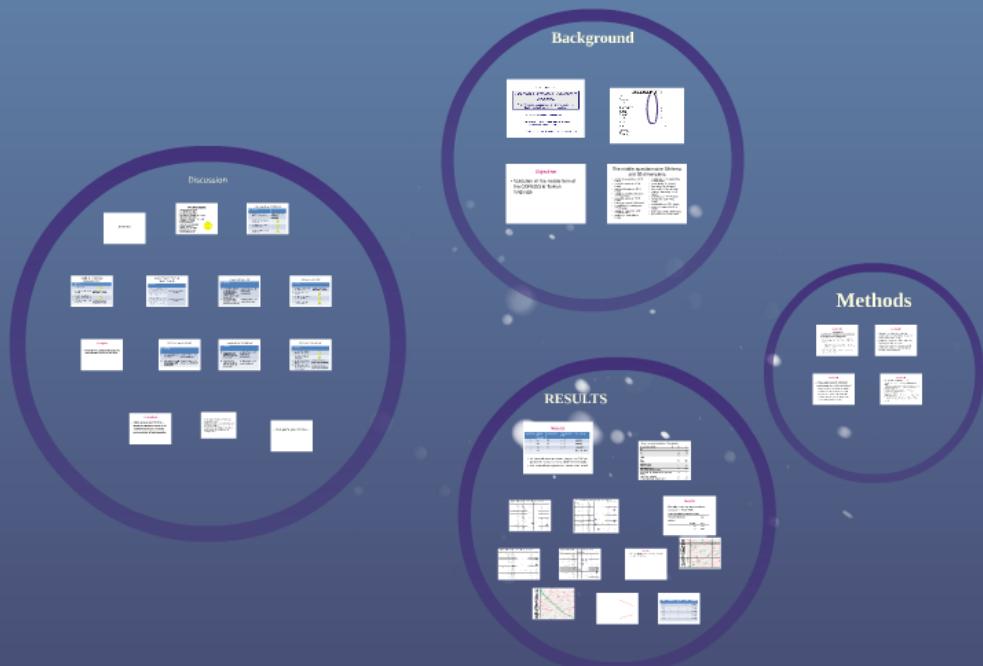


Copenhagen Psychosocial Questionnaire: Turkish translation and validation study

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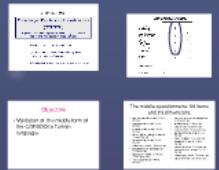
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Background



Discussion



2. EDITION 2003

Copenhagen Psychosocial Questionnaire (COPSOQ)

A questionnaire on psychosocial working conditions,
health and well-being in three versions

- ◆ A long version for research use
- ◆ A medium size version for use by work environment professionals
- ◆ A short version to be used by the workplaces

Copenhagen Psychosocial Questionnaire Scales and number of questions at all three levels

<u>Scale</u>	<u>Number of questions:</u>		
	Research questionnaire	Middle questionnaire	Short questionnaire
Quantitative demands	7	4	3
Cognitive demands	8	4	
Emotional demands	3	3	2
Demands for hiding emotions	2	2	1
Sensorial demands	5	4	
Influence at work	10	4	3
Possibilities for development	7	4	2
Degree of freedom at work	4	4	1
Meaning of work	3	3	2
Commitment to the workplace	4	4	2
Predictability	2	2	2
Role-clarity	4	4	
Role-conflicts	4	4	
Quality of leadership	8	4	2
Social support	4	4	2
Feedback at work	2	2	2
Social relations	2	2	
Sense of community	3	3	2
Insecurity at work	4	4	4
Job satisfaction	7	4	4
General health	5	5	1
Mental health	5	5	5
Vitality	4	4	4
Behavioural stress	8	4	
Somatic stress	7	4	
Cognitive stress	4	4	
Sense of coherence	9		
Problem focused coping	2		
Selective coping	2		
Resigning coping	2		
Number of questions	141	95	44
Number of scales	30	26	8

The middle questionnaire: 69 items and 20 dimensions

- quantitative demands (QD-4 items),
- cognitive demands (CD-4 items),
- emotional demands (ED-3 items),
- demands for hiding emotions (DHE-2 items),
- sensorial demands (SD-4 items),
- influence at work (IW-4 items),
- possibilities for development (PD-4 items),
- degree of freedom at work (DFW-4 items),
- meaning of work (MW-3 items),
- commitment to the workplace (CW-4 items),
- predictability (P-2 items),
- role-clarity (RCI-4 items),
- role-conflicts (RCo-4 items),
- quality of leadership (QL-4 items),
- social support (SS-4 items),
- feedback at work (FW-2 items),
- social relations (SR-2 items),
- sense of community (SC-3 items),
- insecurity at work (IW-4 items)
- job satisfaction (JS-4 items)

Objective

- Validation of the middle form of the COPSOQ to Turkish language.

Methods

Methods

Methodologic study

- The translation process; including two forward translations and one back translation each by three bilingual translators.
- English COPSOQ version was translated in Turkish by two bilingual translators from different specialties who had no knowledge about COPSOQ.
- The two translated versions were compared with each other and checked for disagreement of the translators and relevant revisions and corrections were completed.
- COPSOQ-TR was translated back into English language to compare with the original COPSOQ form.

Methods

Methods

- A pilot study was carried out by applying the Questionnaire to 13 workers (of those who are not included in the field study sample).
- Participants were asked to evaluate each items for their understandability and meaning.
- A minor changes were made in accordance to the participants suggestions and established the final translated Turkish COPSOQ form.

Methods

- In three workplace (health and industrial sector) between 01.04.2015 and 01.05.2015.
 - Respondent who answer less than half of the questions in a scale are regarded as missing.
 - If a person has answered at least half of the questions, the scale value is calculated as the average of the questions answered.

Methods

- KMO and Bartlett's Test of Sphericity were used.
- Validity of the dimensions were investigated with confirmatory factor analysis.
- The principal component analysis and Varimax rotation methods used to identify the factor structure.
- The internal consistency of dimensions were assessed by Chronbach's alpha coefficient.
- Celing and floor effects of each dimensions were evaluated by computing the percentages of minimum and maximum values of the each domain.
- The study was approved by the Dicle University Research Ethics Committee.

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RESULTS

- In three workplace sectors) between
- Respondent with questions in a sector
- If a person has questions, the percentage of the

Results

WORKPLACE	NUMBER OF WORKERS	PARTICIPANTS	PARTICIPATION RATE	Data collection
1	162	110	67.5 %	FINISHED
2	191	129	67.5 %	FINISHED
3	306	134	43.5 %	CONTINUES
4	300	—	—	NOT STARTED YET

- 26 respondents who answer less than half of the questions in a scale are excluded from the study.
 - 373 respondents' questionnaires were evaluated.

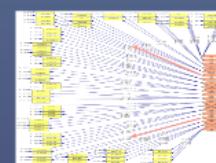
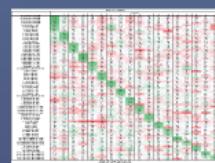
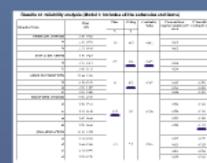
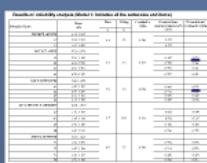
Bio-demographic characteristics of the participants

Characteristic(n=573)	M	%
Age		
18-25	145	25
26-40	138	24
>40	90	16
Gender		
Male	345	60
Female	675	40
Educational Status		
Primary or secondary	374	33
High School/Ged University	349	67
Marital Status (Who do you live with?)		
Married living with husband and the other family	273	76
Single (either living alone)	80	21
Single (either living alone or financially dependent)	55	4

Results

- Sampling adequacy was considered adequate ($KMO=0.784$).

Results of the suitability of the sample for factor analysis		
Kaiser-Meyer-Olkin coefficient		0.794
Bartlett test:		
	Chi-square	13641.5
	df	1546
	P	<0.0001



Role	Desirability	Acceptability	Risk	Concern
visit	0-2	3-5	3-8	RECOMMEND
remove	0-25	20-25	3-54	ACCEPTABLE
move	0-18	6-18	3-17	ACCEPTABLE
create	0-25	10-25	3-27	ACCEPTABLE
edit	0-25	20-25	3-29	ACCEPTABLE

Results

WORKPLACE	NUMBER OF WORKERS	PARTICIPANTS	PARTICIPATION RATE	Data collection
1	162	110	67.9 %	FINISHED
2	191	129	67.5 %	FINISHED
3	308	134	43.5 %	CONTINUES
4	300	NOT STARTED YET

- 26 respondents who answer less than half of the questions in a scale are excluded from the study.
- 373 respondents' questionnaires were evaluated.

Sociodemographic characteristics of the participants.

Characteristics(n=373)	N	%
Age		
≤35	145	38.9
36-45	138	37.0
>46	90	24.1
Gender		
Men	248	66.5
Women	125	33.5
Educational Status		
Primary or secondary	124	33.2
High School or University	249	66.8
Marital Status (Who do you live with?)		
Married (living with wife/husband and the other family members)	270	72.4
Single/Divorced/.. (living alone)	18	4.8
The other (single but living with family or friends)	85	22.8

Results

- Sampling adequacy was considered adequate ($KMO=0.784$).

Results of the suitability of the sample for factor analysis	
Keiser-Meyer-Olkin coefficient	0.784
Bartlett test	
Chi-square	10041.6
df	2346
p	<0.0001

Results of reliability analysis (Model 1: Includes all the subscales and items)

Subscales / Items	Mean ±SD	Floor	Ceiling	Cronbach's Alpha	Corrected item-total correlation coefficients	If item deleted Cronbach's Alpha
		%	%			
QUANTITAVE DEMANDS	11.36±3.102	0.5	1.6	0.695		
	3.47±0.883				0.464	0.646
	2.75±1.115				0.539	0.591
	2.72±1.051				0.611	0.546
	2.42±1.216				0.345	0.728
COGNITIVE DEMANDS	14.53±3.253	0.3	7.6	0.723		
	4.25±0.966				0.489	0.677
	4.02±1.055				0.535	0.650
	3.45±1.200				0.551	0.639
	2.81±1.165				0.484	0.680
EMOTIONAL DEMANDS	6.96±2.838	16.5	0.8	0.742		
	2.46±1.148				0.634	0.577
	2.37±1.188				0.685	0.509
	2.13±1.159				0.404	0.835
DEMANDS FOR HIDING EMOTIONS	5.46±2.590	20.3	12.2	0.836		
	2.69±1.379				0.718	-
	2.77±1.416				0.718	-
SENSORIAL DEMANDS	16.10±3.525	1.4	20.1	0.753		
	3.70±1.284				0.548	0.700
	3.57±1.437				0.478	0.761
	4.49±0.884				0.696	0.647
	4.35±0.955				0.586	0.687

Results of reliability analysis (Model 1: Includes all the subscales and items)

Subscales / Items	Mean±SD	Floor	Ceiling	Cronbach's Alpha	Corrected item-total correlation coefficients	If item deleted
		%	%			Cronbach's Alpha
INFLUENCE AT WORK	11.23±3.420	1.9	1.4	0.627		
	18 3.78±1.137				0.191	0.692
	19 2.34±1.369				0.457	0.520
	20 2.32±1.143				0.588	0.432
	21 2.79±1.311				0.426	0.544
POSSIBILITIES FOR DEVELOPMENT	14.15±3.518	0.8	8.9	0.649		
	22 3.59±1.297				0.494	0.592
	23 3.22±1.264				0.434	0.577
	24 3.65±1.241				0.468	0.554
	25 3.69±1.237				0.400	0.600
DEGREE OF FREEDOM AT WORK	11.93±3.735	1.9	1.9	0.662		
	26 3.16±1.391				0.465	0.580
	27 3.68±1.277				0.428	0.605
	28 2.99±1.227				0.584	0.505
	29 2.09±1.395				0.319	0.681
MEANING OF WORK	12.81±2.098	0.5	28.7	0.791		
	30 4.27±0.881				0.661	0.686
	31 4.39±0.774				0.717	0.634
	32 4.16±0.840				0.534	0.819
COMMITMENT TO THE WORKPLACE	14.02±3.284	0.8	5.1	0.609		
	33 3.55±1.316				0.412	0.521
	34 2.89±1.356				0.384	0.546
	35 3.57±1.129				0.371	0.552
	36 4.01±1.007				0.407	0.534

Results of reliability analysis (Model 1: Includes all the subscales and items)

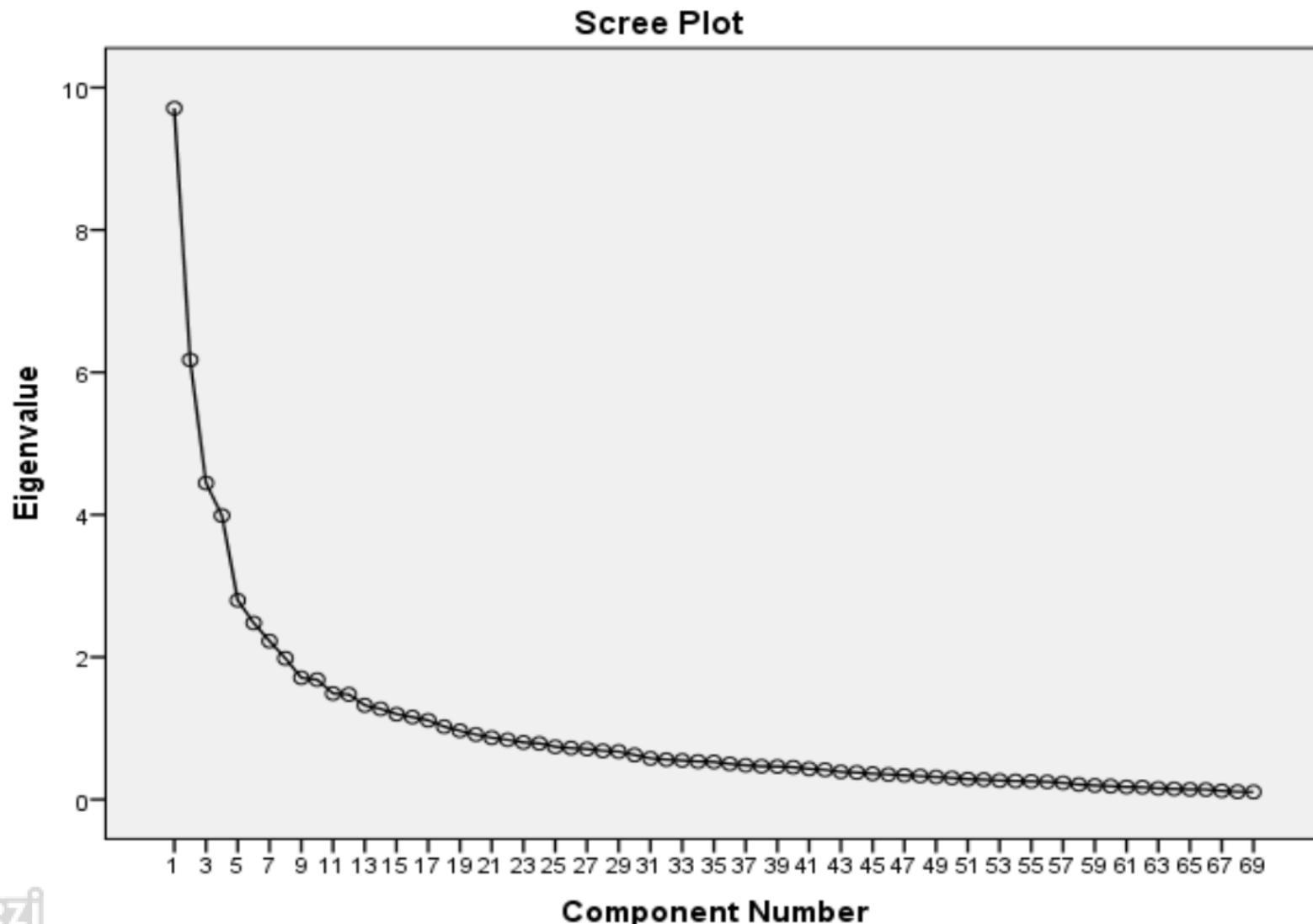
Subscales / Items	Mean ±SD	Floor	Ceiling	Cronbach's Alpha	Corrected item-total correlation coefficients	If item deleted Cronbach's Alpha
		%	%			
PREDICTABILITY	6.32±1.905	4.4	5.5	0.540		
	37 2.64±1.261				0.378	-
	38 3.68±1.029				0.378	-
ROLE CLARITY	15.26±2.951	0.8	6.8	0.735		
	39 2.93±1.100				0.367	0.776
	40 4.03±0.970				0.597	0.634
	41 4.03±1.053				0.598	0.631
	42 4.27±0.805				0.595	0.651
ROLE CONFLICTS	11.40±3.672	5.2	1.9	0.774		
	43 3.07±1.195				0.448	0.785
	44 2.69±1.205				0.588	0.714
	45 2.83±1.163				0.678	0.667
	46 2.81±1.190				0.605	0.706
QUALITY OF LEADERSHIP	14.01±3.917	2.5	12.0	0.883		
	47 3.53±1.108				0.666	0.879
	48 3.47±1.116				0.786	0.835
	49 3.56±1.107				0.802	0.829
	50 3.45±1.218				0.736	0.855
SOCIAL SUPPORT	13.82±3.431	0.5	7.7	0.760		
	51 3.62±1.078				0.552	0.708
	52 3.47±1.124				0.531	0.719
	53 3.22±1.135				0.609	0.676
	54 3.52±1.160				0.543	0.713

Results of reliability analysis (Model 1: Includes all the subscales and items)

Subscales / Items	Mean ±SD	Floor	Ceiling	Cronbach's Alpha	Corrected item-total correlation coefficients	If item deleted Cronbach's Alpha
		%	%			
FEEDBACK AT WORK	6.77±1.906	1.9	10.7	0.603		
	55 3.39±1.152				0.432	-
	56 3.38±1.101				0.432	-
SOCIAL RELATIONS	7.19±1.947	0.5	16.4	0.345		
	57 3.53±1.318				0.210	-
	58 3.66±1.183				0.210	-
SENSE OF COMMUNITY	12.04±2.863	1.1	29.2	0.815		
	59 4.19±0.982				0.665	0.756
	60 3.92±1.105				0.733	0.676
	61 3.93±1.249				0.624	0.398
INSECURITY AT WORK	9.99±4.985	17.5	7.9	0.870		
	62 2.74±1.538				0.726	0.832
	63 2.21±1.410				0.776	0.813
	64 2.45±1.464				0.798	0.802
	65 2.59±1.466				0.599	0.881
JOB SATISFACTION	11.23±2.529	3.6	5.7	0.843		
	66 2.81±0.741				0.715	0.785
	67 2.64±0.806				0.621	0.827
	68 2.81±0.799				0.703	0.790
	69 2.97±0.719				0.679	0.801

Results

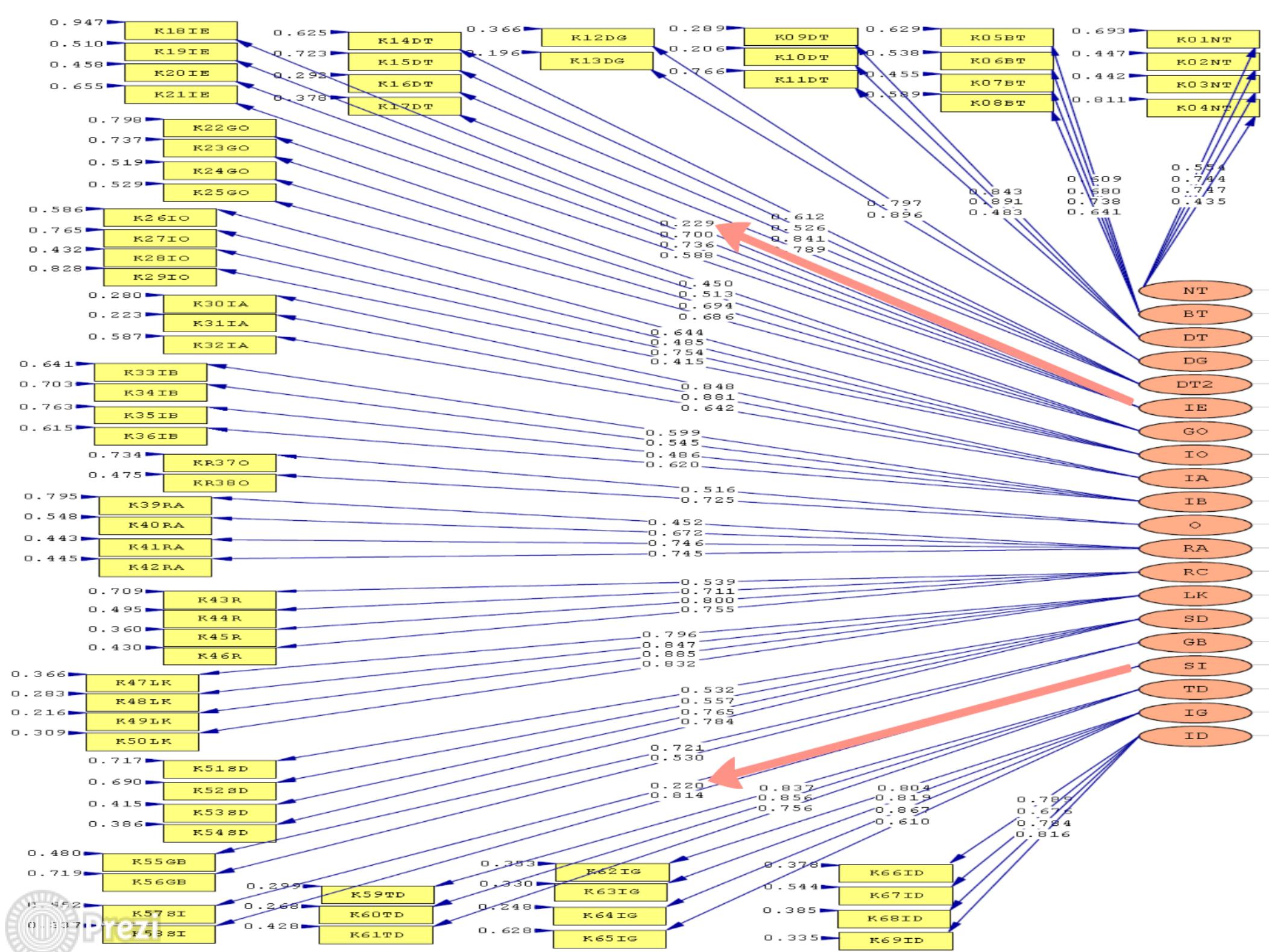
- The factor analysis of COPSOQ-TR identified 18 factors with eigenvalue higher than one and explained %68.5 of the total variance.



Rotated Component Matrix ^a																		
	Component																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1-QUANTITATIVE DEMANDS	-.065	.164	.044	.109	-.123	.011	-.042	.106	.640	.008	-.029	-.030	.234	.061	.249	.028	.224	-.045
	-.226	-.054	-.068	-.024	-.064	.179	.010	.044	.679	.009	.016	-.032	.153	.077	.088	.191	.026	-.068
	-.062	-.082	-.005	.021	.160	.093	.015	.045	.780	.040	-.022	-.047	.014	.009	.070	.144	-.041	.007
	.050	-.024	.125	-.149	.278	.047	-.042	.022	.612	-.243	-.013	.131	-.016	-.101	-.072	.016	-.055	.162
5-COGNITIVE DEMANDS	.095	-.044	.424	.050	.049	.163	-.051	.093	.195	-.072	.067	.160	.554	.014	.092	-.180	.061	-.082
	-.011	.040	.192	-.040	.090	.166	.088	.135	.154	.104	-.063	.132	.676	-.012	.121	.046	.029	.058
	.036	.143	.176	-.135	.263	.148	.115	.131	.207	.039	.005	.064	.510	.084	.294	-.066	.040	.221
	.008	-.082	.230	-.022	.397	.117	.020	-.003	.354	.119	-.089	-.067	.415	.098	.077	.197	-.071	.201
9-EMOTIONAL DEMANDS	-.115	-.144	.026	.041	.094	.288	-.031	-.056	.350	.079	-.067	-.043	.194	.231	-.104	.620	.056	-.005
	-.011	-.031	.053	.174	.102	.286	-.031	-.124	.364	.079	-.031	-.141	.159	.275	-.003	.550	.082	-.051
	.085	.074	.047	.059	.011	.123	.017	-.012	.170	.041	-.124	-.027	-.195	.092	.181	.707	-.032	.064
	.087	-.039	.045	.109	-.048	.080	.058	.014	.036	.053	-.016	.095	.017	.851	-.038	.137	-.021	.007
12-DEMANDS FOR HIDING EMOTIONS	-.053	-.025	.079	.075	.046	.104	.050	-.067	.031	.012	-.037	.066	.003	.887	.041	.095	.020	-.024
	-.021	.145	.704	.036	-.125	-.030	.140	.109	.019	-.007	.012	.022	.096	.157	.000	-.092	.019	.190
15-SENSORIAL DEMANDS	-.005	.085	.655	.103	-.072	.003	.124	.031	.126	-.289	-.091	.011	-.114	.101	-.110	-.044	-.039	-.049
	-.067	-.059	.817	-.025	-.048	-.043	-.044	.135	-.024	-.059	.114	.112	.124	-.025	.002	.094	.034	-.046
	-.036	-.011	.732	.132	-.046	-.018	-.170	.205	-.081	.072	.131	.119	.168	-.001	.149	.099	.021	.001
	-.033	.186	.489	-.068	.287	.057	-.127	.043	.037	-.026	.039	.197	.167	-.101	.034	.092	.226	-.075
18-INFLUENCE AT WORK	.132	.134	-.021	.043	.722	-.017	.191	.089	.118	.098	.107	-.114	.053	.010	-.052	-.041	.075	.071
	.088	.079	-.080	-.084	.784	-.022	.046	.012	-.021	.072	.046	.031	.031	-.019	.025	.048	.008	.008
	-.104	.087	-.197	-.101	.577	-.099	.080	.007	.031	.100	-.024	.236	.044	-.020	.389	.122	-.020	-.076
	.040	-.042	.045	-.042	.025	.166	.038	-.009	.177	.096	.130	.126	.195	-.039	.662	.125	.033	.040
23-POSSIBILITIES FOR DEVELOPMENT	-.010	.052	-.026	.040	.542	.115	-.006	.010	.204	.018	-.022	.028	.219	.018	.478	.084	.031	.052
	.157	.294	.127	-.114	.169	.127	.089	.319	.128	.150	.125	.045	.073	.024	.478	-.160	-.074	.238
	-.015	.294	.177	-.044	.328	-.032	.137	.370	.075	.019	.040	.253	.218	.015	.202	.021	.067	.095
	.029	.148	-.058	-.144	.175	.061	.217	.034	-.024	.565	-.031	.169	-.093	.098	.366	.017	.045	.067
27-DEGREE OF FREEDOM AT WORK	.034	.122	.006	.035	-.007	-.031	.067	.045	-.045	.714	-.006	.098	.079	.077	.007	-.078	.220	-.247
	-.060	-.112	-.161	-.023	.106	.099	.159	-.004	-.086	.706	-.031	-.021	.083	.014	.132	.197	-.032	.120
	-.034	-.094	-.135	-.045	.121	.017	.087	-.051	.229	.547	-.068	.048	-.006	-.162	-.274	.048	-.253	.287
	.059	.084	.126	-.018	.066	.039	-.008	.851	.100	.081	.069	.090	.069	-.035	.021	-.125	.112	-.017
31-MEANING OF WORK	.114	.100	.150	-.008	-.019	.060	-.031	.854	.030	-.013	.066	.111	.035	-.081	-.027	.007	.022	.071
	.150	.217	.198	-.014	.038	-.140	-.040	.614	.006	-.142	.173	.134	.123	.066	.173	.110	.046	.082
	.137	.282	.076	.014	-.043	-.119	.050	.091	-.001	.040	.105	.070	.042	.054	.064	.055	.268	.668
34-COMMITMENT TO THE WORKPLACE	-.074	.295	-.104	.037	.306	-.005	.075	.169	.035	.038	-.015	-.009	.296	-.190	.028	-.002	.177	.510
	.010	.099	.009	-.030	.132	.070	.022	.031	.095	.092	.068	.050	.099	-.024	-.056	.005	.810	.094
	.144	.081	.214	.113	.068	-.014	.020	.295	-.057	-.016	.093	.152	.125	.046	.194	.024	.602	.265
	.397	.255	.102	.038	.298	.122	-.057	-.055	.056	.338	.125	.021	-.284	.054	-.002	-.057	.001	.201
38-PREDICTABILITY	.352	.367	.018	.061	.071	.001	.090	.318	.028	.181	.182	.265	.049	.087	-.171	-.097	.015	-.053
	.197	.191	-.030	-.129	.381	-.052	-.018	-.057	.090	.341	.159	.338	-.100	.125	-.037	-.238	.164	.080
40-ROLE CLARITY	.098	.103	.210	-.020	.065	-.084	.034	.218	.014	.217	.031	.655	-.170	-.009	.058	-.150	.027	.057
	.087	.072	.113	-.023	.027	-.092	.022	.060	-.014	.024	.044	.827	.128	.115	.079	.002	-.003	-.005
	.096	.168	.091	.050	-.055	-.014	.018	.168	-.050	.004	.208	.712	.215	.053	.045	.007	.141	.027
	-.039	.022	-.018	-.025	-.048	.706	.009	-.049	.066	.120	-.048	.019	.051	.019	.036	-.053	.105	-.074
44-ROLE CONFLICTS	-.048	-.065	.035	.068	.071	.752	.018	.050	.077	-.003	-.010	-.106	.019	.116	.192	.062	-.068	.046
	-.082	-.039	.023	-.044	.052	.811	-.009	.005	.046	-.049	-.064	-.122	.095	.024	-.024	.130	.038	.003
	-.201	-.096	-.094	.094	-.109	.723	-.039	.023	.126	.009	-.020	.051	.083	.041	.014	.214	-.055	-.030
	.795	.098	-.043	.047	-.013	.063	.019	.050	-.049	-.053	.096	.068	-.004	.027	.026	-.105	-.029	.198
48-QUALITY OF LEADERSHIP	.809	.200	-.090	.039	-.033	-.098	.019	.044	-.126	-.026	.029	.065	.022	.032	.043	-.028	.099	-.049
	.819	.214	-.019	.094	.046	-.066	.027	.073	-.078	-.026	.045	.091	-.002	-.033	-.017	-.048	.049	.091
	.814	.152	.000	.081	.055	-.083	-.051	.135	-.049	.014	.100	.143	.003	.010	.045	.032	-.011	.011
	.091	.075	-.007	.032	.052	.098	.765	-.053	-.011	.113	.121	-.044	-.041	-.001	.089	-.028	-.024	.070
51-SOCIAL SUPPORT	.101	.140	-.037	-.017	.023	-.057	.759	.006	.049	.137	.192	.099	.052	.014	-.015	.013	.062	.051
	.597	-.011	.085	.060	.042	-.062	.516	-.021	-.009	.057	.017	-.121	-.102	.008	.144	.011	-.023	-.164
	.638	.097	-.029	-.047	.043	-.106	.450	.045	-.032	.064	-.064	-.020	.080	-.094	.031	.127	.091	.213
	.664	.112	.002	-.005	.107	-.015	.368	.014	.052	-.002	.039	-.065	.038	.052	-.068	.013	.068	-.220
55-FEEDBACK AT WORK	.146	-.029	.021	-.022	.156	-.028	.670	.027	-.052	.009	.295	.051	.103	.141	-.037	-.036	-.019	.026
	-.009	.003	-.130	-.277	-.280	-.280	-.110	-.110	.025	.232	.368	-.022	.245	-.002	.134	-.100	-.084	.011
	.058	-.128	-.065	-.078	.132	.026	.365	-.005	-.122	.341	.306	.245	.211	.004	.051	.140	.046	.052
	.038	.164	.101	-.041	.048	-.031	.241	.130	-.071	.015	.775	.150	.007	-.010	.011	-.061	.045	.062
60-SENSE OF COMMUNITY	.158	.177	.076	-.042	.041	-.064	.310	.049	.011	.013	.771	.016	-.079	-.026	-.019	-.102	.079	.028
	.126	.174	.061	.127	.077	-.064	.147	.160	.008	-.098	.731	.105	-.034	-.051	.141	-.025	.055	-.010
	.088	.034	.054	.836	-.091	.046	.071	-.026	-.018	-.142	-.026	.134	-.025	-.003	-.012	.061	-.029	.077
	.044	.159	.086	.848	.010	.032	-.018	.018	.033	-.052	.046	-.092	.062	.082	-.076	.005	.020	-.035
64-INSECURITY AT WORK	.040	.050	.047	.870	-.052													

Rotated Component Matrix^a

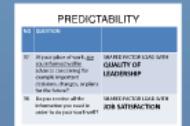
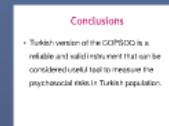
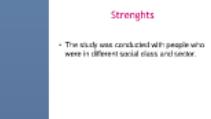
	Component																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
49-QUALITY OF LEADERSHIP	.819	.214	-.019	.094	.046	-.066	.027	.073	-.078	-.026	.045	.091	-.002	-.033	-.017	-.048	.049	.091
50-QUALITY OF LEADERSHIP	.814	.152	.000	.081	.055	-.083	-.051	.135	-.049	.014	.100	.143	.003	.010	.011	.045	.032	-.011
48-QUALITY OF LEADERSHIP	.809	.200	-.090	.039	-.033	-.098	.019	.044	-.126	-.026	.029	.065	.022	.032	.043	.043	-.028	.099
47-QUALITY OF LEADERSHIP	.795	.098	-.043	.047	.013	-.063	.019	.050	-.049	-.053	.096	.068	-.004	.027	.026	-.105	-.029	.198
55-FEEDBACK AT WORK	.664	.112	.002	-.005	.107	-.015	.368	.014	.052	-.002	.039	-.065	.038	.052	-.068	.013	.068	-.220
54-SOCIAL SUPPORT	.638	.097	-.029	-.047	.043	-.106	.450	.045	-.032	.064	-.064	-.020	.080	-.094	.031	.127	.091	-.213
53-SOCIAL SUPPORT	.597	-.011	.085	.060	.042	-.062	.516	-.021	-.009	.057	.017	-.121	-.102	.008	.144	.011	-.023	-.164
37-PREDICTABILITY	.397	.255	.102	.038	.298	.122	-.057	-.055	.056	.338	.125	.021	-.284	.054	-.002	-.057	-.001	.201
68-JOB SATISFACTION	.162	.783	.079	.019	.102	-.043	.084	.198	.009	-.048	.172	.039	.023	.036	.038	.023	-.031	.013
67-JOB SATISFACTION	.156	.755	.028	.042	.028	-.086	.010	.054	-.064	.007	.081	.041	.035	-.010	-.036	.014	.152	.053
66-JOB SATISFACTION	.299	.726	.028	.116	.087	.010	.073	-.001	-.029	.097	.052	.124	-.061	-.073	.137	-.061	.002	.140
69-JOB SATISFACTION	.274	.711	.054	.000	.133	-.058	.053	.126	-.008	.014	.128	.120	.013	-.067	.002	.010	.059	.098
38-PREDICTABILITY	.352	.367	.018	.061	.071	.001	.090	.318	.028	.181	.182	.265	.049	.087	-.171	-.097	.015	-.053
16-SENSORIAL DEMANDS	-.067	-.059	.817	-.025	-.048	-.043	-.044	.135	-.024	-.059	.114	.112	.124	-.025	-.002	.094	.034	-.046
17-SENSORIAL DEMANDS	-.036	-.011	.732	.132	-.046	-.018	-.170	.205	-.081	.072	.131	.119	.168	-.001	.149	.099	.021	.001
14-SENSORIAL DEMANDS	-.021	.145	.704	.036	-.125	-.030	.140	.109	.019	-.007	.012	.022	.096	.157	.000	-.092	.019	.190
15-SENSORIAL DEMANDS	-.005	.085	.655	.103	-.072	.003	.124	.031	.126	-.289	-.091	.011	-.114	.101	-.110	-.044	-.039	-.049
18-INFLUENCE AT WORK	-.033	.186	.489	-.068	.287	.057	-.127	.043	.037	-.026	.039	.197	.167	-.101	.034	.092	.226	-.075
64-INSECURITY AT WORK	.040	.050	.047	.870	-.052	.011	-.069	-.016	.026	-.034	.039	-.006	-.044	-.034	-.027	.103	.001	-.013
63-INSECURITY AT WORK	.044	.159	.086	.848	.010	.032	-.018	.018	.033	-.052	.046	-.092	.062	.082	-.076	.005	.020	-.035
62-INSECURITY AT WORK	.088	.034	.054	.836	-.091	.046	.071	-.026	-.018	-.142	-.026	.134	-.025	-.003	.012	.061	-.029	.077
65-INSECURITY AT WORK	.065	-.092	-.040	.752	.013	-.013	.006	.021	-.044	.137	-.056	-.049	.074	.160	.038	-.047	.027	-.008
20-INFLUENCE AT WORK	.088	.079	-.080	-.084	.784	-.022	.046	.012	-.021	.072	.046	.031	.031	-.019	-.004	.025	.048	.008
19-INFLUENCE AT WORK	.132	.134	-.021	.043	.722	-.017	.191	.089	.118	.098	.107	-.114	.053	.010	-.052	-.041	.075	.071
21-INFLUENCE AT WORK	-.104	.087	-.197	-.101	.577	-.099	.080	.007	.031	.100	-.024	.236	.044	-.020	.389	.122	.020	-.076
23-POSSIBILITIES FOR DEVELOPMENT	-.010	.052	-.026	.040	.542	.115	-.006	.010	.204	.018	-.022	-.028	.219	.018	.478	.084	.031	-.052
39-ROLE CLARITY	.197	.191	-.030	-.129	.381	-.052	-.018	-.057	.090	.341	.159	.338	-.100	.125	-.037	-.238	.164	.080
45-ROLE CONFLICTS	-.082	-.039	.023	-.044	.052	.811	-.009	.005	.046	-.049	-.064	-.122	.095	.024	-.024	.130	.038	.003
44-ROLE CONFLICTS	-.048	-.065	.035	.068	.071	.752	.018	.050	.077	-.003	.010	-.106	.019	.116	.192	.062	-.068	.046
46-ROLE CONFLICTS	-.201	-.096	-.094	.094	-.109	.723	-.039	.023	.126	.009	-.020	.051	.083	.041	.014	.214	-.055	-.030
43-ROLE CONFLICTS	-.039	.022	-.018	-.025	-.048	.706	.009	-.049	.066	.120	-.048	.019	.051	.019	.036	-.053	.105	-.074
51-SOCIAL SUPPORT	.091	.075	-.007	.032	.052	.098	.765	-.053	-.011	.113	.121	-.044	-.041	-.001	.089	-.028	-.024	.070
52-SOCIAL SUPPORT	.101	.140	-.037	-.017	.023	-.057	.759	.006	.049	.137	.192	.099	.052	.014	-.015	.013	.062	.051
56-FEEDBACK AT WORK	.146	-.029	.021	-.022	.156	-.028	.670	.027	-.052	.009	.295	.051	.103	.141	-.037	-.036	-.019	.026
58-SOCIAL RELATIONS	-.058	-.128	-.065	-.078	.132	.026	.365	-.005	-.122	.341	.306	.245	.211	.004	.051	.140	-.046	.052
31-MEANING OF WORK	.114	.100	.150	-.008	-.019	.060	-.031	.854	.030	-.013	.066	.111	.035	-.081	-.027	.022	.071	
30-MEANING OF WORK	.059	.084	.126	-.018	.066	.039	-.008	.851	.100	.081	.069	.090	.069	-.035	-.021	-.125	.112	-.017
32-MEANING OF WORK	.150	.217	.198	-.014	.038	-.140	-.040	.614	.006	-.142	.173	.134	.123	.066	.173	.110	.046	.082
25-POSSIBILITIES FOR DEVELOPMENT	-.015	.294	.177	-.044	.328	-.032	.137	.370	.075	.019	.040	.253	.218	.015	.202	.021	.067	.095
3-QUANTITATIVE DEMANDS	-.062	-.082	-.005	.021	.160	.093	.015	.045	.780	.040	-.022	-.047	.014	.009	.070	.144	-.041	.007
2-QUANTITATIVE DEMANDS	-.226	-.054	-.068	-.024	-.064	.179	.010	.044	.679	.009	.016	-.032	.153	.077	.088	.191	-.026	-.068
1-QUANTITATIVE DEMANDS	-.065	.164	.044	.109	-.123	.011	-.042	.106	.640	.008	-.029	-.030	.234	.061	.249	.028	.224	-.045
4-QUANTITATIVE DEMANDS	.050	-.024	.125	-.149	.278	.047	-.042	.022	.612	-.243	.013	.131	-.016	-.101	-.072	.016	-.055	.162
27-DEGREE OF FREEDOM AT WORK	.034	.122	.006	.035	-.007	-.031	.067	.045	-.045	.714	-.006	.098	.079	.077	.007	-.078	.220	-.247
28-DEGREE OF FREEDOM AT WORK	-.060	-.112	-.161	-.023	.106	.099	.159	-.004	-.086	.706	-.031	.083	.014	.132	.197	-.032	.120	
26-DEGREE OF FREEDOM AT WORK	.029	.148	-.058	-.144	.175	.061	.217	.034	-.024	.565	-.031	.169	-.093	.098	.366	.017	.045	.067
29-DEGREE OF FREEDOM AT WORK	-.034	-.094	-.135	-.045	.121	.017	.087	-.051	.229	.547	.068	.048	-.006	-.162	-.274	.048	-.253	.287
59-SENSE OF COMMUNITY	.038	.164	.101	-.041	.048	-.031	.241	.130	-.071	.015	.775	.150	.007	-.010	.011	-.061	.045	.062
60-SENSE OF COMMUNITY	.158	.177	.076	-.042	.041	-.064	.310	.049	.011	.013	.771	.016	-.079	-.026	-.019	.102	.079	.028
61-SENSE OF COMMUNITY	.126	.174	.061	.127	.077	-.064	.147	.160	.008	-.098	.731	.105	-.034	-.051	.141	-.025	.055	-.010
57-SOCIAL RELATIONS	-.009	.003	-.130	-.277	-.280	-.110	-.110	.025	.232	.368	-.022	.245	-.002	.134	-.100	-.084	.011	
41-ROLE CLARITY	.087	.072	.113	-.023	.027	-.092	.022	.060	-.014	.024	.044	.827	.128	.115	.079	.002	-.003	-.005
42-ROLE CLARITY	.096	.168	.091	.050	-.055	-.014	.018	.168	-.050	.004	.208	.712	.215	.053	.045	.007	.141	.027
40-ROLE CLARITY	.098	.103	.210	-.020	.065	-.084	.034	.218	.014	.217	.031	.655	-.170	-.009	.058	-.150	.027	.057
6-COGNITIVE DEMANDS	-.011	.040	.192	-.040	.090	.166	.088	.135	.154	.104	-.063	.132	.676	-.012	.121	.046	.029	.058
5-COGNITIVE DEMANDS	.095	-.044	.424	.050	.049	.163	-.051	.093	.195	-.072	.067	.160	.554	.014	.092	-.180	.061	-.082
7-COGNITIVE DEMANDS	.036	.143	.176	-.135	.263	.148	.115	.131	.207	.039	.005	.610	.084	.294	-.066	.040	.221	
8-COGNITIVE DEMANDS	.008	-.082	.230	-.022	.397	.117	.020	-.003	.354	.119	-.089	-.067	.415	.098	.077	.197	-.071	.201
13-DEMANDS FOR HIDING EMOTIONS	-.053	-.025	.079	.075	.046	.104	.050	-.067	.031	.012	.037	.066	.003	.887	.041	.095	.020	-.024
12-DEMANDS FOR HIDING EMOTIONS	.087	-.039	.045	.109	-.048	.080	.058	.014	.036	.053	-.016	.095	.017	.851	-.038	.137	-.021	.007
22-POSSIBILITIES FOR DEVELOPMENT	.040	-.042	.045	-.042	.025	.166	.038	-.009	.177	.096	.130	.126	.195	-.039	.682	.125	.033	.040
24-POSSIBILITIES FOR DEVELOPMENT	.157	.294	.127	-.114	.169	.127	.089	.319	.128	.150	.125	.045	.073	.024	.478	-.160	-.074	.238
11-EMOTIONAL DEMANDS	.085	.074	.047	.059	.011	.123	.017	-.012	.170	.041	-.124	-.027	-.195	.092	.181	.707	-.032	.064
9-EMOTIONAL DEMANDS	-.115	-.144	.026	.041	.094	.288	-.031	-.056	.350	.079	-.067	-.043	.194	.231	-.104	.620	.056	-.005



INDEX	EXCELLENT FIT	ACCEPTABLE FIT	RESULT	CONCLUSION
χ^2/df	0-2	2-3	1.82	EXCELLENT
RMSEA	≤ 0.05	≤ 0.08	0.054	ACCEPTABLE
RMR	≤ 0.05	≤ 0.08	0.075	ACCEPTABLE
SRMR	≤ 0.05	≤ 0.08	0.075	ACCEPTABLE
CFI	≥ 0.95	≥ 0.90	0.908	ACCEPTABLE

Discussion

Discussion



* Thank you for your attention...

Discussion

FIT dimensions

- QUANTITATIVE DEMANDS
- COGNITIVE DEMANDS
- EMOTIONAL DEMANDS
- DEMANDS FOR HIDING EMOTIONS
- SENSORIAL DEMANDS
- DEGREE OF FREEDOM AT WORK
- MEANING OF WORK
- ROLE CONFLICTS
- QUALITY OF LEADERSHIP
- SOCIAL SUPPORT
- SENSE OF COMMUNITY
- INSECURITY AT WORK
- JOB SATISFACTION



INFLUENCE AT WORK

NO	QUESTION	
18	Do you have a large degree of influence concerning your work?	SHARED FACTOR LOAD WITH SENSORIAL DEMANDS
19	Do you have a say in choosing who you work with?	
20	Can you influence the amount of work assigned to you?	
21	Do you have any influence on WHAT you do at work?	

POSSIBILITIES FOR DEVELOPMENT

NO	QUESTION	
22	Is your work varied?	
23	Does your work require you to take the initiative?	SHARED FACTOR LOAD WITH INFLUENCE AT WORK
24	Do you have the possibility of learning new things through your work?	
25	Can you use your skills or expertise in your work?	SHARED FACTOR LOAD WITH MEANING OF WORK

COMMITMENT TO THE WORKPLACE

NO	QUESTION	
33	Would you like to stay at your current place of work for the rest of your working life?	COMMITMENT TO THE WORKPLACE COMPONENT 1
34	Do you enjoy telling others about your place of work?	
35	Do you feel that the problems at your place of work are yours too?	COMMITMENT TO THE WORKPLACE COMPONENT 2
36	Do you feel that your place of work is of great personal importance to you?	

PREDICTABILITY

NO	QUESTION	
37	At your place of work, <u>are you informed well in</u> advance concerning for example important decisions, changes, or plans for the future?	SHARED FACTOR LOAD WITH QUALITY OF LEADERSHIP
38	Do you receive all the information you need in order to do your work well?	SHARED FACTOR LOAD WITH JOB SATISFACTION

ROLE CLARITY

NO	QUESTION	
39	Do you know exactly <u>how much say you have at work?</u>	SHARED FACTOR LOAD WITH INFLUENCE AT WORK
40	Does your work have clear objectives?	
41	Do you know exactly which areas are your responsibility?	
42	Do you know exactly what is expected of you at work?	

SOCIAL SUPPORT

NO	QUESTION	
51	How often do you get help and support from your colleagues?	
52	How often are your colleagues willing to listen to your work related problems?	
53	How often do you get help and support from your immediate superior?	SHARED FACTOR LOAD WITH QUALITY OF LEADERSHIP
54	How often is your immediate superior willing to listen to your work related problems?	SHARED FACTOR LOAD WITH QUALITY OF LEADERSHIP

FEEDBACK AT WORK

NO	QUESTION	
55	How often does your <u>superior</u> talk with you about how well you carry out your work?	SHARED FACTOR LOAD WITH QUALITY OF LEADERSHIP
56	How often do your <u>colleagues</u> talk with you about how well you carry out your work?	SHARED FACTOR LOAD WITH SOCIAL SUPPORT

SOCIAL RELATIONS

NO	QUESTION	
57	Do you work isolated from <u>your colleagues?</u>	SHARED FACTOR LOAD WITH SOCIAL SUPPORT
58	Is it possible for you to <u>talk</u> <u>to your colleagues while</u> <u>you are working?</u>	SHARED FACTOR LOAD WITH SENSE OF COMMUNITY

Strengths

- The study was conducted with people who were in different social class and sector.

Conclusions

- Turkish version of the COPSOQ is a reliable and valid instrument that can be considered useful tool to measure the psychosocial risks in Turkish population.

- The dimensions which have two items are needed to be revised
- Additional questions may be added to prevent from these limitations
- The other dimensions that have been found problematic can be used after relevant wording revisions

- Thank you for your attention...