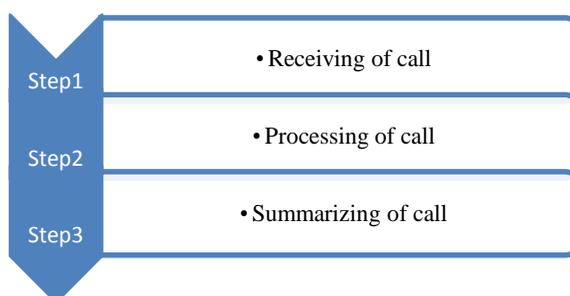


Fig. 2. Process Flow for BPO X, June 2015

The main process in business process outsourcing is handling the telephone call. The call handling can be broken down into three steps: first is the receiving of the call by the call center agent; second is the

time that an agent spends talking to the customer or processing of the call, and the last step, the summarizing of call or wrap time which is anything that the agent must do with the call after the customer hangs up. Factors such as the ability to control a conversation with a customer, complexity of the customer requests, level of knowledge or understanding of the customer and efficiency in finding information and handling the process on the computer are very vital in measuring the efficiency of the process are important parameters being observed during call processing. During the wrap time, it is important to consider the following factors: (1) ability to talk or listen and type information into the computer at the same time, (2) efficiency of the process, (3) keyboard or computer skills, and (4) efficiency of the system. An agent will be measured on their talk time and their wrap time. The average call duration is the combination of the three steps, which is a key statistic in contact centers. It is a must for all call center agents to deliver each of these things to ensure that the customer will be satisfied (DOLE, 2008).

### *3.1.8 Workplace Environment*

#### *3.1.8.1 Description of the Workstation*

Physical, environmental and behavioral parameters are being considered in a workstation evaluation. The physical evaluation covered achieving a good fit between workers and their workstations and was observed during the brief walk-through survey in the operations area. The work tables and computers are of appropriate height together with adjustable chairs. However, some worn out chairs (one in ten) that need to be replaced to ensure the safety and comfort of the workers. Another concern is the proximity of each workstation which can cause easy transmission of communicable diseases among employees and limited workspace.

The environmental aspect covers illumination, ventilation and other key aspects of the workplace. Based on the results of the recently conducted work environment measurement by a third-party concessionaire, the inadequate lighting was partially addressed by ongoing substitution of Light-Emitting Diode (LED) lights in the production areas. The improvement of the lighting is very evident in the WEM conducted although some work areas still need improvement. The inadequate ventilation based on the WEM March 2015 revealed the flow rate to be below the standards (DOLE, 2013). The room temperature is within the optimum range.

The behavioral aspects relate to addressing duration and repetition by providing recovery time during operations such as the execution of breaks and meal breaks which are existing administrative controls.



Fig. 3. Simulated Typical Workstation of BPO X, June 2015

Retrieved from <https://www.wellworking.co.uk/news/wp-content/uploads/2014/06/Orange-call-center-by-3g-Office-Oviedo-Spain-07.jpg>

### 3.1.8.2 Sanitary Facilities

The table below shows the distribution and number of the drinking water supply found in BPO X.

Table 8. Drinking Water Supply Distribution per Area in BPO X, June 2015

Floor	Area	Quantity
Ground	Recruitment area	1
9 <sup>th</sup>	Recruitment area	2
12 <sup>th</sup>	Production Area	6
	Command center	1
	Support area	1
	Cafeteria	2
Penthouse	Production area	4
	Pantry	2
Total		19

The fire safety devices and equipment strategically located in different areas of BPO X are presented in the table below.

Table 9. Fire Safety Equipment Distribution per Area in BPO X, June 2015

Fire Safety Equipment/ Device	Ground floor	9 <sup>th</sup> floor	12 <sup>th</sup> floor	Penthouse	Total
1. Fire Extinguisher a. Dry Chemical	1	0	1 (smoking area)	0	2
b. Hydro chlorofluorocarbons (HCFC)	0	0	19	25	44
2. Sprinkler	6	23	146	132	307
3. Smoke Detector	4	14	72	38	128
4. Fire Alarm system *count	*1	1	1	1	4
5. First aid kit	1	1	1	2	5
6. Rechargeable Emergency light	1	1	8	1	11

The company is compliant with appropriate standards regarding the sanitary facilities and support services for their employees. BPO X has a total of 19 water dispensers supplied by a private concessionaire that is adequate in number for drinking water supplies as prescribed by the Code on Sanitation of the Philippines (1975) which states that there should be one drinking water supply per 50 employees that are strategically distributed in the ground, ninth, twelfth floor and penthouse. There are a regular bacteriologic examination and physical and chemical analysis of the water supply conducted by a third-party concessionaire. An adequate sanitary facility such as toilets, sleeping quarters, shower and locker rooms, hand washing area and septic tank separately for male and female employees in the penthouse is provided as well. The employee's cafeteria is on the 12<sup>th</sup> floor, operated by a private concessionaire with a sanitary permit, serving more than 100 employees per day. There are seven food service personnel, all with health certificates as reported.

Table 10 shows the sanitary facilities available for the employees within the premises of BPO X and the number distribution in the various areas of the facility.

Table 10. Number and Distribution of Sanitary Facilities per area in BPO X, June 2015

Sanitary Facilities	Ground Floor		9 <sup>th</sup> floor		12 <sup>th</sup> floor		Penthouse	
	Male	Female	Male	Female	Male	Female	Male	Female
Toilets	1*	1*	1*	1*	12 cubicles 3 urinals	5 Cubicles	4 cubicles 4 urinals	6 Cubicles
Sleeping quarters	0	0	0	0	0	0	15 beds	15 Beds
Shower room	0	0	0	0	0	0	1	1
Hand washing area	1*	1*	1*	1*	5	6	4	6
Septic tank	Building sewage system							

\*Within the building facility

### 3.1.8.3 Safety Provisions

The company has a safety officer and adequate fire safety equipment strategically distributed per floor (DOLE, 2013). The fire and earthquake drills are conducted by the company and building administrator quarterly. Luminous exit signs are present, as well as evacuation plan layout posted on the walls of the entire facility. Moreover, they have a fire safety certificate, Occupational Safety and Health Management System, and Environmental Management System certification.

### 3.1.8.4 Specific Health and Safety Hazards

The table below shows the physical, ergonomic, biological, and safety hazards identified in BPO X. It further illustrates the existing control measures, evidence for the recognized hazards, and certain recommendations.

Table 11. Hazards identified in BPO X, June 2015

<b>Physical Hazards</b>			
<b>Hazard Identified</b>	<b>Existing Control Measures</b>	<b>Evidence</b>	<b>Recommendations</b>
Inadequate illumination	Substitution of Lighting Units (LED lights) *on going	Walk-through survey, Work Environment Measurement (WEM)	Repeat WEM after completion of installation of LED lights
Inadequate	None	Walk-through	Installation of
<b>Ergonomic Hazards</b>			
Sustained Static Position	Rest Periods	Walk-through survey	Conduct Training on Proper Body Mechanics
Repetitive Movements	Rest Periods	Walk-through survey	Create Policy on Ergonomics in the Workplace  Conduct Training on stretching exercises
Shift work	None	Key Informant Interview	Create Policy on Stress Management in the workplace
<b>Biological Hazards</b>			
<b>Hazard Identified</b>	<b>Existing Control Measures</b>	<b>Evidence</b>	<b>Recommendations</b>
Yeast and Molds	Regular Cleaning of Air-conditioning units (quarterly)	WEM	Frequent cleaning of air-conditioning units
<b>Safety Hazards</b>			
Poorly maintained chairs	Repair of worn out chairs	Walk-through survey, Focus Group Discussion	Substitution of worn out chairs

## IDENTIFICATION, PRIORITIZATION, AND ANALYSIS OF PROBLEM

### 3.1.8.5 Statement and Analysis of the Problems According to Priorities Problems Identified

Based on the methodologies used the following specific hazards are identified in different areas of BPOX, as well as the list of problems categorized into three main problems: the hazards (health and safety), the health outcomes and health system problems (Table 12).

Table 12. List of Problems identified in BPO X, June 2015

Type of Hazard	Evidence
Health hazard	
1. Ergonomic issues	Walk-through survey, FGD
2. Inadequate Illumination	Walk-through survey, WEM
3. Biological Hazard – yeast and molds	WEM
Safety hazard	
1. Fire Hazard (smoking area)	Walk-through survey
2. Dangerous elements outside the premises during the night	FGD
3. Poorly maintained chairs	Walk-through survey, FGD
4. Poorly communicated evacuation plan	FGD

Table 13. List of Health Outcomes of BPO X based on Annual Medical Report, 2014

Rank	Disease	Total Number of cases
1	Tension Headache	2683 (20.8%)
2	Rhinitis/Cold	2214 (17.2%)
3	Neuromuscular - Others: NWR	1698(13.2%)
4	Respiratory - Others: Cough	1114 (8.7%)
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9	Gastroenteritis/Diarrhea	546 (4.2%)
10	Meniere's disease/ Vertigo	343 (2.7%)
Total Number of Consultation:		12,851 (100%)

Table 14. List of Health System Problems of BPO X, June 2015

<b>Problem</b>	<b>Evidence</b>
Health System	
1. Inefficient Information Management System	Walk-through survey, Key Informant Interview, FGD
2. Inadequate compliance with prescribed DOLE Health Programs	Walk-through survey, Key Informant interview
3. Non-compliance with some provisions of OSH Standards on Occupational Health Services	Walk-through survey, Key Informant Interview, FGD
4. Poor employees' involvement in Occupational Health and Safety Programs	Key Informant Interview, FGD

#### Problem Prioritization

These lists of problems were presented and explained thoroughly to the stakeholders to facilitate them in deciding which problem to prioritize using the set of criteria (Table 1). The stakeholders opted to address the health system problems.

Table 15. Decision Matrix of Health System Problems Identified in BPO X, June 2015

<b>Problem</b>	<b>Magnitud</b>	<b>Feasibility</b>	<b>Policy</b>	<b>Impact</b>	<b>Urgency</b>	<b>TOTAL</b>	<b>RANK</b>
1. Inefficient Information Management System	4	3	3	4	3	17	2
2. Inadequate compliance to prescribed DOLE Health programs	3	2	1	3	2	11	4
3. Non- Compliance to some provisions of OSH Standards on Occupational Health Services	4	4	3	4	3	18	1
4) Poor employees' involvement in Occupational Health and Safety Programs	4	3	1	4	2	14	3

Table 15 shows that the non-compliance with some provisions of Occupational Safety and Health Standards on Occupational Health Services was ranked as the top priority among the list of problems (Rank 1). This problem had the greatest magnitude due to the highest number of workers affected; the urgency to address the problem is of greatest importance. The impact will benefit the majority of the workers, the presence of policy currently implemented makes it highly feasible to solve the problem in the stakeholders' point of view.

**Rationale:**

- **Magnitude:** Majority of the workers are affected by the inefficient Occupational Health Service delivery.
- **Feasibility:** highly feasible due to the availability of resources (financial, human resources).
- **Policy:** There is a relevant policy being implemented
- **Impact:** Majority of the workers will benefit in the improvement of Occupational Health Service delivery.
- **Urgency:** must be addressed within six months

**Problem Analysis**

*3.1.8.7 Problems and Causes*

The core problem identified by the stakeholders is the non-compliance with some provisions of Occupational Safety and Health Standards on Occupational Health Services.

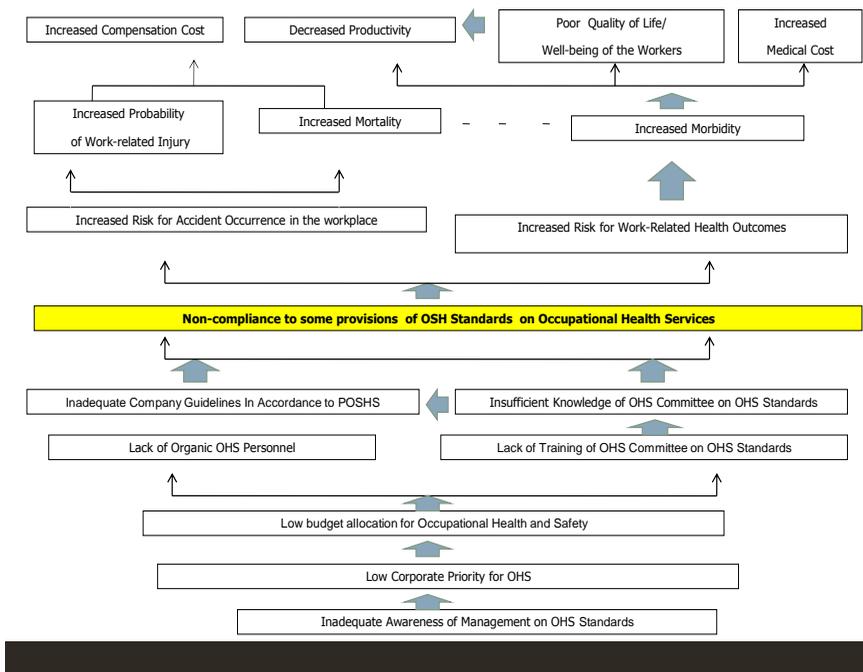


Fig. 4. Problem Tree for BPO X, June 2015

The problem tree is the tool used to identify the causes and effects of the prioritized problem which is the non-compliance to some provisions of Occupational Safety and Health Standards on Occupational Health Services (DOLE, 2013). The direct causes are the inadequate awareness of the management of OHS standards leading to low corporate priority on OHS and low allocation of financial resources for OHS. The lack of organic OHS personnel and Lack of training of OHS committee on OHS standards results in insufficient knowledge of the OHS committee and inadequate company guidelines in accordance with Philippine OHS standards.

The effects of the core problem can lead to increased risk of accident occurrence and work-related health outcomes. Thus, this will further result in increased work-related injuries, morbidities and mortalities. Eventually, if problems are not addressed, these will lead to increased medical and compensation cost for BPO X, decreased the productivity of the workers and consequently the poor quality of life or well-being of the workers.

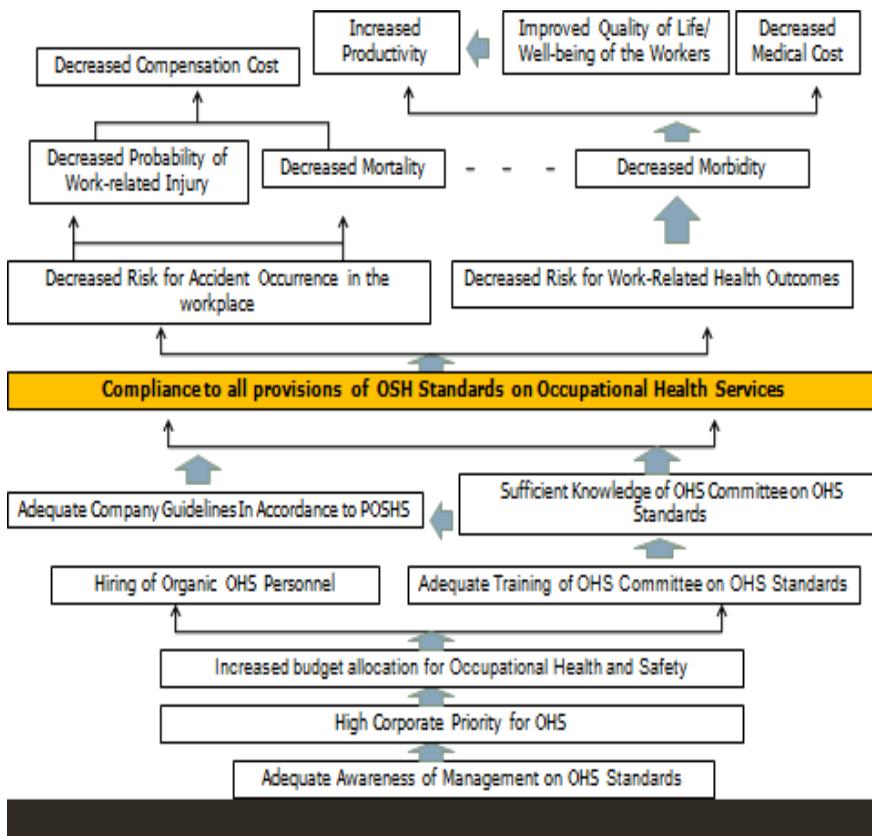


Fig. 5. Objective tree for BPO X, June 2015

The objective tree negates the problem tree. By increasing the awareness of the management of OHS standards, there will be compliance with all the provisions of Occupational Safety and Health Standards on Occupational Health Services. With a high corporate priority on OHS standards and increased budget allocation, sufficient training of OHS committee will be conducted together with the hiring of organic OHS personnel will lead to knowledgeable OHS committee about the OHS standards and having an adequate company guideline which follows the POSHS.

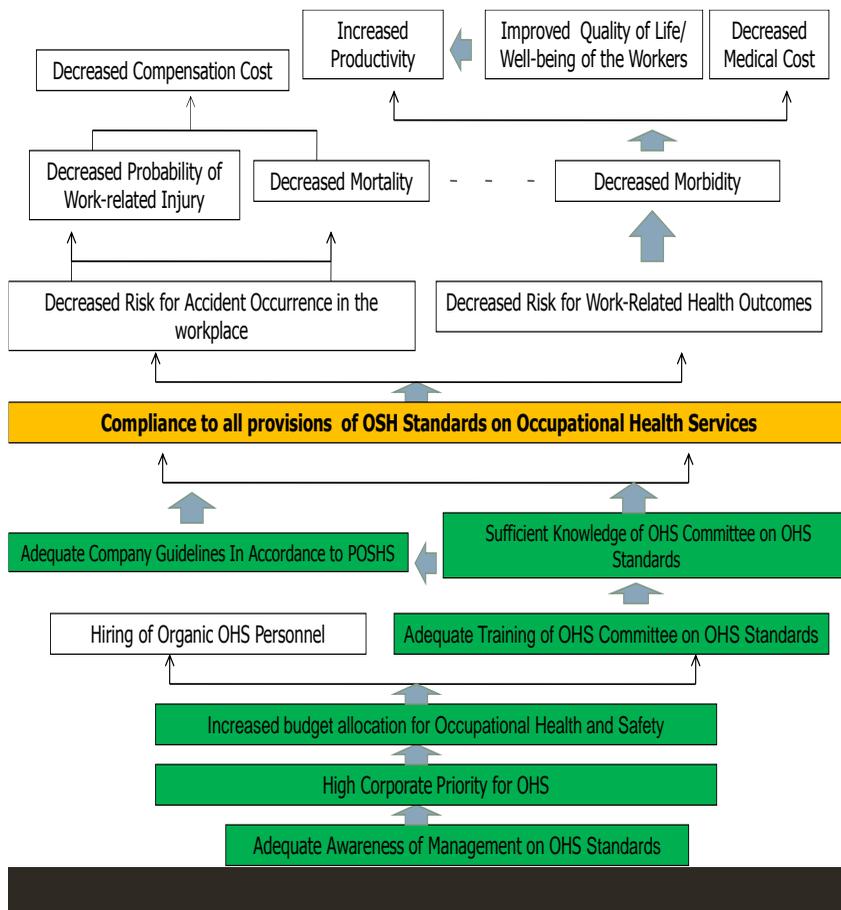


Fig. 6. Alternative tree for BPO X, June 2015

The alternative tree as shown in figure 6, are the attainable solutions to address the core problem. Foreseen hindrance in achieving the full compliance to all the provisions of OHS is the hiring of an organic OHS personnel.

## PROJECT PLANNING AND IMPLEMENTATION

Founded on the analysis of the core problem using the problem, objective and alternative trees presented, the following exhibits the project titled, CALL (Compliance with OSH Standards for ALL).

<b>PROJECT TITLE:</b>	PROJECT CALL (Compliance with OSH Standards for ALL)
<b>GOAL:</b>	To ensure the health and safety of the BPO X's workers by improving occupational health services within five months.
<b>PROJECT OBJECTIVE:</b>	To increase compliance of BPO X to the Occupational Health Services Provision of the Philippine Occupational Safety and Health Standards to 100% within six months.
<b>COMPONENT OBJECTIVE 1:</b>	To increase the awareness of BPO X management on Philippine Occupational Safety and Health Standards and DOLE issuances on Occupational Health Services by 20% within five months.
<b>COMPONENT OBJECTIVE 2:</b>	To increase the knowledge of BPO X's Occupational Health and Safety Committee on Philippine Occupational Safety and Health Standards and DOLE on Occupational Health Services issuances by 20% within five months.
<b>COMPONENT OBJECTIVE 3:</b>	To develop BPO X's OSH guidelines in accordance with Philippine Occupational Safety and Health Standards and DOLE issuances on Occupational Health Services within four months.
<b>COMPONENT OBJECTIVE 4:</b>	To increase the budget allocation for Occupational Health and Safety services within five months.

***Implementation and Time Target for Activities***

**A. Component Objective 1**

<b>Activity</b>	<b>Objectively Verifiable Indicator</b>	<b>Means of Verification</b>	<b>Remarks</b>
1.1 Consultation with Resource person	5 Resource persons consulted from OSHC and BWC within two weeks	<p>List of resource persons:</p> <p>Ms. Marnie O. Pebrada, Training and Public Information Division</p> <p>Dr. Maria Beatriz Villanueva, Health Control Division</p> <p>Dr. Marissa San Jose, Health Control Division</p> <p>Ms. Elizabeth Echavez, Senior Labor and Employment Officer, BWC</p> <p>Ms. Emila De Guzman, Supervising Labor and Employment Officer, BWC</p>	<p>OSHC:</p> <ul style="list-style-type: none"> <li>• Clarified the requirements for OSH regarding call center industry.</li> <li>• Provided with copies of Dept. Circular 1: Policy and technical guidelines on OSH in Call Center Industry</li> <li>• Avail of EIC materials (Posters, brochures, leaflets) from TPID</li> </ul> <p>BWC:</p> <ul style="list-style-type: none"> <li>• Clarified the amendment on classification of hazardous and non-hazardous workplace</li> <li>• Inquired on new issuance concerning call center industry</li> <li>• provided with a copy of the guidelines on night work</li> </ul>

*(Cont'd.)* A. Component Objective 1

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
1.2 Material preparation (brochure, leaflets and posters)	5 Brochure 4 Posters 6 Leaflets prepared for the group discussion with BPO management within four weeks	List of materials  Brochures: <ul style="list-style-type: none"> <li>• A Primer on HIV/AIDS and the Workplace: Based on RA 8504 The Philippine AIDS Prevention and Control Act of 1998</li> <li>• D.O. 73-05: Guidelines (Tuberculosis )</li> <li>• Department Order No. 53-03: Guidelines for the Implementati on of A Drug-Free Workplace Policies and Programs for the Private Sector</li> <li>• Health and Safety In the Use of Computers</li> <li>• Hearing Conservation Programs</li> <li>•</li> </ul>	Visited with OSHC and BWC to ensure materials relevant to the POSH Standards and DOLE issuance will be available for presentation to the top management.  Conducted group meeting for the program during the group discussion. Individual assignments were also divided to ensure thorough documentation of the discussion.

## (Cont'd.) A. Component Objective 1

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
		Posters: <ul style="list-style-type: none"> <li>▪ Paghandaan ang sunog 2. Medical examination 3. Magtatag ng safety &amp; health committee</li> <li>▪ This is a drug-free workplace!</li> <li>▪ Working with a video display terminal</li> <li>▪ Are you getting adequate illumination?</li> <li>▪ <i>Iwasan ang mga panganib sa lalakaran</i></li> <li>▪ <i>Darating din ang araw, wala ka nang ibubuga!</i></li> </ul> Leaflets: CHANGE Lifestyle Modification leaflets	
Meeting with field counselor conducted for a possible schedule of group discussion with top management. Field counselor category informed the group that top management is very hard to convene on such a short time since they are assigned from different sites in Muntinlupa, Makati and Quezon City. However, there is the intention of the company to continue the project.			
1.3 Conduct group discussion with top management	Number of group discussions conducted with BPO management eight weeks	Transcription of group discussion	Endorsed to OSH Committee members during disengagement

## (Cont'd.) A. Component Objective 1

<b>Activity</b>	<b>Objectively Verifiable Indicator</b>	<b>Means of Verification</b>	<b>Remarks</b>
1.4 Disseminate materials for additional information	Number of materials disseminated to BPO management two week	Number of materials received	Endorsed to OSH Committee members during disengagement
1.5 Evaluation	Number of pre- and post-test performed after every discussion	Activity Report	Endorsed to OSH Committee members during disengagement

## B. Component Objective 2

<b>Activity</b>	<b>Objectively Verifiable Indicator</b>	<b>Means of Verification</b>	<b>Remarks</b>
2.1 Needs Assessment	Two concepts identified for training of OSH Committee members within one week	Needs Assessment Report	Risk of Training participants not available for the meeting was realized. Conducted meeting with EHS Manager and OSH Committee members present in the OCC branch only.
2.2 Objective setting	Three objectives set were met:  1. To enumerate the components of Rule 1960. Occupational Health Services of the OSH standards	Minutes of meeting Seminar Report	Objective setting is done with EHS manager and OSH Committee members. Considered requirement of the EHS Manager to minimize time for the training so that work disruption of OHS Committee members is minimize

## (Cont'd.) B. Component Objective 2

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
	<p>2. To enumerate the technical and policy guidelines of Department Circular No. 1 Technical guidelines and policy guidelines for contact center industry.</p> <p>3. To explain the concepts learned about the company for the seminar of OSH Committee members within one week</p>		
2.3 Seek consultation with resource person for development of seminar material	5 Resource persons consulted from OSHC and BWC within two weeks	<p>List of Resource persons:</p> <p>Ms. Marnie O. Pebrada, Training and Public Information Division Dr. Maria Beatriz Villanueva, Health Control Division</p> <p>Dr. Marissa San Jose, Health Control Division</p> <p>Ms. Elizabeth Echavez, Senior Labor and Employment Officer, BWC</p>	Communication with OSHC and BWC were done initially thru e-mail. Inquiry and coordination with resource persons were made personally by visiting these government offices separately.

## (Cont'd.) B. Component Objective 2

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
		Ms. Emila De Guzman, Supervising Labor and Employment Officer, BWC	
2.4 Development of seminar materials for OHS Committee members  2.4.1 Pretesting of seminar material using expert review	2 Concepts were discussed: 1) Department Circular No.1 Policy and Technical guidelines on OSH in Call Center Industry 2) POSHS Rule 1960 Occupational Health Service  Expert opinion used for pre-testing of seminar materials and pre-and post-test questionnaire before the conduct of seminar	Seminar Materials  Dr. Vic Molina, DEOH UP Manila	Prepared seminar materials using the following references: 1. Department Circular No. 1 technical guidelines on OSH for contact center industry 2. Philippine Occupational Safety and Health Standards Sought expert review of the prepared materials before seminar.
2.5 Conduct of seminar	One seminar conducted with 7 OSH Committee members at BPO X company dated July 10, 2015	Report of the seminar conducted two days after seminar	Risk of unavailability of some participants to join the seminar was realized. Out of the 12 members of the OSH Committee, only seven members attended the seminar. HR representative, assigned to the same site did not attend the seminar; other members are assigned to their Muntinlupa and Makati sites.

## (Cont'd.) B. Component Objective 2

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
			Endorsed by the EHS Manager, the seminar materials for an additional seminar to be conducted with the other OSH Committee members.
2.6 Evaluation of seminar	One pre-test and one post-test were given to 7 participants from OSH Committee immediately before and after the seminar	Terminal report of the seminar conducted two days after the training.	Pre-test and post-test given to 7 seminar participants. Results were recorded and analyzed using a paired t-test. Results were: <b><i>p-value: 0.650068</i></b> <b><i><math>\alpha = 0.05</math></i></b>

## C. Component Objective 3

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
3.1 Review of existing Company guidelines on OHS services	1 document reviewed containing the Roles and Responsibilities of the following:  1. Doctor 2. Nurse 3. Crisis Management	1 EHS Manual titled "SOP for Emergency Medical Response."	Reviewed documents and identified the following provisions by the POSHS requirements: <ul style="list-style-type: none"> <li>• Duties of Doctor</li> <li>• Duties of Nurse</li> <li>• Guidelines for Emergency response about Crisis Management</li> <li>• Guidelines for Ergonomic program</li> </ul>

## (Cont'd.) Component Objective 3

Activity	Objectively Verifiable Indicator	Means of Verification	Remarks
			<ul style="list-style-type: none"> <li>Provision for Ergonomic logbook (discussed with the Medical team the importance of observing these provisions)</li> </ul>
<p>The consultative meeting was done with the EHS manager only; top management and a representative from the HR department are not available for the meeting. The endorsement will be done to the EHS Manager and OSH Committee members to ensure continuity of the activities identified.</p>			
3.2 Consultative meeting with stakeholders  a) Present gaps	Gaps in the company guidelines regarding OHS services are identified within two weeks	Minutes of meeting	Endorsed to OSH committee members during disengagement
3.3 Strategy planning with stakeholders	Strategies for addressing the identified gaps are formulated within one week	Minutes of meeting	Endorsed to OSH Committee members during disengagement
3.4 Dissemination of information material (leaflets, brochure, poster) on POSHS to all stake holders	Information on POSHS are adequately and appropriately disseminated to all stakeholders within two weeks.	Number of information dissemination materials distributed and received	Endorsed by OSH Committee members during disengagement
3.5 Consultative meeting for revision of company guidelines	Provision for revised company guidelines regarding OHS services are identified within one month.	Minutes of meeting	Endorsed by OSH Committee members during disengagement
3.6 Seek approval of revised guidelines	Revised company guidelines are approved by personnel within one week.	Signed and approved revised company guidelines on OHS	Endorsed to OSH Committee members during disengagement

## (Cont'd.) Component Objective 3

<b>Activity</b>	<b>Objectively Verifiable Indicator</b>	<b>Means of Verification</b>	<b>Remarks</b>
3.7 Dissemination of approved revised guidelines	Revised guidelines are adequately and appropriately disseminated to all stakeholders within one month	Number of materials distributed and received	Endorsed to OSH Committee members during disengagement

## D. Component Objective 4

<b>Activity</b>	<b>Objectively Verifiable Indicator</b>	<b>Means of Verification</b>	<b>Remarks</b>
4.1 Review of Budget Allocation for OHS	Number of OHS services with low budget allocation	Financial documents (Budget Plan)	Endorsed to OSH Committee members during disengagement
4.2 Consultative meeting with the Finance Department a) Present findings	Gaps in the company guidelines regarding OHS services are presented within two weeks	Minutes of meeting Consultative meeting reports	Endorsed to OSH Committee members during disengagement
4.3 Lobbying for OHS services with low budget allocation	Number of OHS services with low budget allocation is identified	Minutes of meeting Consultative meeting reports	Endorsed to OSH Committee members during disengagement
4.4 Seek approval for the revised budget plan.	Revised budget plan is approved by relevant signatories	Signed and approved revised budget plan on OHS	Endorsed to OSH Committee members during disengagement
4.5 Dissemination of approved revised budget plan to the concerned departments (OHS Committee)	Revised budget plan is adequately and appropriately disseminated to all stakeholders within one month.	Copy of the revised budget plan	Endorsed to OSH Committee members during disengagement

One of the bases for component objective 4: increasing the budget allocation for Occupational Health and Safety is the key informant interview with the Medical team members. The doctor verbalized that during her duty, the nurse is not reporting to the clinic and vice-versa. This is to maximize the personnel that the BPO is hiring for the medical team and minimize the cost it would entail. Another reason is that during the focus group discussion, the workers would like the doctor to be present every day during the shift where the largest numbers of workers are present. It is not the case in the BPO; one doctor has her shift in the afternoon during Mondays, Wednesday, and Fridays while another doctor has her duty at night but only during Tuesdays and Thursdays only.

Initial communication with the EHS manager was done requesting for the review of the budget for Occupational Health Services of the company. However, the request was denied citing confidentiality issue as the limitation. During the endorsement, OSH Committee was informed to identify the training needs, and seminar needs so that they can request the Finance Department to allocate budget for these.

Business process outsourcing requires a dynamic work schedule, making changes in the work schedule is an as fast phase as the turnover of agents. With this background, it is expected that there will be changes even if there is a schedule of all activities.

## MONITORING AND EVALUATION

### Monitoring

A budget plan was prepared for all the activities enumerated. Allocation is calculated as: Component Objective 1- Php 4,4870.00, Component Objective 2: Php 4,127.00, Component Objective 3: Php 3, 536.00 and Component Objective 4: Php 3,420.00. Total anticipated cost is Php 15,570.00.

Table 17. Budget Monitoring Tool

Summary of Activity	Proposed Budget	Actual Budget
<b>Component Objective 1:</b> To increase the awareness of BPO X management on Philippine Occupational Safety and Health Standards and DOLE issuances within five months by 20% based on pre-test done.	P4,487.00	0 Unfinished component
<b>Component Objective 2:</b> To increase the knowledge of the BPO X Company's Occupational Health and Safety Committee on Philippine Occupational Safety and Health Standards and DOLE issuances within five months by 20% based on pre-test done.	P4,127.00	P3,000.00
<b>Component Objective 3:</b> To develop the BPO X company guidelines in accordance with Philippine Occupational Safety and Health Standards and DOLE within three months.	P3,536.00	0 Unfinished component
<b>Component Objective 4:</b> To increase the budget allocation for Occupational Health and Safety services within six months.	P3,420	0 Unfinished component

The table above depicts the monitoring of the budget plan. Since component objectives 1 and 3 activities are partially fulfilled, there is no monitoring of the expenses incurred. For component objective 4, no activity has been done as well; there is no monitoring since there are no actual expenses made.

Activities done in component objective two were completed. The figure in that row accounts for the total expenses made. The difference is large as that the attendance for the seminar is far below the expected number. There were only 7 participants out of 15 OSH Committee members due to the company's restraints. Materials reproduction and snacks provided were significantly slashed.

#### *Evaluation*

Component Objective 2: To increase the knowledge of BPO Q's Occupational Health and Safety Committee on Philippine Occupational Safety and Health Standards and DOLE issuances on Occupational health services by 20% within five months.

Table 18. Evaluation Tool per Component Objective

<b>Purpose of Evaluation</b>	<b>Evaluation Objectives</b>	<b>Components of the Projects to be Evaluated</b>	<b>Indicators</b>	<b>Means of Verification</b>	<b>Analysis of the Data</b>
Project Effectivity	To determine the knowledge of BPO X OSH Committee on Philippine Occupational Safety and Health Standards and Dole issuances have increased by 20%.	Seminar of BPO Q OSH Committee on Philippine Occupational Safety and Health Standards and Dole issuances	20% improvement difference between the pre-test and post-test results	Terminal report of the Seminar	Paired t-test
Project Efficiency	To ensure the seminar was implemented within the budget allocation.	Budget allocation of seminar of BPO Q OSH Committee on Philippine Occupational Safety and Health Standards and Dole issuances	Seminar was conducted within allocated budget and timeline.	Terminal report of the Seminar	Descriptive
Administrative Feasibility	To determine feasibility of administration of activities related to BPO X OSH Committee seminar on Philippine Occupational Safety and Health Standards and Dole issuances	Seminar of BPO Q OSH Committee on Philippine Occupational Safety and Health Standards and Dole issuances	Indicators listed were accomplished.	Terminal report of the seminar	Descriptive
Social Acceptability	To determine BPO X OSH committee's satisfaction with the seminar.	Seminar of BPO Q OSH Committee on Philippine Occupational Safety and Health Standards and Dole issuances	Seminar participants are satisfied as evidenced in the comments and inputs mentioned during and after the seminar.	Terminal report of the Seminar	Descriptive

Disengagement was conducted after the short-term implementation. It was attended by Facilities engineer, Nurse, and the Front desk personnel. The EHS Manager joined via teleconference. Presentation of summary of the accomplishments, findings, and recommendations based on the situational analysis, endorsement of the project for continuation, signing of Occupational Safety and Health committee member's pledge of Commitment to continue the implementation of Project CALL and turnover of relevant documents such as DOLE issuances, Ergonomics and Employee Compensation Commission (ECC) logbook and others were performed. The project would be considered to attain a partial success rate of 25% as one of the four component objectives was fully accomplished.

#### **4. CONCLUSION**

BPO X provides good occupational health and safety conditions for its workers. Based on the UP Manila – Occupational Health Program Protocol, problems identified were categorized into three: (1) hazards (health and safety), (2) health outcomes, and (3) health system issues. Health hazards included ergonomic issues, inadequate illumination and biological hazards such as yeast and molds while safety hazard includes fire hazard (smoking area), dangerous elements outside the premises during the night, poorly maintained chairs, and poorly communicated evacuation plan. A tension headache and rhinitis/cold topped the list of health outcomes whereas Meniere's disease/vertigo ranked 10<sup>th</sup>. Inefficient information management system, inadequate compliance to prescribed DOLE Health programs, non-compliance to some provisions of OSH Standards on Occupational Health Services and poor employees' involvement in Occupational Health and Safety Programs were the major health system problems.

Grounded on a decision matrix criterion comprising of the magnitude of the problem, urgency, impact, feasibility and presence of a policy, the non-compliance to some provisions of Occupational Safety and Health (OSH) Standards on Occupational Health Services under the health system category was acknowledged as the number one concern. A project titled: *Project "CALL": Compliance to OSH Standards for ALL* was then planned which had a goal to ensure the health and safety of the BPO X's workers by improving occupational health services within five months. Its objective was to increase the company's compliance with the Occupational Health Services Provision of the Philippine Occupational Safety and Health Standards to 100% within six months. It was comprised of four component objectives which were: 1) To increase the awareness of BPO X management on Philippine Occupational Safety and Health Standards and DOLE issuances on Occupational Health Services by 20% within 5 months, 2) To increase the knowledge of BPO X's

Occupational Health and Safety Committee on Philippine Occupational Safety and Health Standards and DOLE on Occupational Health Services issuances by 20% within 5 months, 3) To develop BPO X's OSH guidelines in accordance to Philippine Occupational Safety and Health Standards and DOLE issuances on Occupational Health Services within 4 months, and 4) To increase the budget allocation for Occupational Health and Safety services within five months.

Due to the establishment's restrictions, implementation and evaluation of the project were not broadly realized. However, a partial success rate was achieved (25%). Additional projects like Family Welfare Program, Good Nutrition and Exercise, Immunization program, Ergonomics Program, Work-related Stress Management, Anti-sexual Harassment and Workplace Violence Program were advised. Facilitating/motivating factors in a program implementation consist of good design of program; competent program implementers, good communication plan, sufficient budget, capability building of OSH personnel, worker involvement and enhanced communication channels. Improving the program implementation entails heightening the worker involvement in program design and implementation, using of electronic communication and social media, and establishing a partnership with DOLE and other organizations. A multi-sectoral strategy is also being called for which engages partners from business, workers group, other government and Non-Governmental Organizations and the academic communities.

It is recommended to perform a follow-through and a rigorous study on the BPO firms nationwide of which results of the present research although small-scale might have baseline implications.

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