Health Promotion Intervention Plan for Employees of a Local Service Center of Taiwan Electric Power Company

I-Ching Lin[1], Pei-Yu Yang[2], Fang-Yu Lai[1]

[1]Department of Family Medicine, Asia University Hospital, Taichung City, Taiwan;

[3]Department of Medical Technology, Jenteh Junior College of Medicine, Nursing and Management, Miaoli County, Taiwan

Conclusion

Employee health is an intangible asset for companies. Early detection of physical and mental health warnings through health examinations and questionnaires allows for workplace environment improvements and appropriate job assignments, ultimately enhancing employee satisfaction and productivity. Through the health promotion plan which was made by the cooperation between hospital and workplace, The health status of workplace employees can be better.

Introduction

According to regulations by the Taiwanese Ministry of Labor, companies with 50 or more employees are required to hire on-site health service personnel to provide regular services. These services include 1. health check result analysis and assessment, 2. assisting employers in appropriate job assignments, 3. assessing high-risk workers and providing case management, 4. maternal health protection, and 5. preventing work-related illnesses. The power company is a special industry. Some employees work night shifts and perform high-risk tasks related to high-voltage electricity. This study aims to understand the health examination results of employees at a local service center of Taiwan power company and implement health promotion interventions based on risk assessment to safeguard employee health.

Methods

This study included 356 employees from a Taiwan Electric Power service center who underwent health examinations at Asia University Hospital in 2022. Health behavior questionnaires, work hour surveys, mood thermometers, musculoskeletal symptom surveys, and burnout assessment scales were used for risk evaluation. On-site health service nurse and physician provided health management, actively scheduled health consultations for high-risk employees.

Based on individual risk levels, employees received overload, maternal health, and ergonomics consultations and assessments to determine the severity of occupational injuries or illnesses. Referrals to relevant specialists were made when necessary.

Results

Out of the 356 employees, 92 (25.8%) required shift work, 66 (18.6%) were current smokers, and 10 (2.9%) chewed betel nut. 71(19.9%) reported less than 6 hours of sleep. 61 (17%) had metabolic syndrome. 7 had cardiovascular risk assessment scores >=20%. 54 (15%) were hepatitis B carrier. 8 (2%) were hepatitis C carrier. 116 employees had a mood thermometer score >5 (32.6%).

Table. Results of Health examination

	Total (%, mean±SD)	Female (mean±SD)	Male (mean±SD)	P value
Age	52.4±7.7	53.0±8.3	52.3±7.6	0.604
40-64	351 (98.6)	33	318	
≥65	5 (1.4)	0	5	
Smoker				
No	247	33	214	<0.001
Yes	109	0	109	
BMI	24.9±3.5	23.0±3.8	25.1±3.4	0.001
<24	150 (42.1)	22	128	0.011
≥24-<27	120 (33.7)	7	113	
≥27	86 (24.2)	4	82	
Abd. Circ.	85.5±9.4	79.8±9.8	86.1±9.1	<0.001
Normal	239 (67.1)	18	221	0.106
Abnormal	117 (32.9)	15	102	
Metabolic S.				
No	275 (77.2)	23	252	0.28
Yes	81 (22.8)	10	71	
Abn. Work S.				
Grade I	103 (28.9)	12	91	0.39
Grade II	253 (71.1)	22	231	
BSRS				
0-5	240 (67.4)	21	219	0.46
≥6	116 (32.6)	13	103	
WBC	5840±1700	5740±1800	5850±1692	0.719
Hemoglobin	14.8±1.1	13.3±1.0	15.0±1.0	<0.001
Blood sugar	93.2±19.5	93.0±26.6	93.2±18.7	0.952
Cholesterol	182.2±35.9	197.7±40.8	118.6±35.0	0.009
LDL-C	111.8±31.2	118.3±34.0	111.1±30.8	0.206
Normal	258 (72.5)	24	234	0.972
Abnormal	98 (27.5)	9	89	
Creatinine	1.03±1.05	0.67±0.15	1.07±1.09	0.041
Normal	340 (95.5)	32	208	0.67
Abnormal	16 (4.5)	1	15	
GPT	25.5±16.4	22.0±19.1	25.9±16.1	0.197
Normal	335 (94.1)	31	304	0.967
Abnormal	21 (5.9)	2	19	

Footnote: BMI: Body mass index; Abd. Circ.: Abdominal circumference; BSRS: Brief Symptom Rating Scale; Abn. Work S.: Abnormal Workload survey; GPT: liver function

Asia University Hospital

I-Ching Lin

Director • Department of Family Medicine

E-mail: licypy01@gmail.com

Line ID: 0917155906

Web: https://www.auh.org.tw/