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Job related affective well-being among primary health care physicians

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Background: Job related affective well-being is important for a healthy life and job satisfaction for all individuals, including physicians. The later group, however, is most often compromised. **Objectives:** We aimed to investigate a group of Turkish primary health care physicians' job related emotional perceptions and to assess their reactions in terms of stress, anxiety and depression. **Methods:** A descriptive, cross-sectional, self-reported questionnaire study was conducted. A total of 60 primary health care centres and 274 general practitioners who were working at these centres participated in the study. The response rate was 74%. Printed questionnaires were completed by the participants anonymously. We used the Job Related Affective Well-Being Scale (JAWS) and Depression Anxiety Stress Scale (DASS 42). Correlation analysis and hierarchic regression were performed. **Results:** Correlations between JAWS and DASS total scores were negative and statistically significant ($r = -0.52$; $P < 0.01$). Low pleasure/high arousal (LPHA) and low pleasure/low arousal (LPLA) variations that describe negative emotional states show a positive and significant relationship with depression, anxiety and stress values. The highest mean score was obtained for the high pleasure/low arousal (HPLA) status that can be interpreted to mean that our study group was pleased with their job but was not motivated. **Conclusions:** Physician's job related negative emotional perceptions are associated with reactions in terms of stress, anxiety and depression. For this reason, it is critical to consider primary care physicians' job related affectations and job related stimuli.

Keywords: affective well-being, general practitioner, primary health care, stress, work

Introduction

Positive emotions help people not only to survive, but also to thrive when confronted with adverse situations. Happiness is a lay construct, replete with personal meaning for each of us. It has been tended to treat happiness as psychological well-being, which also referred to as emotional well-being or subjective well-being.[1]

Job satisfaction is 'a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences',[2] and it is an important issue in every work environment, but its importance is significantly higher in the field of medicine as medicine is involved with critical decisions regarding one's health. Numerous industrial studies emphasized the role of psychological well-being in job performance and job satisfaction.[3] One study among physicians revealed that one third of all doctors reported lowered standards of patient care that is associated to primarily stress-related origins, and tiredness were determined to be at fault for 48.8% of the incidents, where doctors provided a lowered standard of care to their patients.[4] Studies focused on primary health care physicians mostly assessed the sources of stress and predictors of job satisfaction among GPs, and indicated how job stress affects levels of job satisfaction.[5–11] Time pressure, interruptions, practice administration, dealing with difficult patients and work/home conflict were found as the main sources of stress for GPs.[12–15] In Australia, 68% of GPs that were questioned were satisfied with their job;[16] in the US, the satisfaction level increased to 82% among primary care physicians.[17] Another survey reported that 59% of family physicians in the US were happy with their careers.[18] In Turkey, studies about these issues are rare and somehow, medical professionals are seen as super-humans and the expectation of self-sacrificing is higher than in other professions. On the other side, health policies and primary health care systems are changing rapidly in our country, and these changes are a burden for job related affective well-being. Nowadays a transition period for the health care system is being considered. This transition period consists of adopting a family medicine model for primary health care services. While family doctor and general practitioner are used interchangeably in most countries, they are distinct in Turkey. All medical school graduates can work as GPs, who are not considered as specialists. These doctors usually work in health centres, providing preventive and primary health care. Family doctors are specialists, who receive an additional 3 years of training with an extensive curative focus. Since there are an insufficient number of family doctors, GPs will take responsibility in this scheme after some training. But the question of how will the training be arranged still remains unknown. With this recently proposed family medicine system, the primary health care physicians will be appointed upon the contracts made with the National Health Insurance Organization and paid through this organization. This is a new concept for GPs and it brings the fear of losing their jobs. Since the beginning of the Turkish Republic, all GPs were governmental officers, paid by the state budget, without any contract or limitations, and they get fixed salaries arranged by their length of service.

The purpose of this study is to investigate a group of Turkish primary health care physicians' job related emotional perceptions and their outcomes in terms of stress, anxiety and depression. Our study group did not represent all the primary health care physicians in the country; but it gives us an understanding about their job related well-being situation that is rarely assessed.

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Methods

This study was performed in a metropolitan city (Bursa) of Turkey in the year 2004, and utilized a descriptive, cross-sectional, self-reported questionnaire. The study proposal and the questionnaire were approved by the Uludag University Ethics Review Committee and the Directorate of Health of our city. Our participant base was GPs who worked in the primary health care centres in the city. At the time of the study period, there were a total of 60 primary health care centres and 274 GPs. We performed on-site visits to all the health centres, and explained the purpose of the study. Our criteria were: Being present on the work place during our visits and consenting to participate in the study. Out of 274 GPs, 202 met our criteria and composed our study group. The remaining 72 physicians either chose not to involve in this study ($n = 10$) or they were absent on the day of visit ($n = 62$). The causes for their absenteeism were holiday, sick leave, being on house visits or temporarily being in charge in other health institutions. Printed questionnaires were filled anonymously by the participants. Participants were asked to state their demographic characteristics (age, gender, marital status and years in practice) and to complete the Job Related Affective Well-Being Scale (JAWS) and Depression Anxiety Stress Scale (DASS-42).

JAWS was developed by Katwyk *et al.* (2000)[19] to assess a wide range of emotional reactions towards work. The first studies with JAWS were performed by the developers among 51 and 100 employed undergraduate students and 114 state civil service employees of the University of South Florida.[19] The results of these three studies provided insights into the complex structure of affective well-being, and introduced a new affect measure the JAWS. A Turkish version of JAWS was developed by Bayram *et al.* (2004).[20] Cronbach's alpha for the Turkish version was 0.93. The Turkish version of JAWS consists of four sub-scales as the original version: high pleasure/high arousal (HPHA); high pleasure/low arousal (HPLA); low pleasure/high arousal (LPHA); and low pleasure/low arousal (LPLA). These four dimensions were derived from the distribution of the scale items, indicating emotion in two main dimensions (i.e. high/low pleasure and high/low arousal). Respondents were asked to evaluate 20 job-related affective statements (in the original version of JAWS there were 30 items) in terms of how their current job has made them feel over the past 30 days. They responded by choosing one of the five variable categories, ranging from 'never' to 'extremely often'. Five scores were derived from JAWS. For the overall job-related affective well-being score, the non-pleasurable items were reverse-coded and added to the scores on all the pleasurable items. A high score on the resulting analysis represents a high level of overall job-related affective well-being. For each subscale (HPHA, HPLA, LPLA and LPHA) high values represented high levels of this state. The items and corresponding response scale for the Turkish version of JAWS are shown in the Appendix. Of all the items, 10 were referred to pleasurable affects while the remaining 10 were referred to as non-pleasurable affects.

DASS-42 developed by Lovibond and Lovibond (1995)[21] is a 42 item instrument measuring current (within the past week) symptoms of depression, anxiety and stress. Each of the three scales consists of 14 items that are answered by using 0–3 scale, where 0= did not apply to me at all, and 3= applied to me very much or most of the time (range of possible scores for each scale is 0–42). Scores considered in the normal range are 0–9 for depression, 0–7 for anxiety and 0–14 for stress. Scores above these ranges indicate the degree of problem from mild to extreme.[22] The first studies by using the DASS-42 scale were performed by the developers on 3540 volunteer university students from Australia,[23] and they found a good convergent validity with other scales. Another study with DASS-42 was done in the Netherlands to detect anxiety disorder and depression in 326 employees absent from work because of mental health problems, and the psychometric properties of this scale was found suitable.[22] Since the DASS-42 was not used or adopted to Turkish before, we used the following procedure: for the linguistic translation the instrument was translated by two independent bilingual (Turkish–English) translators from the source language (English) into the target language (Turkish). Then, it was translated back from the target language into the source language by another bilingual translator who was not involved in the original translation. Finally the first and second translations were compared, by an expert panel whose members were: a bilingual health professional, a bilingual native English teacher and a bilingual psychologist. (Members of this panel were not involved in the study.) This expert panel identified the word usage discrepancies and solved them. The relevance and comprehensibility of the items were checked by a pilot study on 20 physicians who were working at Uludag University Hospital.

Correlations were calculated to see the relations between JAWS and DASS. Two hierarchical regression models were performed to analyse the relationships between the job related affective status and demographic characteristics and job related affective status and depression, anxiety and stress. The Statistical Package for Social Scientists (SPSS) version 9.0 for windows was used.

Results

Among 202 physicians, 89 (44.1%) were male and 113 (55.9%) were female. The mean age was 37.7 ± 6.2 (range 22–59). The demographic details are given in Table 1.

Table 2 shows the descriptive statistics on study variables.

Correlations were calculated by evaluating the sizes of scales (Total JAWS, HPHA, HPLA, LPHA, LPLA, depression, anxiety and stress) to see the associations between JAWS and DASS (Table 3). Five hierarchical regression analyses were undertaken to investigate the explanation of percent variance differences in total JAWS and its sub-dimensions (HPHA, HPLA, LPHA, LPLA) (Table 4).

The Pearson correlation coefficients in Table 3 show the mere statistical relationships between JAWS and DASS. The associations between depression, anxiety, stress, and total JAWS and its sub-scales were negative except for LPHA and LPLA (which were positive). This negative relationship is confirmed by looking at Table 4. The coefficients of anxiety for total JAWS, HPHA, HPLA carried a negative sign in Table 3, which turned into positive in Table 4, but they were not found statistically different from zero except for HPHA. On the other hand, the correlation coefficient of anxiety for LPLA carried a positive sign in Table 3 and turned into negative in Table 4, but was not found statistically significant. The highest correlation was obtained from stress, although correlations between JAWS total scores and DASS were negative and statistically significant ($r = -0.52$; $P < 0.01$); If the sub-dimensions were reviewed, HPHA and HPLA variations were in inverse relations with anxiety, depression and stress. Depression shows the highest negative correlation with these two emotional sub-dimensions states (-0.32 for HPHA; -0.40 for HPLA; $P < 0.01$ for both of them). The LPHA and LPLA variations that describe negative emotional states show a positive and significant relationship associated with depression, anxiety and stress values. Stress has the highest positive relationship to

Table 1 Demographic details of the study group

	Respondents ($n = 202$)						Non-respondents ($n = 72$)[a]					
	Female		Male		Total		Female		Male		Total	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Age Groups												
≤34	40	35.4	13	14.6	53	26.3	14	35.0	5	15.6	19	26.5
35–44	67	59.3	63	70.8	130	64.3	24	60.0	22	68.8	46	63.8
45≥	6	5.3	13	14.6	19	9.4	2	5.0	5	15.6	7	9.7
Total	113	100.0	89	100.0	202	100.0	40	100.0	32	100.0	72	100.0
Marital Status												
Single	25	22.1	8	9.0	33	16.3	8	20.0	3	9.4	11	15.3
Ever married	88	77.9	81	91.0	169	83.7	32	80.0	29	90.6	61	84.7
Length of service												
≤4 years	61	54.5	36	40.4	97	48.2	23	57.5	12	37.5	35	48.6
5–9 years	28	25.0	22	24.7	50	24.9	9	22.5	8	25.0	17	23.6
≥10 years	23	20.5	31	34.9	54	26.9	8	20.0	12	37.5	20	27.8
Managerial responsibility												
Yes	18	15.9	30	33.7	48	23.8	5	12.5	7	21.8	12	16.7
No	95	84.1	59	66.3	154	76.2	35	87.5	25	78.2	60	83.3

a: Ten did not want to participate to the study; Sixty-two were absent

Table 2 Descriptive statistics on study variables

Description	Variable	Mean	SD	Possible Range	Actual Range	Coefficient Alpha
Job related affect	JAWS	65.9	13.6	20–100	28–96	0.93
High Pleasure High Arousal	HPHA	12.6	4.7	5–25	5–24	0.91
High Pleasure Low Arousal	HPLA	14.5	4.4	5–25	5–25	0.89
Low Pleasure High Arousal	LPHA	9.1	3.6	5–25	5–25	0.82
Low Pleasure Low Arousal	LPLA	11.9	4.3	5–25	5–25	0.85
Total Positive Emotions		26.9	8.8	10–50	10–47	0.94
Total Negative Emotions		20.9	7.4	10–50	10–50	0.90
	Depression	7.3	7.3	0–42	0–42	0.94
DASS-42 Scale	Anxiety	5.4	6.0	0–42	0–42	0.91
	Stress	12.5	7.7	0–42	0–42	0.93

Table 3 Pearson correlation between JAWS and DASS sub-scales

	Total	HPHA	HPLA	LPHA	LPLA
Depression	−.488**	−.320**	−.397**	.398**	.458**
Anxiety	−.398**	−.162*	−.268**	.426**	.441**
Stress	−.520**	−.291**	−.355**	.482**	.557**

*$P < 0.05$; **$P < 0.01$

these two emotional states (0.48 for LPHA; 0.56 for LPLA; $P < 0.01$ for both of them). Our correlation analysis provided important information about the relationship between two groups of variations; however, the factors that play a role in describing a group's or individuals' emotional perceptions should be clear. We worked on this subject to find an answer by evaluating five hierarchical regression analyses relative to practitioners' age, gender, marital status, having children, length of service and managerial responsibility. A regression analysis was applied by adding each of two variation groups (demographic characteristics and DASS) to the regression equation sequentially. This analysis was targeted to determine the contribution of DASS to the variance found in Table 4.

Scores of total JAWS, HPHA, HPLA, LPHA and LPLA were used as dependent variables. Socio-demographic characteristics (age, gender, marital status, having children, length of service, being in a managing position) and DASS (depression, anxiety and stress) scores were accepted as independent variables. Every regression consisted of two steps. In the first step, we took only the socio-demographic characteristics into account. The second step of this model analysed the effects of socio-demographic characteristics together with depression, anxiety and stress scores. As it seen in Table 4, age, length of service, depression, anxiety and stress scores were continuous data, while gender, marital status, having children and being in a managerial position were dichotomous. Age was found as a significant variable in the total scores of the JAWS and HPHA, HPLA sub-dimensions. A 1 year increase in age increases HPHA sub-dimension in step 2 by 0.028 points. Other demographic variables like gender, marital status, having children and length of service as months were not found significant both in the total score of JAWS and in the sub-dimensional scores. Depression and stress together were significant in the total score of JAWS and the HPHA sub-dimension; depression alone was significant in the HPLA sub-dimension and stress alone was significant in both the LPHA and LPLA sub-dimensions. Statistically significant elevations in described variances obtained by adding depression, anxiety and stress into the regression equation and elevations between 0.18–0.33 in R^2 values ($P < 0.001$ for both) resulted by adding symptom variances. This means by adding depression, anxiety and stress into the model the 18–33% of the variances could be explained while only 3.0–7.0% could be explained only with demographic factors. R^2 changes in table 4 showed the differences between step 1 and 2. The socio-demographic variables explained ∼6.0% of the variance in total JAWS, 5.0% in HPHA, 6.0% in HPLA, 3.0% in LPHA and 2.0% in LPLA. After entering the DASS scores as independent variables the amount of explained variance increased to 33.0% in total JAWS, 18.0% in HPHA, 22.0% in HPLA, 25.0% in LPHA and 32.0% in LPLA. This revealed that the individuals' job related affective well-being is closely related with their depression, anxiety and stress levels. For total JAWS age, depression and stress were found statistically significant factors ($P < 0.05$, $P < 0.01$ and $P < 0.001$, respectively).

Table 4 Summary of hierarchical regression analysis predicting JAWS and its sub-scales in a sample of Turkish GPs

	Predictors	Coefficients				
		Total JAWS	HPHA	HPLA	LPHA	LPLA
STEP 1 Socio-demographics	Age (in years)	0.025*	0.031*	0.036**	−0.015	−0.019
	Gender (female)	0.155	0.37	0.257	−0.128	−0.091
	Marital status (ever married)	0.246	0.193	0.321	−0.155	−0.287
	Having children (no)	0.008	−0.131	0.065	−0.034	−0.073
	Length of service (in months)	−0.002	−0.002	−0.002	0.001	0.001
	Managing position (no)	0.227	0.295	0.227	−0.220	−0.166
	R^2	0.07	0.06	0.07	0.03	0.03
STEP 2 DASS	Age (in years)	0.018*	0.028*	0.030*	−0.005	−0.007
	Gender (female)	0.115	0.081	0.205	−0.109	−0.055
	Marital status (ever married)	0.174	0.010	0.182	−0.171	−0.256
	Having children (no)	0.055	−0.146	0.094	−0.114	−0.152
	Length of service (in months)	−0.001	−0.002	−0.002	0.001	0.001
	Managing position (no)	0.197	0.309	0.218	−0.162	−0.104
	Depression	-0.027**	−0.049**	−0.048***	0.002	0.011
	Anxiety	0.017	0.059**	0.032	0.019	−0.001
	Stress	-0.035***	−0.032*	−0.023	0.034**	0.054***
	R^2	0.33***	0.18***	0.22***	0.26***	0.33***
	R^2 change	0.26	0.12	0.15	0.23	0.30

*$P<0.05$; **$P<0.01$; ***$P<0.001$; Age, length of service, depression, anxiety and stress are continuous data

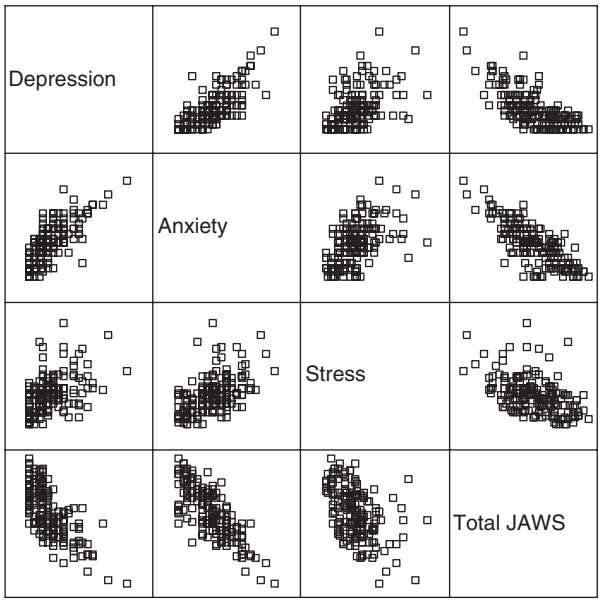

Figure 1 Scatterplot matrix of anxiety, depression, stress and total JAWS scores

In HPHA, age, depression, anxiety and stress, in HPLA, age and depression and in LPHA and LPLA only stress were found statistically significant.

Scatter plot matrix (Figure 1) shows negative relationships between total JAWS and depression, anxiety and stress. These correlations tend to be linear and negative.

Discussion

Since the time of the famous utilitarian philosopher Jeremy Bentham, it is known that seeking pleasure and avoiding pain is fundamental to human motivation. Moods and emotions which together are labelled as 'affect', represent people's on-line evaluations of the events that occur in their lives. Subjective well-being is a broad category that includes individual's emotional responses, domain satisfactions and global judgements of life satisfaction. Work is one of the domain satisfactions that are considered under the components of subjective well-being.

In our study group the mean score for total positive emotions were higher than the negative ones (26.9 *vs* 20.9) and the mean total JAWS score was 65.9. According to the ranking of the scores of JAWS subscales, the job related affective well-being status of the primary health care physicians is as follows:

(i) High pleasure/low arousal (satisfied, content, proud, pleased and calm)
(ii) High pleasure/high arousal (elated, enthusiastic, excited, cheerful and inspired)
(iii) Low pleasure/low arousal (depressed, discouraged, confused, fatigued and bored)
(iv) Low pleasure/low arousal (furious, frustrated, frightened, intimidated, disgusted)

So we can say that, the primary health care physicians who were in our study group were mostly satisfied, content, proud, pleased and calm in terms of their job related moods and emotions. This indicates that they are pleased with their jobs but they are not motivated. This may be due to the problems emerging from the failure of healthcare policies that are briefly mentioned in the introduction but this is beyond the scope of this article, and needs further evaluation.

The mean depression, anxiety and stress scores according to the DASS-42 were below the cut off limits, and we found negative correlations between JAWS total scores and depression, anxiety and stress scores. The highest correlation was associated with stress. We could not find any other study in the literature employing the scales that we have used but there were many studies concerning GPs' job satisfaction and causes of dissatisfaction. Demographic factors like age, sex and marital status were mentioned as they related to job dissatisfaction in these studies. Robinson[24] demonstrated that women were more prone to job stress and Linzer *et al.*[25] found that US female physicians experienced more burnout than male physicians. A job satisfaction study among GPs showed no difference between men and women in the UK.[11]

We found that the age of the practitioner played a significant role in job related affective well-being. Younger physicians showed higher pleasure and arousal and this decreased incrementally with increased age of the practitioner. This could be due to gained experiences and the lack of

idealism. But these issues need to be investigated via extensive qualitative studies. Diener and Suh[26] examined the relation between age and the subjective well-being in a survey that included national probability samples, and found that only pleasant affect declined with age. We have not found any relationship between sex, marital status, having children, the length of service, being in a managing position and job related affective well-being. Only few physicians had a managerial responsibility and this would explain the relatively high but statistically insignificant coefficients.

Other studies used depression scales for evaluation of physicians job related affections or 'burnout' as an outcome measure. These studies revealed some significant relationships related to psychological health status, particularly to depression.[13,27,28] A study among 406 GPs (response rate 70%) showed that 52% scored 3 or more on the General Health Questionnaire (GHQ-12) which indicates a high level of psychological symptoms.[28] Another study among 145 junior doctors revealed that 37.5% of women and 24% of men pre-registration house officers scored >4 on the GHQ, and 38.9% of women and 5.4% of men had a score >8 on the anxiety component, and 8.3% of women and 2.7% of men had a score of >8 on the depression component of the of the Hospital Anxiety and Depression Scale (HAD).[12] The most recent large-scale investigation of GP's job satisfaction is Sibbald *et al.*'s[11] survey of 1815 GPs in England and Wales. In this study, job satisfaction is measured by the Warr-Cook-Wall questionnaire and job stress is measured by a 30-item questionnaire where each item is rated on a five point scale with high scores representing high stress. The overall job satisfaction mean score was 4.65 and mean stress score was 2.85. The authors concluded that they found generally low levels of job satisfaction and high levels of stress among general practitioners in 2001.

Unlike other job satisfaction scales, JAWS evaluates pure affects and this affect is context specific. Also the coverage of a wide range of affective responses allows one to consider the effect of arousal as well as the pleasurable dimension on perceptions, behaviours and outcomes related to work.[13] Low levels of job satisfaction are closely related with poor mental health; this is a downward spiral: poor mental health has an adverse impact on patient care which in turn further upsets the physician.[6,7,9,12,14,16,18,27–30]

As a conclusion, primary health care physicians' job related negative emotional perceptions were associated with reactions in terms of stress, anxiety and depression, and further studies that focus on these issues in a qualitative manner are needed. Because primary health care physicians' job related affective well-being matter, they were serving as gate-keepers for the health of the whole nation. Their negative moods and emotions related to their job will disturb the quality of the service and the continuity of patient–physician relationship. Negative moods and emotions could be a reason for high turnover and absenteeism or decreased job performance and these factors will increase the cost of primary health care services.[31]

Limitations

This is a cross-sectional study and thus, we must be cautious in inferring the causal direction from these findings. Potential attrition bias, recall bias, social desirability, participants' ability and willingness to remember and report emotional events from their past should be taken into consideration. Despite these limitations, we feel that the study highlights the emotional status of the general physicians in our country.

Conflict of interest: None declared.

Key points

- Job related positive emotions were higher among our group of Turkish physicians.
- But they were in a low arousal affective status and this means that they were not motivated.
- Job related negative emotions lead to stress, depression and anxiety among which stress is highly pronounced.
- Job related affective well-being of primary health care physicians should be considered when changing public health policies and decision makers should be aware of its importance.
- More qualitative and quantitative studies should be performed about these issues, especially in developing countries like ours in which they are neglected.

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Appendix

Job Related Affective Well-Being Scale (JAWS)

Below are a number of statements that describe different emotions that a job can make a person feel. Please indicate the amount to which any part of your job has made you feel that emotion in the past 30 days. Base your answers on the following scale

1, Never; 2, Rarely; 3, Sometimes; 4, Quite often; 5, Extremely often or always,

Sub scale	Item no	Emotion
HPLA	1	My job made me feel *calm*
LPLA	2	My job made me feel *bored*
HPHA	3	My job made me feel *cheerful*
LPLA	4	My job made me feel *confused*
HPLA	5	My job made me feel *pleased*
LPLA	6	My job made me feel depressed
LPHA	7	My job made me feel *disgusted*
HPHA	8	My job made me feel *elated*
HPHA	9	My job made me feel *excited*
HPHA	10	My job made me feel *enthusiastic*
LPHA	11	My job made me feel *frightened*
LPHA	12	My job made me feel *frustrated*
LPHA	13	My job made me feel *furious*
LPLA	14	My job made me feel *fatigued*
LPHA	15	My job made me feel *intimidated*
HPHA	16	My job made me feel *inspired*
LPLA	17	My job made me feel *discouraged*
HPLA	18	My job made me feel *content*
HPLA	19	My job made me feel *proud*
HPLA	20	My job made me feel *satisfied*

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