

Work Environment and Health Promotion Needs among Personnel in the Faculty of Medicine, Thammasat University

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Background: Work environment and health promotion needs are important factors for quality of life of workers.

Objective: Study occupational health and safety hazards and control measures as well as health status and health promotion needs among personnel in Faculty of Medicine, Thammasat University.

Material and Method: This was a cross sectional study. Questionnaires were designed to collect demographic data, health status, health promotion needs, occupational health and safety hazards, and job demand/control data.

Results: Questionnaires were sent out to 181 personnel and 145 were returned filled-out (80.1%). Among them, 42.8% had physical illness or stress, 68.3% had debt problem, 20% had some problems with coworker or work environment, 65.5% had a high workload, and 64.1% felt they did not get enough work benefits. Job demand and control factors included attention from leaders, fast-pace work, relationship among coworkers, repetitive work, hard work, high stress work, and high workload. The occupational safety and health system included training to use new equipment, supervisor training, work skill training, work in sitting position for long period of time, appropriate periodic health exam, appropriate medical service, proper canteen, proper salary raise, and facilities for health promotion. In the occupational health hazards, employees were working in low temperature, bright light, and had a lack of health promotion programs. Requested programs to improve quality of life were Thai traditional massage, workplace improvement, health promotion, one-day travel, and Friday's happy and healthy program.

Conclusion: Results from the present study can be used to improve workplace environment and health of personnel in the Faculty of Medicine, Thammasat University.

Keywords: Work environment, Health needs, Office, Medical school, Personnel

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Every Faculty of Medicine in Thailand agreed to do quality assurance under Thailand Quality Award framework⁽¹⁾. This framework consisted of leadership, strategic planning, customer and market focus, measurement, analysis, and knowledge management, personnel focus, process management, and outcomes. Personnel focus consisted of personnel relationship and personnel's work environment. Personnel's work environment consisted of personnel ability and manpower, and workplace climate that included workplace health and safety. Main factors associated with workplace health and safety included workers, work conditions, and working environments, which are physical, biological, chemical, psychological

environments, and ergonomics⁽²⁻⁴⁾ International Labor Organization defined occupational health service as services entrusted with essentially preventive function and responsible for advising the employer, the workers, and their representatives in the undertaking on the requirements of physical and mental health in relation to work and the adaptation of work to the capabilities of workers in the light of their state of physical and mental health⁽⁵⁾. First International Conference on Health Promotion proposed five action means to accomplish promotion of health including building healthy public policy, creating supportive environment, community empowerment, developing personal skill, and health service re-orientation⁽⁶⁾. Study of workplace environment and health promotion needs of Faculty of Medicine's personnel would help to understand how to improve workplace climate to support Thailand Quality Award. Objectives of the present study were to study occupational health and safety hazards and control measures and to study health status and health

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promotion needs among personnel in Faculty of Medicine, Thammasat University.

Material and Method

This research was approved by Human Ethics Committee of Thammasat University (reference number 038/2554). This was a cross sectional study among supportive personnel of Faculty of Medicine, Thammasat University. Instructors were not included in the present study because of difficulty in obtaining data. Questionnaires were designed to collect demographic data, health status, health promotion needs, occupational health and safety hazards, and job demand, and control data. Job demand and control questionnaire was adapted from job content questionnaire including data about decision latitude, job demand, work environment, work development, and benefits⁽⁷⁾. Questionnaires were tested among 30 personnel from other Faculties. Reliability coefficient of the whole questionnaire was 0.83. Demographic, health status, and health promotion needs data were analyzed by using numbers and percentages. Occupational health and safety hazards and job demand and control data were analyzed by using means and standard deviations. From 4-rating scale questionnaire, occupational health and safety hazards and job demand, and control data would be defined as problems if its mean score of negative question was more than 2.5 or that of positive question was less than 2.5 (because 2.5 was mean of 1 to 4 scale).

Results

Questionnaires were sent out to all 181 personnel. There were 145 questionnaires sent back. Respond rate was 80.1%. Most of respondents were female (81.4%), aged 26 to 35 (40.7%), Buddhists (97.9%), singles (48.3%), bachelor graduates (61.4%), office workers (93.1%), and worked 8 to 10 hours per day (82.8%) (Table 1).

Health and health promotion needs data (Table 2)

For health behavior, 4.8% of them were active smokers, 1.4% of them were regular alcohol drinkers, and 15.9% had regular physical activity. Among respondents, 42.8% had physical illness or stress, 68.3% had a debt problem, 20% had some problems with coworkers or work environment, 65.5% had high workload, and 64.1% felt they did not get enough work benefits. Five most common quality of life improvement programs respondents wanted were Thai traditional massage (69%), workplace improvement (66.9%)

Table 1. Demographic data

Data	Number	%
Sex		
Male	26	17.9
Female	118	81.4
Not answer	1	0.7
Total	145	100.0
Age		
16-25 years	15	10.3
26-35 years	59	40.7
36-45 years	55	37.9
46-55 years	11	7.6
Not answer	5	3.5
Total	145	100.0
Religion		
Buddhist	142	97.9
Christian	2	1.4
Islamic	1	0.7
Total	145	100.0
Marital status		
Single	70	48.3
Married with living in same house	67	46.2
Married but living separately	5	3.5
Not answer	3	2.1
Total	145	100.0
Education		
Elementary school or lower	3	2.1
Junior high school	6	4.1
High school	20	13.8
Bachelor degree	89	61.4
Master degree or higher	23	15.9
Not answer	4	2.8
Total	145	100.0
Type of work		
Office work	135	93.1
Field work	9	6.2
Not answer	1	0.7
Total	145	100.0
Working hours in 1 day		
Less than 8 hours	17	11.7
8-10 hours	120	82.8
11-13 hours	4	2.8
14 hours or higher	1	0.7
Not answer	3	2.1
Total	145	100.0

health promotion (65.5%), one day trip (62.8%), and Friday's happy and healthy program (54.5%).

Occupational health and safety hazards

Occupational health and safety hazards that were problems (mean score of negative question was

Table 2. Health and health promotion needs data

Factors	Number	%
Cigarette smoking		
Active	7	4.8
Never	131	90.3
Ever	2	1.4
Not answer	5	3.4
Total	145	100.0
Alcohol drinking		
Drink every day	2	1.4
Drink 1-3 times a month	16	11.0
Drink less than 1 times a month	40	27.6
Never	79	54.5
Not answer	8	5.5
Total	145	100.0
Had physical activity		
Every day	23	15.9
1-3 times a month	37	25.5
Less than 1 time a month	28	19.3
Never	48	33.1
Not answer	9	6.2
Total	145	100.0
Debt problem		
Had	99	68.3
Did not have	44	30.3
Not answer	2	1.4
Total	145	100.0
Coworker/work environment problem		
Had	29	20.0
Did not have	113	77.9
Not answer	3	2.1
Total	145	100.0
Physical illness/stress		
Had	62	42.8
Did not have	82	56.6
Not answer	1	0.7
Total	145	100.0
Workload problem		
Had	95	65.5
Did not have	50	34.5
Total	145	100.0
Work benefits		
Enough	48	33.1
Not enough	93	64.1
Not answer	4	2.8
Total	145	100.0
Quality of life programs respondents wanted to have^a		
Thai traditional massage	100	69.0
Workplace improvement	97	66.9
Health promotion	95	65.5
One day trip	91	62.8

Table 2. (cont.)

Factors	Number	%
Quality of life programs respondents wanted to have^a		
Friday's happy and healthy program	79	54.5
Physical activity	74	51.0
Music therapy	64	44.1
Tree planting	60	41.4
Dharma practice	50	34.5
Family budget plan	41	28.3
Karaoke	36	24.8
Chronic disease management	31	21.4
Blood donation	30	20.7
Child rearing	27	18.6
Debt management	24	16.6
Playing games	21	14.5
Family planning	18	12.4
Smoking and alcohol cessation	10	6.9

^a Everyone could choose up to 7 items and % was percentage of 145

more than 2.5 or mean score of positive question was less than 2.5) (Table 3) were the following:

1. Cold temperature (mean 2.68)
2. Bright light (mean 2.66)
3. Proper health promotion program (mean

1.60)

Job demand and control factors

Job demand and control factors that were problems (mean score of negative question was more than 2.5 or mean score of positive question was less than 2.5) ranked by mean score were the following:

Decision latitude

1. Attention from leaders (mean 2.37)

Job demand

1. Fast-pace work (mean 3.28)
2. Coworkers relationship (mean 3.07)
3. Repetitive work (mean 2.79)
4. Difficult work (mean 2.63)
5. Stress work (mean 2.60)
6. Hard work (mean 2.55)

Work development

1. Workplace safety (mean 3.24)
2. Work-related disease prevention (mean 3.20)
3. Training to use new equipment (mean 3.10)
4. Supervisor training (mean 3.09)
5. Work skill training (mean 3.06)

Table 3. Means and standard deviations of occupational health and safety hazards

Occupational health and safety hazards	Mean	Standard deviation
Noise	2.34	0.75
Bright light	2.66	0.66
Hot temperature	2.30	0.79
Cold temperature	2.68	0.71
Vibration	1.57	0.74
Radiation	1.48	0.87
Microbial agents	1.77	0.95
Blood	1.37	0.78
Body fluid secretion	1.36	0.74
Infected materials	1.43	0.81
Chemical agents	1.58	0.95
Work stress	2.38	0.81
Work postures	2.32	0.89
Heavy lifting	2.15	0.89
Non-ergonomic tools	2.11	0.83
Sharp tools	1.40	0.64
Slip and fall	1.20	0.43
Appropriate health promotion programs	1.60	0.67

- 6. Work system improvement (mean 2.97)
- 7. Automated work system (mean 2.96)
- 8. Work objectives learning (mean 2.91)
- 9. Learn new changes in workplace (mean 2.90)
- 10. Communication with supervisors (mean 2.89)
- 11. Work process review (mean 2.72)
- 12. Work orientation for new workers (mean 2.64)

Work environment

- 1. Work in a sitting position for a prolonged period of time (mean 2.64)

Benefits

- 1. Appropriate periodic health exam (mean 2.48)
- 2. Appropriate medical service (mean 2.31)
- 3. Workplace canteen (mean 2.29)
- 4. Salary (mean 2.07)
- 5. Facilities for health promotion (mean 1.91)

Discussion

Active smokers among personnel were 4.8%. They were lower than those among the Thai population aged 15 years and higher, which were 21.4%⁽⁸⁾. Regular alcohol drinkers were 1.4% of all personnel. They were lower than those among the Thai population aged 25-59 years), which were 37.3%⁽⁸⁾. Personnel who had regular physical activity were 15.9%, which were lower than those of the Thai population aged 11 years and higher (26.1%)⁽⁹⁾. Among respondents, 42.8% had physical illness or stress, 68.3% had debt problem, 20% had some problems with coworkers or work environment, 65.5% had a high workload, and 64.1% felt they did not get enough work benefits. Thai traditional massage (69%), workplace improvement (66.9%), health promotion (65.5%), one-day trip (62.8%), and Friday's happy and healthy program (54.5%) were the five most common quality of life improvement programs respondents wanted. These results can be used to implement programs in the future.

Job demand and control factors, which were problems, included attention from leaders, work in a hurry, relationship among coworkers, repetitive work, hard work, high stress work, high workload, occupational safety and health system, training to use new equipment, supervisor training, work skill training, work in a sitting position for long period of time, appropriate periodic health exam, appropriate medical service, proper canteen, proper salary raise, and facilities for health promotion. These results showed that there was a high job demand but low decision latitude among these personnel, which could lead to high work stress if there are no proper corrective measures⁽¹⁰⁾.

Requested programs to improve quality of life were Thai traditional massage, workplace improvement, health promotion, one-day travel, and Friday's happy and healthy program. Occupational health and safety hazards were working in low temperature, bright light, and lack of health promotion programs. From the present study, appropriate measures to promote health and improve work environment should be proper health promotion programs, programs to deal with increasing extra income and reducing debt, work system to reduce high job demand, appropriate personnel's training programs, occupational health and safety system, efficient communication system within the organization, appropriate work salary and benefit system, and quality of life improvement programs.

Limitation of the present study was subjectivity of data from using questionnaires. Further study including focus group discussions might be useful to verify data. However, data from this study could be used as preliminary data to improve work environment and promote health of personnel in organization.

Authors' contribution

SB was the only author of this manuscript.

Potential conflicts of interest

None.

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ความต้องการด้านบรรยากาศการทำงานและสร้างเสริมสุขภาพของบุคลากรคณะแพทยศาสตร์ มหาวิทยาลัยธรรมศาสตร์

สุรศักดิ์ บุรณตรีเวทย์

ภูมิหลัง: ความต้องการด้านบรรยากาศการทำงานและสร้างเสริมสุขภาพเป็นปัจจัยสำคัญสำหรับคุณภาพชีวิตของคนทำงาน

วัตถุประสงค์: วัตถุประสงค์ของการวิจัยเพื่อศึกษาถึงสิ่งคุกคามต่อสุขภาพ ความปลอดภัย และการป้องกันภัยของสถานที่ทำงานในคณะแพทยศาสตร์ มหาวิทยาลัยธรรมศาสตร์ และศึกษาถึงสุขภาพ และความต้องการด้านสร้างเสริมสุขภาพของบุคลากรในคณะแพทยศาสตร์ มหาวิทยาลัยธรรมศาสตร์

วัสดุและวิธีการ: รูปแบบการวิจัยเป็นการศึกษาแบบตัดขวาง อาศัยแบบสอบถามสุขภาพ และความต้องการด้านสร้างเสริมสุขภาพของบุคลากร ประกอบด้วยข้อมูลปัจจัยส่วนบุคคล ข้อมูลสุขภาพและความต้องการด้านสุขภาพ สิ่งคุกคามต่อสุขภาพในที่ทำงาน และความต้องการและความสามารถในการทำงาน และแบบสำรวจสิ่งคุกคามต่อสุขภาพ ความปลอดภัย และการป้องกันภัยของสถานที่ทำงาน

ผลการศึกษา: บุคลากรคณะแพทยศาสตร์ มหาวิทยาลัยธรรมศาสตร์มีปัญหาเจ็บป่วย/ความเครียด ร้อยละ 42.8 มีหนี้สิน ร้อยละ 68.3 มีปัญหากับเพื่อนร่วมงาน/สภาพแวดล้อม ร้อยละ 20 มีปัญหาภาระงาน ร้อยละ 65.5 สวัสดิการไม่เพียงพอ ร้อยละ 64.1 ปัจจัยด้านความต้องการและความสามารถในการทำงานที่เป็นปัญหาที่พบมาก คือ การได้รับความใส่ใจจากผู้บริหาร/หัวหน้า ความรีบเร่งในการทำงาน ความสัมพันธ์ในการทำงานระหว่างเพื่อนร่วมงาน งานที่ซ้ำซาก งานมีความยากลำบาก งานมีความเครียด และงานหนัก ระบบความปลอดภัยในการทำงาน ระบบป้องกันการเกิดโรคจากการทำงาน พัฒนาความชำนาญในการใช้อุปกรณ์ใหม่ๆ ฝึกอบรมหัวหน้างาน ฝึกอบรมเพื่อพัฒนาทักษะการทำงาน นั่งทำงานเป็นเวลานาน ตรวจสอบสุขภาพประจำปีอย่างเหมาะสม บริการทางการแพทย์ที่เหมาะสม อาหารกลางวันมีความเหมาะสม เลื่อนขั้นเงินเดือนหรือเงินเดือนที่ได้รับ และใช้พื้นที่ส่วนกลางอย่างคุ้มค่า ปัจจัยสิ่งคุกคามต่อสุขภาพที่เป็นปัญหา คือ อุณหภูมิในที่ทำงานเย็น แสงสว่างในที่ทำงานจ้า และการขาดกิจกรรมสร้างเสริมสุขภาพ กิจกรรมพัฒนาและส่งเสริมคุณภาพชีวิตที่ต้องการมากที่สุด ได้แก่ นวดแผนไทย ปรับปรุงที่ทำงานให้น่าอยู่ ส่งเสริมสุขภาพท่องเที่ยววันเดียวทั่ววัน และศุกร์ธรรมดา เช่น กีฬา บันเทิง

สรุป: ผลจากการศึกษานี้สามารถนำไปใช้เพื่อพัฒนาสภาพแวดล้อมในการทำงานและสุขภาพของบุคลากรในคณะแพทยศาสตร์ มหาวิทยาลัยธรรมศาสตร์ต่อไป
