2. International COPSOQ Survey Network Research Stories
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Association between Psychosocial Risks and Eating Quality and physical activity

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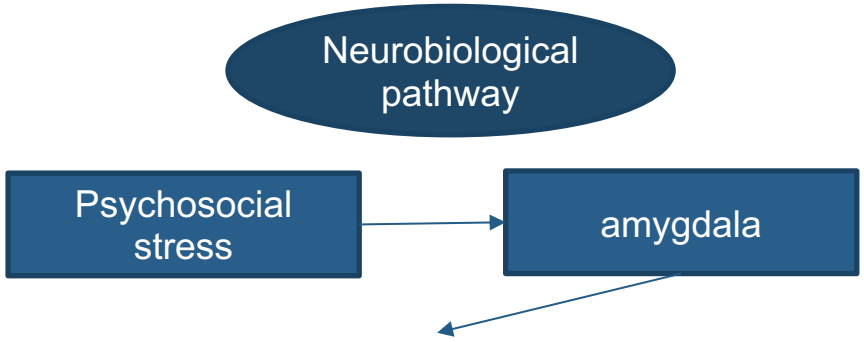
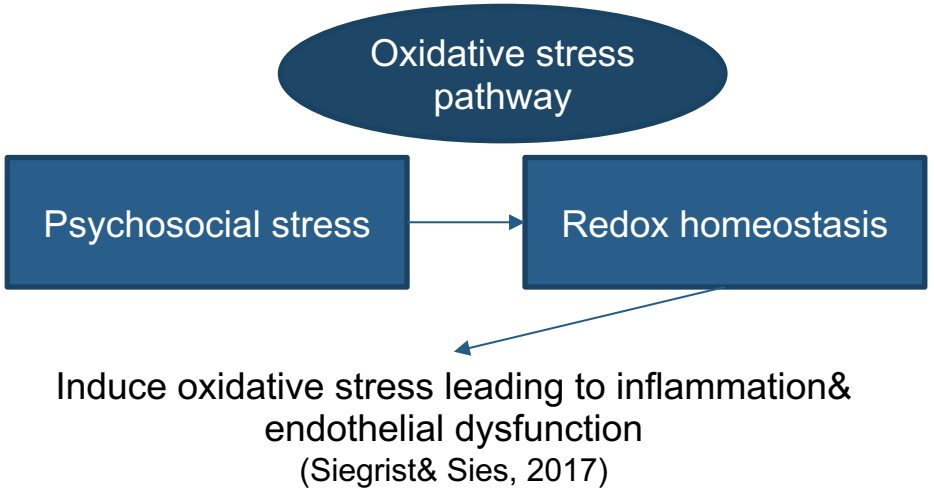
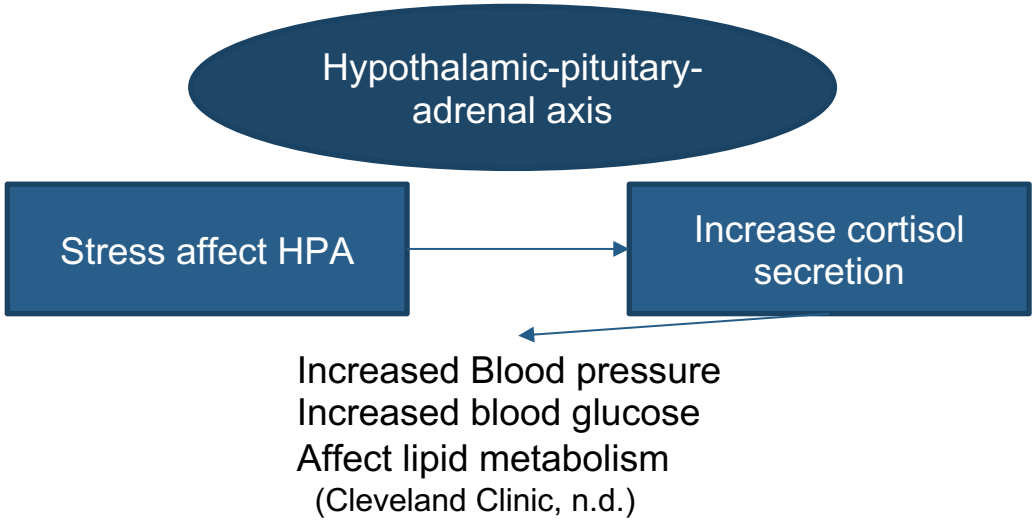
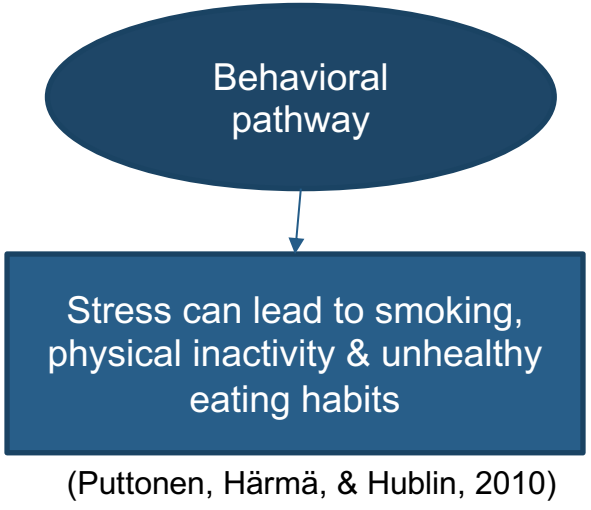
Background information

- Psychosocial risks affect health adversely
  - Work stress is associated with cardiovascular risk factors i.e., hypertension, hyperlipidemia, overweight (Niedhammer et al., 1998)
  - Job strain, long working hours are linked to higher risk of cardiovascular disease ((Kivimäki & Kawachi, 2015)


Neurobiological pathway
Psychosocial stress
amygdala
Heightened activity in hematopoietic tissue
Arterial inflammation
(Dar et al., 2019)


Oxidative stress pathway
Psychosocial stress
Redox homeostasis
Induce oxidative stress leading to inflammation& endothelial dysfunction
(Siegrist& Sies, 2017)


Hypothalamic-pituitary-adrenal axis
Stress affect HPA
Increase cortisol secretion
Increased Blood pressure
Increased blood glucose
Affect lipid metabolism
(Cleveland Clinic, n.d.)


Behavioral pathway
Stress can lead to smoking, physical inactivity & unhealthy eating habits
(Puttonen, Härmä, & Hublin, 2010)

Importance of the study

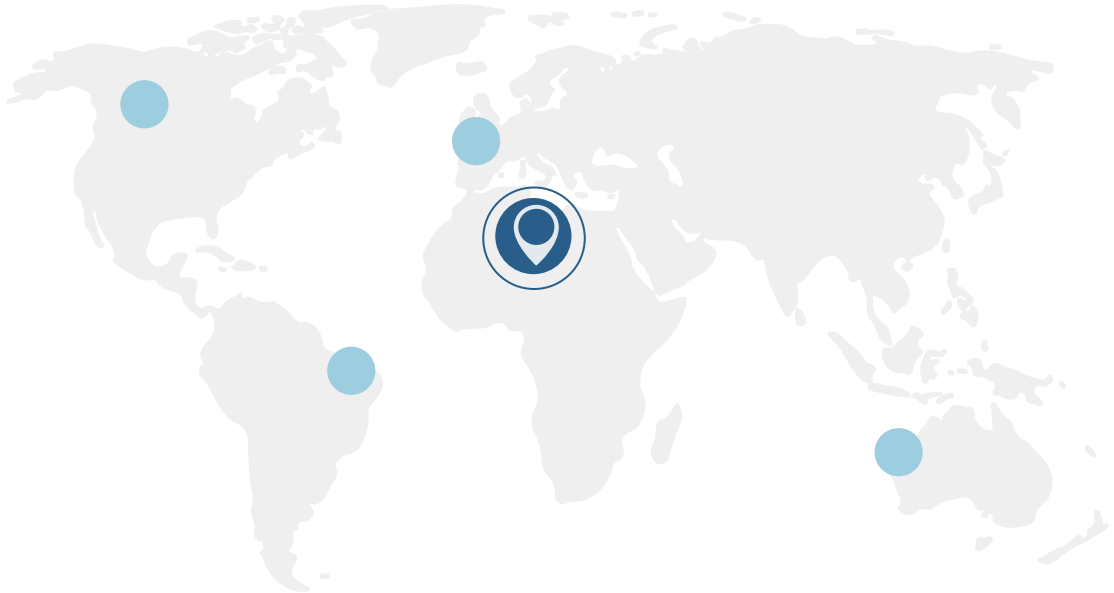
- Limited research on the topic
- Scarcity of research in African countries, particularly Libya
- Emphasis on allocating more resources and attention to this area
- Less than 30% of developing countries have explicit regulation on psychosocial hazards compared to 82.3% of EU member countries
- Significant difference in regulations leads to unequal levels of workers' protection which adversely affects global health.

(Chirico, et al., 2019)

Country study

- **Libya**

located in North Africa.
Capital : Tripoli
Language : Arabic



Working population: 1,956,577
Regulations and Challenges in Implementation

Recently, a new research trend is being initiated in different fields in response to the observed lack of scientific resources, aiming to address and mitigate gaps across multiple studies.

Sectors	%
Agriculture	0.1
Construction	0.5
Education	26
Human health and social work	8
Manufacture	6

(Bureau of Statistics and Census-Libya, 2022)

AIM OF THE STUDY

- Association between
  - Psychosocial risks and diet quality
  - Psychosocial risks and physical activity
- Health care workers

Methodology

Study Population

260 medical staff at the Burns & Plastic Surgery Hospital in Tripoli, representing approximately 70% of the hospital's total medical staff

Psychosocial risks

COPSOQ II short version

Diet quality

The short version of the Healthy Eating Index (sHEI)

Methodology

Physical activity

Godin Leisure time physical activity questionnaire

Anthropometric measurements

Seca scale and non stretchable tape

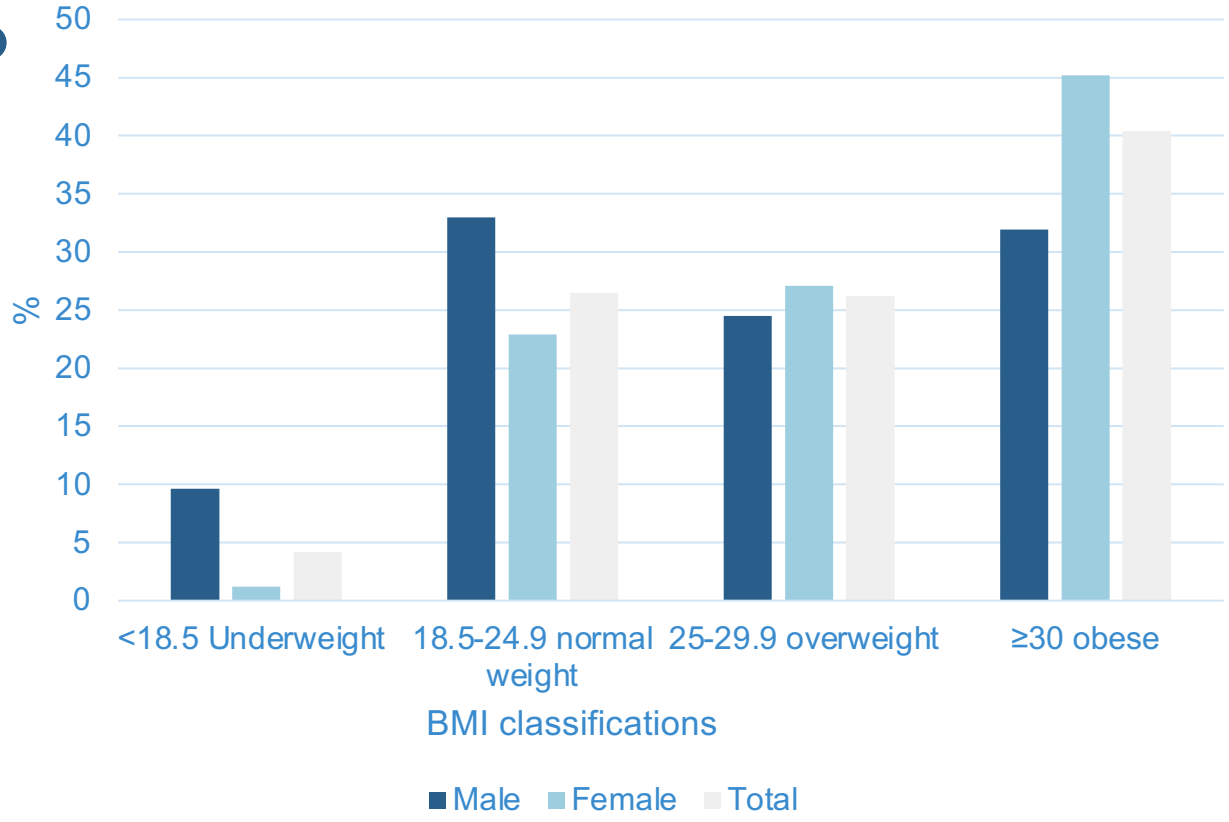
Statistical analysis

- Descriptive statistics
- Psychosocial Risks X HEI scores (T independent test)
- Psychosocial Risks X physical Activity (Chi square)
- Psychosocial Risks X mental Health outcomes (chi square)

Characteristics	Mean± SD	Characteristics	Frequency (%)
Mean age	35.8 ±10	Gender: Male Female	 94 (36.2) 166 (63.8)
Years of work at hospital	10.4±8.9	Marital status: Single Married	 126 (48.5%) 122 (46.9%)
		Occupation type: Doctors Nurses Technicians Others	 41 (15.8%) 114 (43.8%) 58 (22.3%) 47 (18.1%)
		Health issues NO YES	 194 (74.6%) 66 (25.4%)
		Smoking status NO YES QUIT	 206 (79.2%) 45 (17.3%) 9 (3.5%)

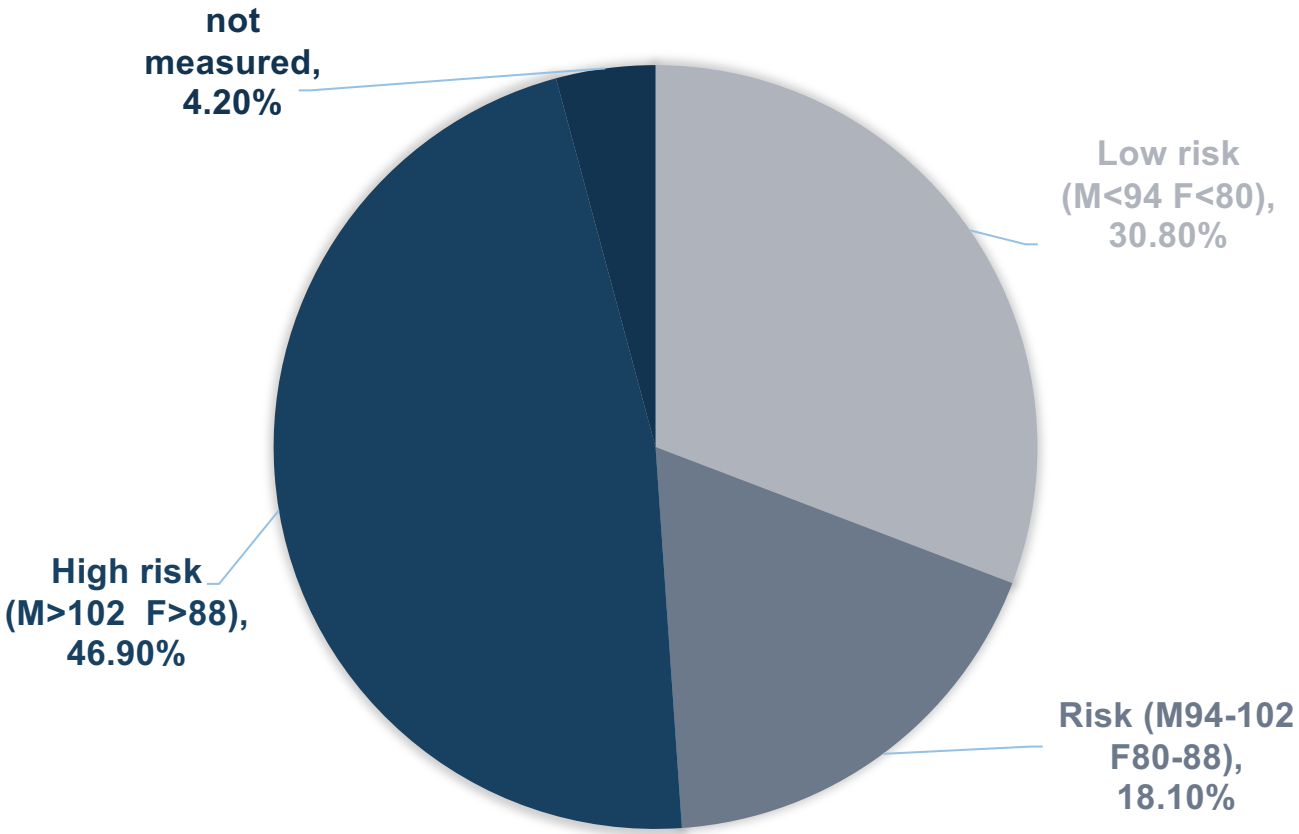
FINDINGS

BMI Distribution by Gender with Accurate Representation



(Own illustration)

Waist Circumference Risk



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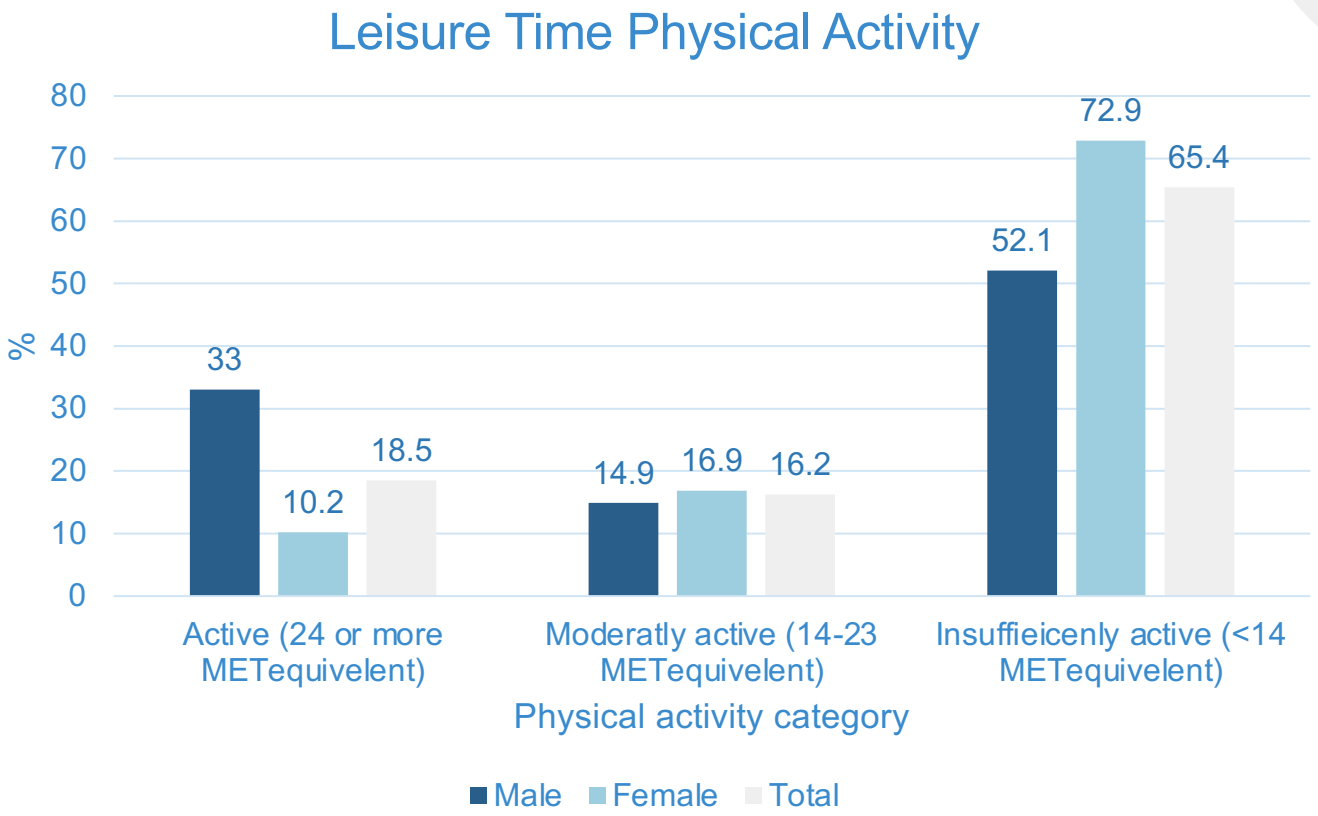

(Own illustration)

Psychosocial risks and sHEI score

Domain	males			Females			Total		
	Mean	SE	P- value	Mean	SE	P-value	Mean	SE	P-value
Meaning of work	3.2	2.2	0.137	3.2	1.6	**0.042**	3.2	1.3	**0.011**
Predictability	5.3	2.3	**0.024**	-1.1	1.5	0.473	0.283	1.3	0.825
Trust in management	6.6	2.0	**0.002**	-0.73	1.5	0.635	1.8	1.3	0.159
Health outcomes in COPSOQ									
Stress	2.1	2.2	0.350	3.5	1.5	**0.021**	2.6	1.3	**0.037**
Depressive symptoms	2.7	2.1	0.205	3.9	1.5	**0.010**	3.3	1.3	**0.009**

Psychosocial risks and physical activity

COPSOQ DOMAIN	P value		Physical activity category		
			Active n (%)	Moderate n (%)	Sedentary n (%)
Trust in management (vertical trust)	0.050	Low	24 (18.5)	14 (10.8)	92 (70.8)

COPSOQ DOMAIN		Males				Females			
		Active n (%)	Moderate n (%)	Sedentary n (%)	P value	Active n (%)	Moderate n (%)	Sedentary n (%)	P value
Trust in management (vertical trust)	Low	17 (34.7)	6 (12.2)	26 (53.1)	0.725	7 (8.6)	8 (9.9)	66 (81.5)	**0.037**
	High	14 (31.8)	8 (18.2)	22 (50.0)		10 (11.8)	20 (23.5)	55 (64.7)	
Commitment to the workplace	Low	16 (29.6)	9 (16.7)	29 (53.7)	0.684	8 (9.2)	7 (8.0)	72 (82.8)	**0.004**
	High	15 (37.5)	5 (12.5)	20 (50.0)		9 (11.4)	21 (26.6)	49 (62.0)	

COPSOQ domains and Depressive symptoms

COPSOQ DOMAIN	P value		Depressive symptoms exposure	
			Frequency (percent)	
			Low	High
Work-family conflict	0.002	**Low**	76 (61.8)	47 (38.2)
		High	58 (42.6)	78 (57.4)
Emotional demands	0.010	**Low**	76 (59.8)	51 (40.2)
		High	58 (43.9)	74 (56.1)
Meaning of work	0.025	**Low**	89 (57.4)	66 (42.6)
		High	45 (43.3)	59 (56.7)

COPSOQ AND STRESS

COPSOQ DOMAIN	P value		Stress exposure	
			Frequency (percent)	
			Low	High
Work-family conflict	0.035	**Low**	74 (60.2)	49 (39.8)
		High	64 (47.1)	72 (52.9)
Justice	0.035	**Low**	67 (60.9)	43 (39.1)
		High	71 (47.7)	78 (52.3)
Possibility for development	0.044	**Low**	90 (58.4)	64 (41.6)
		High	48 (45.7)	57 (54.3)
Supervisor support (vertical support)	0.052	**Low**	85)58.6)	60 (41.4)
		High	53 (46.5)	61 (53.5)

COPSOQ AND BURNOUT

COPSOQ DOMAIN	P value		Burnout exposure	
			Frequency (percent)	
			Low	High
Work-family conflict	0.000	**Low**	87 (70.7)	36 (29.3)
		High	51 (37.5)	85 (62.5)
Work pace	0.000	**Low**	89 (63.6)	51 (36.4)
		High	49 (41.2)	70 (58.8)
Emotional demands	0.000	**Low**	84 (66.1)	43 (33.9)
		High	54 (40.9)	78 (59.1)
Quantitative demands	0.000	**Low**	89 (63.6)	51 (36.4)
		High	49 (41.2)	70 (58.8)
Influence	0.054	**Low**	52 (46.4)	60 (53.6)
		High	86 (58.5)	61 (41.5)

COPSOQ AND SLEEPING TROUBLES

COPSOQ DOMAIN	P value		Sleeping troubles exposure	
			Frequency (percent)	
			Low	High
Work-family conflict	0.005	**Low**	71 (57.7)	52 (42.3)
		High	55 (40.4)	81 (59.6)
Justice	0.008	**Low**	64 (58.2)	46 (41.8)
		High	62 (41.6)	87 (58.4)
Recognition	0.050	**Low**	75 (54.3)	63 (45.7)
		High	51 (42.1)	70 (57.9)
Predictability	0.005	**Low**	84 (56.0)	66 (44.0)
		High	42 (38.5)	67 (61.5)
Commitment to the workplace	0.000	**Low**	84 (59.6)	57 (40.4)
		High	42 (35.6)	76 (64.4)

Summary of findings

- Only one psychosocial risk (meaning of work) showed a significant difference in means when analyzing with diet quality
  - Gender difference
  - Predictability & vertical trust in men
  - Meaning of work in women
- Two psychosocial risks (vertical trust & commitment to workplace) contributed to physical activity category
  - Gender difference
  - Only women had a significant p-value for both risks

Implications and discussion

- There is a need for workplace interventions
- Cultural adaptation of health promotion programs
- Future research

Effectiveness of workplace interventions

- Systematic review found that it is possible to influence work related outcomes positively through health promotion (Grimani, et al., 2019)

Limitations and challenges

- Sample diversity
- Cross-Sectional design
- Self-reported data
- COPSOQ short version

Conclusion

Study Insights: Significant difference in means between psychosocial risks and eating habits. And an association between psychosocial risks and physical activity was observed.

Gender-Specific Findings: Differences in responses to psychosocial risks between genders highlight the need for tailored interventions.

Call to Action:
Urges policymakers and healthcare administrators to integrate psychosocial risks into health promotion strategies.
Advocates for multi-level interventions targeting both individual and environmental factors to improve healthcare worker well-being and productivity.

Future Research: Encourages further exploration of these associations and effectiveness of specific interventions to develop sustainable health practices.

Libya

Libya emerged as Africa's happiest country in the annual World Happiness Report for 2024

Thanks

Do you have any questions?

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