

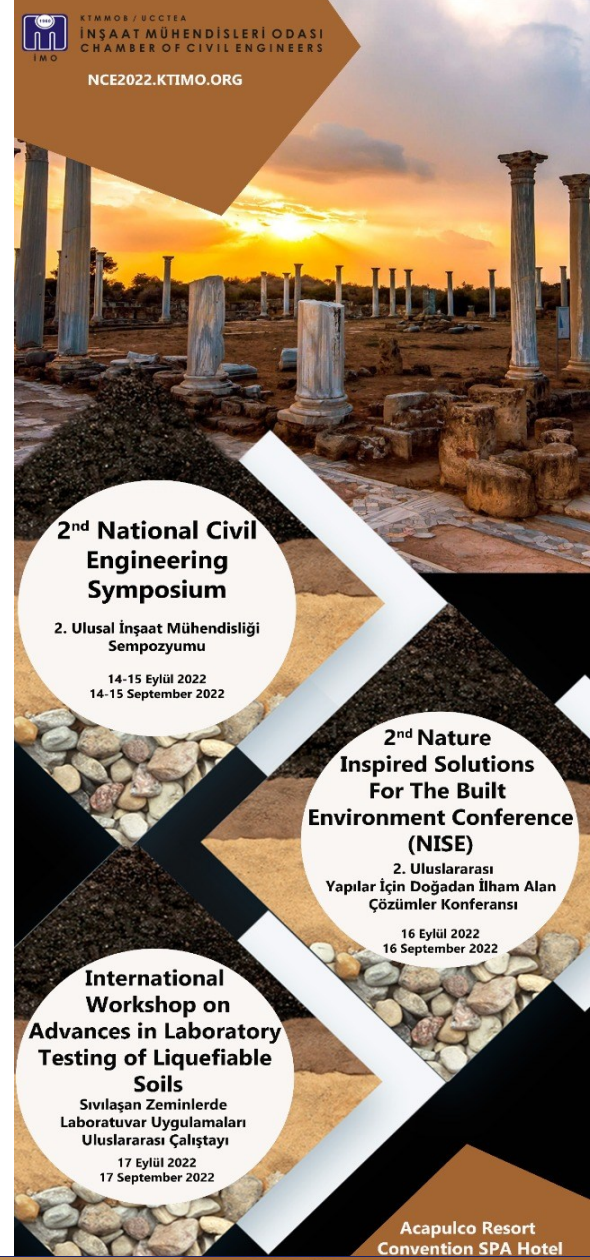
The Evaluation of Relationship Between Work Accidents and Occupational Health and Safety In North Cyprus

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Research Purpose

- It will be demonstrated at the end of the presentation when the research will be able to :
- ✓ Comprehend the important terms for occupational health and safety
- ✓ Understand aim of occupational health and safety
- ✓ Represent occupational risks and hazards in North Cyprus
- ✓ Measure work accidents and their results as number of injured, mortality and labor loss amount between 2006 and 2022 for all business sector and construction site according to ministry of labor and social security of T.R.N.C
- ✓ Discuss and results of measurement and compare rate of work accidents occurred between all business sector and construction site
- ✓ Understand the precautions to prevent work accidents

Definitions For The Important Terms

- 5 important terms related with occupational health and safety
- ✓ Occupational Health and Safety
- ✓ Work Accident
- ✓ Occupational Risk
- ✓ Hazard
- ✓ Precaution

Aim of Occupational Health and Safety In North Cyprus

Occupational Health and Safety activities are regulated by law of occupational health and safety and many statues associated with it. The aim of the law determine precation to ensure and enhance of health, security and comfort for employee while working at their workplace so;

- ✓ Precaution of occupational risks
- ✓ Protecting health and safety of employee
- ✓ Eliminating risk and accident factors at workplace and work environment
- ✓ Informing and consulting employee
- ✓ Educating employee and employee representatives, getting their opinion and ensuring balanced participation
- ✓ Regulating general principle related with working conditions, task, authority and obligations of conserving necessary people due to having private conditions, age and gender
- ✓ Organising supervision of works and workplace at the scope of law and other considerations

Occupational Risks and Hazards In North Cyprus

There are 3 different main hazard types causing occupational accidents.

- 1- Human-made hazards
- 2- Environmental hazards
- 3- Occurance of hazards at workplace



Occupational Risks and Hazards In North Cyprus

1- Human-made hazards

A- Managerial

- ✓ Lack of policy about occupational health and safety
- ✓ Misconfiguration

B- Caused by employee

- ✓ Phycosocial
- ✓ Lack of education
- ✓ Lack of coordination

C- Incorrect or missing planning and projecting

- ✓ Building as out of project
- ✓ Frequently changing on projects during construction



Occupational Risks and Hazards In North Cyprus

2- Environmental hazards

A- Natural disasters

- ✓ Flood
- ✓ Earthquake
- ✓ Storm
- ✓ Hurricane



Occupational Risks and Hazards In North Cyprus

3- Occurance of hazards at workplace

A- Mechanical Hazards

- ✓ Hand tools
- ✓ Moving vehicle
- ✓ Dropping material

B- Physical Hazards

- ✓ Heat
- ✓ Noise
- ✓ Pressure



Occupational Risks and Hazards In North Cyprus

C- Chemical Hazards

- ✓ Acids
- ✓ Dusts
- ✓ Fog

D- Biological Hazards

- ✓ Virus
- ✓ Bacteria
- ✓ Fungs



Occupational Risks and Hazards In North Cyprus

E- Electrical Hazards

✓ Elektric shock

F- Fire Hazards

✓ Burning

✓ Explosion



Methodology

- ✓ Work accidents play negatively important role on life of employee and economical of North Cyprus
- ✓ The data archive of work accidents is very significant for measuring data with using equations as amount of injury, death and labor loss so the data provides to determine problems about occupational health and safety in North Cyprus
- ✓ Finding solutions due to deciding problems

Methodology

$$A * (B * C) = D \quad (\text{Eq. 1})$$

A: Labor Loss (Day)

B: Minimum Wage as TL

C: Exchange Rate (TL/Dollars)

D: Labor Loss (Currency)

$$\sum E = F \quad (\text{Eq. 2})$$

E: Amount of Injured workers for a year

(For example E1 for 2006, E2 for 2007 ...)

F: Sum of injured workers from 2006 to 2020

$$\sum G = H \quad (\text{Eq. 3})$$

G: Amount of dead worker for a year

(For example E1 for 2006, E2 for 2007)

H: Sum of dead workers from 2006 to 2020

Year	Injury (Employee) (E)	Death (Employee) (G)	Labor Loss (Day) (A)	Min. Wage (For a Day as TL) (B)	Exchange Rate (TL/USD) (C)	Daily Min. Wage (USD) (D)	Labor Loss (USD) (D)
2006	258	9	6974	38.00	1.43	26.57	185,323
2007	278	9	8413	44.00	1.3	33.85	284,748
2008	238	5	8077	52.00	1.29	40.31	325,584
2009	253	6	8971	57.00	1.55	36.77	329,901
2010	283	2	9651	57.00	1.5	38.00	366,738
2011	270	6	10240	60.00	1.67	35.93	367,904
2012	214	4	7494	60.00	1.79	33.52	251,196
2013	230	7	8721	65.30	1.9	34.37	299,727
2014	234	6	8296	74.50	2.19	34.02	282,216
2015	128	7	2864	80.00	2.72	29.41	84,235
2016	129	8	3388	84.65	3.02	28.03	94,965
2017	138	4	4606	96.81	3.65	26.52	122,160
2018	138	4	4731	115.04	4.81	23.92	113,146
2019	383	5	13428	145.38	5.67	25.64	344,297
2020	298	4	9503	203.07	7.01	28.97	275,289
Sum of All Year	3472 (F)	86 (H)	115357				3,727,428

Year	Injury (Employee) (E)	Death (Employee) (G)	Labor Loss (Day) (A)	Min. Wage (For a Day as TL) (B)	Exchange Rate (TL/USD) (C)	Daily Min. Wage (USD) (D)	Labor Loss (USD) (D)
2006	56	3	2114	38.00	1.43	26.57	56,169
2007	73	6	2407	44.00	1.3	33.85	81,477
2008	45	1	1835	52.00	1.29	40.31	73,969
2009	56	0	1875	57.00	1.55	36.77	68,944
2010	50	0	1991	57.00	1.5	38.00	75,658
2011	43	2	1657	60.00	1.67	35.93	59,536
2012	36	1	1599	60.00	1.79	33.52	53,599
2013	34	2	1417	65.30	1.9	34.37	48,702
2014	36	3	2216	74.50	2.19	34.02	75,388
2015	29	2	1004	80.00	2.72	29.41	29,528
2016	15	3	570	84.65	3.02	28.03	15,977
2017	23	2	1269	96.81	3.65	26.52	33,654
2018	18	1	1071	115.04	4.81	23.92	25,618
2019	47	3	1948	145.38	5.67	25.64	49,947
2020	68	1	2839	203.07	7.01	28.97	82,246
Sum of All Year	629 (F)	30 (H)	25812				830,411

Table 1 and 2. The tables for all bussiness sector and construction site demonstrate injured and death of workers, Labor Loss as day, minimum wage (for a day as TL), minimum wage (for a day as dollars) and labor loss (currency) from 2006 to 2020, respectively.

Discussion and Results

- ✓ The results clearly demonstrate data of work accidents from 2006 to 2020 in North Cyprus as number and percentage to compare between construction site and all bussines sector. It can be seen ;
- ✓ While 232 employee injury occur in all of the bussiness sector, 42 employee injury occur in construction site. Therefore, %18 employee injury origanate from construction site.
- ✓ When there are 6 employee dying in all of the bussiness sector, there are 2 employee dying in construction site. %35 dying of employee origanate from construction site.
- ✓ T.R.N.C has \$250000 labor loss due to injury in all of the bussiness sector. \$55000 of \$250000 is because of employee injury occuring in construction site. %22 labor loss because of compulsory leave of employee origanate from construction site.

Discussion and Results

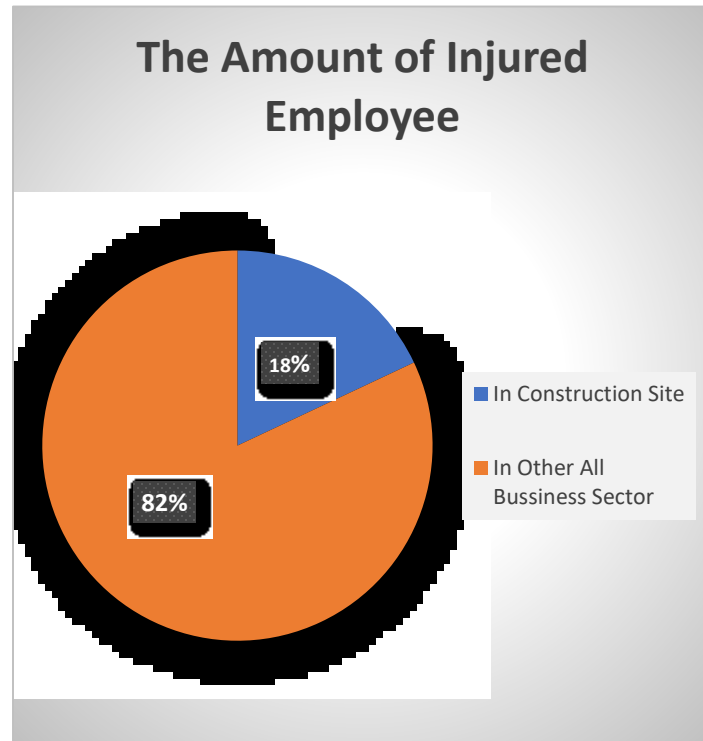


Figure 1: Percentage of injured employee among in construction site and other all business sector from 2006 to 2020 in North Cyprus.

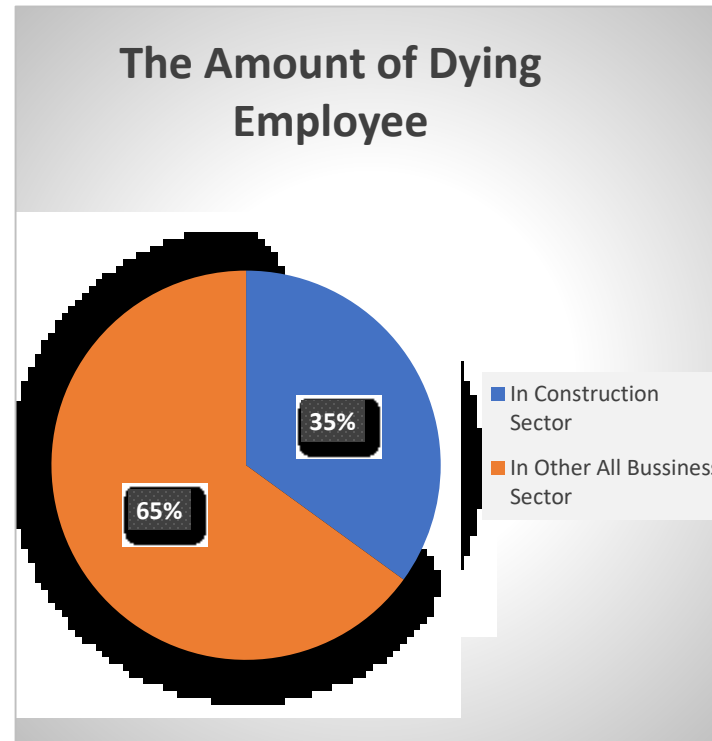


Figure 2: Percentage of dying employee among in construction site and other all business sector from 2006 to 2020 in North Cyprus.

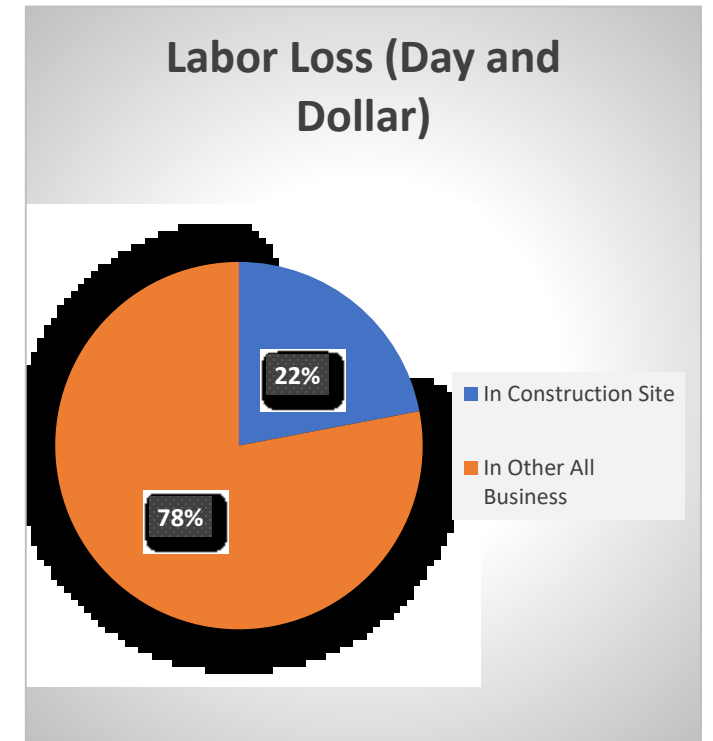


Figure 3: Percentage of labor loss among in construction site and other all business sector from 2006 to 2020 in North Cyprus.

Precautions To Occupational Hazards and Risks

1- At the source

- ✓ Undercontrol risk at their source
(machine protective, ambient measurment, maintaince, local light)

2- In the environment

- ✓ Apply different methods according to the environment if you don't prevent risk on their source
(isolation, ventilation, lighting)

3- For person

- ✓ Using **Personal Protective Equipment (PPE)** such as wearing gloves that is very important application if above 2 methods aren't effective. Moreover, selecting staff, education and control are significant

Conclusion

The study provided ;

- ✓ To understand the significant terms for occupational health and safety so the related topic with the study is comprehend better.
- ✓ Deciding occupational risks and hazards in detailed with examples
- ✓ To Measuring work accidents and their results as number of injured, mortality and labor loss amount for all bussiness sector and construction site according to ministry of labor and social security in North Cyprus
- ✓ Discussing about results of measurment and comparing rate of work accidents occured between all bussiness sector and construction site in North Cyprus
- ✓ To understand the precautions to prevent work accidents in in North Cyprus

Thank you for your attention



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