

Emotional distress symptoms and their determinants: Screening of non-clinical hospital staff in an Egyptian University Hospital

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Supplementary Tables

Supplementary table 1: Insufficient income correlates

	Total	Insufficient income			
	(N=462) (column%)	N=335 (72.5%) (column%)	OR (95% CI) *	P-Value	(row %)
Age groups					
18 – 30 years	70 (15.2)	47 (14.0)	Ref.		67.1
31 – 45 years	164 (35.5)	123 (36.7)	1.11 (0.57-2.17)	0.763	75.0
46 – 60 years	228 (49.4)	165 (49.3)	0.87 (0.46-1.66)	0.675	72.4
Gender					
Men	171 (37.0)	124 (37.0)	Ref.		72.5
Women	291 (63.0)	211 (63.0)	0.94 (0.60-1.47)	0.770	72.5
Level of education					
Less than university	183 (39.6)	144 (43.0)	Ref.		78.7
University or higher	279 (60.4)	191 (57.0)	0.52 (0.32-0.84)	0.007	68.5
Job categories					
Workers	17 (3.7)	13 (3.9)	1.99 (0.44-9.05)	0.372	76.5
Technicians	81 (17.5)	55 (16.4)	1.63 (0.57-4.67)	0.367	67.9
Administrative	344 (74.5)	257 (76.7)	2.89 (1.06-7.87)	0.037	74.7
Engineers and IT professionals	20 (4.3)	10 (3.0)	Ref.		50.0

* Multivariable logistic regression was used including age groups, gender, educational level, and job categories in the model. IT: Information Technology. OR: odds ratio. CI: confidence interval

Supplementary Table 2: Correlates of severe/potentially dangerous job stress level

	Total	Severe/Potentially dangerous job stress			
	N. = 462	N. = 139 (column%)	OR (95% CI)*	P-Value	Row %
Age groups					
18 – 30 years	70 (15.2)	24 (17.3)	Ref.		34.3
31 – 45 years	164 (35.5)	53 (38.1)	0.92 (0.51-1.66)	0.769	32.3
46 – 60 years	228 (49.4)	62 (44.6)	0.72 (0.40-1.27)	0.253	27.2
Gender					
Women	291 (63.0)	86 (61.9)	Ref.		29.6
Men	171 (37.0)	53 (38.1)	1.07 (0.71-1.61)	0.744	31.0
Job categories					
Workers	17 (3.7)	4 (2.9)	1.74 (0.33-9.19)	0.512	23.5
Technicians	81 (17.5)	28 (20.1)	2.99 (0.81-11.10)	0.101	34.6
Administrative	344 (74.5)	104 (74.8)	2.46 (0.70-8.56)	0.159	30.2
Engineers and IT professionals	20 (4.3)	3 (2.2)	Ref.		15.0

*Binary logistic regression was used

Supplementary Table 3: Depression, Anxiety and Stress: Bivariate analysis by demographic characteristics and job stress levels

	Total group	Depression (Any level)			Anxiety (Any level)			Stress (Any level)		
	N. = 462	N.= 312 Overall prevalence = 67.5%			N.= 319 Overall prevalence = 69.0%			N.= 239 Overall prevalence = 51.7%		
		95% CI (63.2% - 71.7%)			95% CI (64.7% - 73.1%)			95% CI (47.1% - 56.3%)		
	n. (column %)	n. (column %)	Unadjusted OR (95% CI) *	P-Value	n. (column %)	Unadjusted OR (95% CI) *	P-Value	n. (column %)	Unadjusted OR (95% CI) *	P-Value
Age										
18 – 30 years	70 (15.2)	51 (16.3)	Ref.		52 (16.3)	Ref.		46 (19.2)	Ref.	
31 – 45 years	164 (35.5)	115 (36.9)	0.87 (0.47-1.63)	0.673	114 (35.7)	0.79 (0.42-1.48)	0.462	95 (39.7)	0.72 (0.40-1.29)	0.266
46 – 60 years	228 (49.4)	146 (46.8)	0.66 (0.37-1.20)	0.174	153 (48.0)	0.71 (0.39-1.29)	0.258	98 (41.0)	0.39 (0.23-0.69)	0.001
Gender										
Men	171 (37.0)	110 (35.3)	Ref.		104 (32.6)	Ref.		91 (38.1)	Ref.	
Women	291 (63.0)	202 (64.7)	1.26 (0.84-1.88)	0.260	215 (67.4)	1.82 (1.22-2.73)	0.004	148 (61.9)	0.91 (0.62-1.33)	0.624
Marital status										
Un-married	89 (19.3)	62 (19.9)	Ref.		58 (18.2)	Ref.		46 (19.2)	Ref.	
Married	373 (80.7)	250 (80.1)	0.89 (0.54-1.46)	0.633	261 (81.8)	1.25 (0.76-2.03)	0.379	193 (80.8)	1.00 (0.63-1.59)	0.992
Residence										
Rural/urban slum	60 (13.0)	36 (11.5)	Ref.		46 (14.4)	Ref.		38 (15.9)	Ref.	
Urban	402 (87.0)	276 (88.5)	1.46 (0.84-2.55)		273 (85.6)	0.64 (0.34-1.21)	0.174	201 (84.1)	0.58 (0.33-1.01)	0.056
Educational level										
Less than university	183 (39.6)	125 (40.1)	Ref.		128 (40.1)	Ref.		95 (39.7)	Ref.	
University or higher	279 (60.4)	187 (59.9)	0.94 (0.63-1.41)	0.774	191 (59.9)	0.93 (0.62-1.40)	0.735	144 (60.3)	0.99 (0.68-1.44)	0.95
Job categories										
Workers	17 (3.7)	12 (3.8)	3.60 (0.91-14.23)	0.068	12 (3.8)	1.96 (0.50-7.69)	0.333	12 (5.0)	4.46 (1.11-17.90)	0.035
Technicians	81 (17.5)	60 (19.2)	4.29 (1.54-11.93)	0.005	59 (18.5)	2.19 (0.80-6.01)	0.126	49 (20.5)	2.84 (1.02-7.90)	0.045
Administrative	344 (74.5)	232 (74.4)	3.11 (1.24-7.82)	0.016	237 (74.3)	1.81 (0.73-4.50)	0.2	171 (71.5)	1.84 (0.72-4.71)	0.207
Engineers and IT professionals	20 (4.3)	8 (2.6)	Ref.		11 (3.4)	Ref.		7 (2.9)	Ref.	

Income										
In debt	97 (21.0)	82 (26.3)	7.95 (3.09-20.45)	<0.0001	78 (24.5)	5.13 (2.07-12.75)	<0.0001	65 (27.2)	3.45 (1.42-8.40)	0.006
Just meet routine expenses	238 (51.5)	167 (53.5)	3.42 (1.51-7.74)	0.003	169 (53.0)	3.06 (1.36-6.88)	0.007	125 (52.3)	1.88 (0.83-4.28)	0.132
Meet routine and emergency expenses	100 (21.6)	52 (16.7)	1.58 (0.67-3.73)	0.301	60 (18.8)	1.88 (0.80-4.42)	0.151	39 (16.3)	1.09 (0.45-2.62)	0.853
Able to save/invest money	27 (5.8)	11 (3.5)	Ref.		12 (3.8)	Ref.		10 (4.2)	Ref.	
Socioeconomic status										
Low	18 (3.9)	12 (3.8)	1.06 (0.36-3.14)	0.918	14 (4.4)	2.19 (0.66-7.27)	0.202	14 (5.9)	4.30 (1.30-14.24)	0.017
Middle	366 (79.2)	249 (79.8)	1.13 (0.67-1.89)	0.650	257 (80.6)	1.47 (0.89-2.45)	0.135	190 (79.5)	1.33 (0.81-2.17)	0.260
High	78 (16.9)	51 (16.3)	Ref.		48 (15.0)	Ref.		35 (14.6)	Ref.	
Job Stress Level										
Relatively Calm	57 (12.3)	19 (6.1)	Ref.		25 (7.8)	Ref.		12 (5.0)	Ref.	
Fairly Low	117 (25.3)	60 (19.2)	2.11 (1.09-4.07)	0.027	67 (21.0)	1.72 (0.91-3.25)	0.098	31 (13.0)	1.35 (0.63-2.88)	0.436
Moderate	149 (32.3)	105 (33.7)	4.77 (2.48-9.18)	<0.0001	107 (33.5)	3.26 (1.73-6.14)	<0.0001	84 (35.1)	4.85 (2.37-9.90)	<0.0001
Severe	104 (22.5)	95 (30.4)	21.11 (8.78-50.79)	<0.0001	88 (27.6)	7.04 (3.34-14.85)	<0.0001	82 (34.3)	13.98 (6.33-30.85)	<0.0001
Potentially Dangerous	35 (7.6)	33 (10.6)	33.00 (7.15-152.38)	<0.0001	32 (10.0)	13.65 (3.74-49.80)	<0.0001	30 (12.6)	22.5 (7.19-70.42)	<0.0001
Effort-reward imbalance										
Yes (any)	253 (54.8)	196 (62.8)	2.76 (1.85-4.12)	<0.0001	196 (61.4)	2.40 (1.61-3.60)	<0.0001	161 (67.4)	2.94 (2.01-4.30)	<0.0001
Financial	229 (49.6)	179 (57.4)	2.69 (1.79-4.04)	<0.0001	179 (56.1)	2.38 (1.58-3.58)	<0.0001	145 (60.7)	2.55 (1.75-3.71)	<0.0001
Emotional	146 (31.6)	114 (36.5)	2.12 (1.35-3.34)	0.001	118 (37.0)	2.41 (1.51-3.86)	<0.0001	102 (42.7)	3.03 (1.99-4.60)	<0.0001

* Binary logistic regression was used for their calculation

Supplementary Table 4: Depression, Anxiety and Stress: Bivariate analysis by individual job stressors

	Total group	Depression (Any level)			Anxiety (Any level)			Stress (Any level)		
	N. = 462	N.= 312 Overall prevalence = 67.5%			N.= 319 Overall prevalence = 69.0%			N.= 239 Overall prevalence = 51.7%		
		95% CI (63.2% - 71.7%)			95% CI (64.7% - 73.1%)			95% CI (47.1% - 56.3%)		
	n. (column %)	n. (column %)	Unadjusted OR (95% CI) *	P-Value	n. (column %)	Unadjusted OR (95% CI) *	P-Value	n. (column %)	Unadjusted OR (95% CI) *	P-Value
Unpleasant/unsafe work conditions										
Never	47 (10.2)	16 (5.1)	Ref.		19 (6.0)	Ref.		10 (4.2)	Ref.	
Rarely	69 (14.9)	31 (9.9)	1.58 (0.73-3.41)	0.242	38 (11.9)	1.81 (0.85-3.83)	0.123	21 (8.8)	1.62 (0.68-3.85)	0.276
Sometimes	221 (47.8)	153 (49.0)	4.36 (2.24-8.50)	<0.0001	152 (47.6)	3.25 (1.70-6.21)	<0.0001	107 (44.8)	3.47 (1.65-7.33)	0.001
Often	71 (15.4)	61 (19.6)	11.82 (4.80-29.09)	<0.0001	61 (19.1)	8.99 (3.70-21.82)	<0.0001	60 (25.1)	20.18 (7.81-52.15)	<0.0001
Very often	54 (11.7)	51 (16.3)	32.94 (8.88-122.25)	<0.0001	49 (15.4)	14.44 (4.86-42.92)	<0.0001	41 (17.2)	11.67 (4.57-29.77)	<0.0001
Job negatively affects physical/emotional wellbeing										
Never	101 (21.9)	49 (15.7)	Ref.		50 (15.7)	Ref.		28 (11.7)	Ref.	
Rarely	60 (13.0)	35 (11.2)	1.49 (0.78-2.83)	0.299	39 (12.2)	1.89 (0.98-3.66)	0.057	24 (10.0)	1.74 (0.88-3.42)	0.109
Sometimes	163 (35.3)	105 (33.7)	1.92 (1.16-3.18)	0.011	109 (34.2)	2.06 (1.24-3.42)	0.005	78 (32.6)	2.39 (1.40-4.08)	0.001
Often	72 (15.6)	62 (19.9)	6.58 (3.04-14.26)	<0.0001	60 (18.8)	5.10 (2.45-10.61)	<0.0001	59 (24.7)	11.83 (5.64-24.85)	<0.0001
Very often	66 (14.3)	61 (19.6)	12.95 (4.80-34.90)	<0.0001	61 (19.1)	12.44 (4.62-33.55)	<0.0001	50 (20.9)	8.15 (4.00-16.60)	<0.0001
Having much work/unreasonable deadlines										
Never	71 (15.4)	31 (9.9)	Ref.		35 (11.0)	Ref.		17 (7.1)	Ref.	
Rarely	90 (19.5)	60 (19.2)	2.58 (1.36-4.90)	0.004	59 (18.5)	1.96 (1.04-3.70)	0.039	42 (17.6)	2.78 (1.40-5.51)	0.003
Sometimes	168 (36.4)	118 (37.8)	3.05 (1.72-5.41)	<0.0001	123 (38.6)	2.81 (1.58-5.01)	<0.0001	92 (38.5)	3.85 (2.06-7.18)	<0.0001
Often	73 (15.8)	52 (16.7)	3.20 (1.60-6.37)	0.001	54 (16.9)	2.92 (1.45-5.89)	0.003	42 (17.6)	4.30 (2.10-8.81)	<0.0001
Very often	60 (13.0)	51 (16.3)	7.31 (3.13-17.10)	<0.0001	48 (15.0)	4.11 (1.88-9.02)	<0.0001	46 (19.2)	10.44 (4.65-23.45)	<0.0001
Difficult to express opinions/feelings about job conditions to superiors										
Never	103 (22.3)	41 (13.1)	Ref.		57 (17.9)	Ref.		25 (10.5)	Ref.	
Rarely	70 (15.2)	40 (12.8)	2.02 (1.09-3.73)	0.026	43 (13.5)	1.29 (0.69-2.39)	0.426	29 (12.1)	2.21 (1.15-4.25)	0.018
Sometimes	113 (24.5)	84 (26.9)	4.38 (2.46-7.81)	<0.0001	79 (24.8)	1.88 (1.07-3.28)	0.028	56 (23.4)	3.07 (1.71-5.49)	<0.0001
Often	98 (21.2)	73 (23.4)	4.42 (2.42-8.06)	<0.0001	72 (22.6)	2.24 (1.24-4.05)	0.008	64 (26.8)	5.87 (3.18-10.84)	<0.0001
Very often	78 (16.9)	74 (23.7)	27.98 (9.49-82.44)	<0.0001	68 (21.3)	5.49 (2.54-11.84)	<0.0001	65 (27.2)	15.60 (7.39-32.92)	<0.0001

Job pressures interfere with family/personal life										
Never	105 (22.7)	43 (13.8)	Ref.		47 (14.7)	Ref.		17 (7.1)	Ref.	
Rarely	81 (17.5)	43 (13.8)	1.63 (0.91-2.93)	0.101	57 (17.9)	2.93 (1.59-5.41)	0.001	30 (12.6)	3.05 (1.53-6.06)	0.002
Sometimes	135 (29.2)	104 (33.3)	4.84 (2.77-8.46)	<0.0001	95 (29.8)	2.93 (1.72-5.00)	<0.0001	86 (36.0)	9.09 (4.86-17.00)	<0.0001
Often	75 (16.2)	61 (19.6)	6.28 (3.12-12.64)	<0.0001	61 (19.1)	5.38 (2.68-10.79)	<0.0001	51 (21.3)	11.00 (5.41-22.39)	<0.0001
Very often	66 (14.3)	61 (19.6)	17.59 (6.53-47.40)	<0.0001	59 (18.5)	10.40 (4.35-24.90)	<0.0001	55 (23.0)	25.88 (11.29-59.35)	<0.0001
Having adequate control/input over work duties [†]										
Never	32 (6.9)	16 (5.1)	0.74 (0.35-1.58)	0.439	18 (5.6)	0.70 (0.33-1.50)	0.359	10 (4.2)	0.52 (0.23-1.16)	0.112
Rarely	34 (7.4)	25 (8.0)	2.06 (0.91-4.68)	0.083	27 (8.5)	2.10 (0.86-5.09)	0.102	23 (9.6)	2.40 (1.10-5.21)	0.027
Sometimes	66 (14.3)	51 (16.3)	2.53 (1.32-4.83)	0.005	51 (16.0)	1.85 (0.96-3.56)	0.065	32 (13.4)	1.08 (0.61-1.90)	0.793
Often	154 (33.3)	119 (38.1)	2.53 (1.56-4.08)	<0.0001	109 (34.2)	1.32 (0.83-2.10)	0.245	92 (38.5)	1.70 (1.10-2.64)	0.017
Very often	176 (38.1)	101 (32.4)	Ref.		114 (35.7)	Ref.		82 (34.3)	Ref.	
Receive appropriate recognition/rewards for good performance [†]										
Never	118 (25.5)	91 (29.2)	2.05 (1.09-3.88)	0.027	90 (28.2)	1.54 (0.81-2.94)	0.188	73 (30.5)	2.38 (1.31-4.31)	0.004
Rarely	100 (21.6)	69 (22.1)	1.36 (0.72-2.55)	0.347	73 (22.9)	1.30 (0.67-2.50)	0.437	61 (25.5)	2.29 (1.24-4.24)	0.008
Sometimes	106 (22.9)	69 (22.1)	1.14 (0.61-2.10)	0.687	66 (20.7)	0.79 (0.42-1.48)	0.465	48 (20.1)	1.21 (0.67-2.22)	0.528
Often	64 (13.9)	37 (11.9)	0.83 (0.42-1.65)	0.603	40 (12.5)	0.80 (0.40-1.61)	0.533	27 (11.3)	1.07 (0.54-2.11)	0.845
Very often	74 (16.0)	46 (14.7)	Ref.		50 (15.7)	Ref.		30 (12.6)	Ref.	
Utilize skills/talents to full extent at work [†]										
Never	41 (8.9)	32 (10.3)	2.96 (1.33-6.63)	0.008	30 (9.4)	1.79 (0.83-3.84)	0.135	22 (9.2)	1.59 (0.79-3.17)	0.192
Rarely	38 (8.2)	31 (9.9)	3.69 (1.53-8.89)	0.004	24 (7.5)	1.12 (0.54-2.34)	0.754	24 (10.0)	2.35 (1.13-4.88)	0.022
Sometimes	104 (22.5)	86 (27.6)	3.98 (2.19-7.25)	<0.0001	87 (27.3)	3.36 (1.82-6.19)	<0.0001	59 (24.7)	1.80 (1.09-2.97)	0.023
Often	125 (27.1)	79 (25.3)	1.43 (0.88-2.32)	0.145	85 (26.6)	1.39 (0.85-2.29)	0.189	69 (28.9)	1.69 (1.05-2.72)	0.031
Very often	154 (33.3)	84 (26.9)	Ref.		93 (29.2)	Ref.		65 (27.2)	Ref.	

* Binary logistic regression was used for their calculation

[†] Reverse scoring was used

Power calculation

The power calculation for the sample to detect a difference between job categories. Calculation is based on the distribution of depression within job categories (snapshots from output of OpenEpi power calculator).

Start	Enter	Results	Examples	Help
Power for Cross-Sectional Studies				
			Input Data	
Two sided-confidence interval (%)			95	
Number of Exposed			81	
Prevalence/Coverage among Exposed (%)			74	
Number of Non-exposed			20	
Prevalence/Coverage among Non-exposed (%)			40	
Prevalence/Coverage Ratio			1.9	
Prevalence Difference (%) ¹			34	
Power based on:				
Normal approximation			83.74%	
Normal approximation with continuity correction			75.55%	
¹ Prevalence Difference = Prevalence in Exposed - Prevalence in Non-exposed.				
Results from OpenEpi, Version 3, open source calculator--PowerCross				
Print from the browser with ctrl-P				
or select text to copy and paste to other programs.				

Technicians vs. Engineers/IT professional

Start	Enter	Results	Examples	Help
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Power for Cross-Sectional Studies	
	Input Data
Two sided-confidence interval (%)	95
Number of Exposed	17
Prevalence/Coverage among Exposed (%)	71
Number of Non-exposed	20
Prevalence/Coverage among Non-exposed (%)	40
Prevalence/Coverage Ratio	1.8
Prevalence Difference (%) ¹	31
Power based on:	
Normal approximation	46.91%
Normal approximation with continuity correction	32.16%

¹ Prevalence Difference = Prevalence in Exposed - Prevalence in Non-exposed.

Results from OpenEpi, Version 3, open source calculator--PowerCross
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

Unskilled workers vs. Engineers/IT professional

Start	Enter	Results	Examples	Help
Power for Cross-Sectional Studies				
		Input Data		
Two sided-confidence interval (%)		95		
Number of Exposed		344		
Prevalence/Coverage among Exposed (%)		67		
Number of Non-exposed		20		
Prevalence/Coverage among Non-exposed (%)		40		
Prevalence/Coverage Ratio		1.7		
Prevalence Difference (%) ¹		27		
<hr/>				
Power based on:				
Normal approximation		69.64%		
Normal approximation with continuity correction		60.13%		
<hr/>				
¹ Prevalence Difference = Prevalence in Exposed - Prevalence in Non-exposed. Results from OpenEpi, Version 3, open source calculator--PowerCross Print from the browser with ctrl-P or select text to copy and paste to other programs.				

Administrative vs. Engineers/IT professional

Start	Enter	Results	Examples	Help
Power for Cross-Sectional Studies				
		Input Data		
Two sided-confidence interval (%)		95		
Number of Exposed		20		
Prevalence/Coverage among Exposed (%)		40		
Number of Non-exposed		442		
Prevalence/Coverage among Non-exposed (%)		69		
Prevalence/Coverage Ratio		0.58		
Prevalence Difference (%) ¹		-29		
<hr/>				
Power based on:				
Normal approximation		77.64%		
Normal approximation with continuity correction		69.19%		
<hr/>				
¹ Prevalence Difference = Prevalence in Exposed - Prevalence in Non-exposed. Results from OpenEpi, Version 3, open source calculator--PowerCross Print from the browser with ctrl-P or select text to copy and paste to other programs.				

Engineers/IT professional vs. Other job categories