

THE RELATIONSHIPS BETWEEN PSYCHOSOCIAL FACTORS AND PHYSICAL AND
MENTAL HEALTH IN ENGLISH AND TURKISH FIRST-YEAR UNIVERSITY
STUDENTS

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ABSTRACT

Background: There has been extensive research on associations between psychosocial factors, such as stress and social support, and physical and mental health. Less is known about cultural differences in such effects, which were examined in the present study by comparing university students in England and Turkey. **Methods:** Two hundred and seventeen first-year university students from Turkey and 76 first-year university students from England participated in this study. They completed questionnaires measuring perceived social support (the Interpersonal Self-Evaluation List), daily hassles, perceived stress, emotional distress, fatigue, cognitive difficulties, somatic symptoms and mood states. **Results:** The results showed significant differences between English and Turkish first-year university students in most psycho-social factors and outcome measures. The Turkish sample generally reported a more negative profile. However, the results also indicated that both countries had similar associations between psychosocial factors and health. **Conclusions:** Cross-cultural differences in psychosocial predictors and health outcomes were observed in the present study. However, similar psychosocial models were present in both countries.

KEYWORDS: Social Support, Hassles, Physical Health, Mental Health, Perceived Stress, Positive Mood, Negative Mood, Cognitive Difficulties, Fatigue, Somatic Symptoms, England, Turkey, University Students.

INTRODUCTION

Many previous studies of stress in university students^[1,2,3] have shown clear evidence that many students suffer from anxiety during their university years. Previous cross-cultural studies^[4,5,6] have also revealed cultural differences in stress among university students. Therefore, the present study focused on whether the relationship between psychosocial factors and stress differed between Turkish and English first-year university students. Hassles and social support were chosen as psychosocial factors in this study. The relationships between hassles, health, and social support are briefly summarised below.

Hassles and health

Hassles have been conceptualised as ‘*experiences and conditions of daily living that have been appraised as salient and harmful or threatening to the endorser’s well-being.*’^[7] Research suggests that daily hassles are better predictors of symptoms than more major life events. Previous studies also found adverse effects of hassles on health status. For example, the psychological symptoms in students taking their final examinations

were examined in one study^[8,9] and it was found that hassles were significantly and positively related to psychological symptoms. Similarly, in another study^[10], the impact of daily stress on health and mood among married couples was investigated, and it examined whether psychological and social resources modified the effects of stress. The results showed a tendency for an increase in daily hassles to be associated with a decline in health and mood. In general, the results also showed that those who reported low self-esteem and low social support showed a more positive association with stress than those who were high in these psychological characteristics.^[11,12]

Social support and health

Social support has been defined as ‘*information from others that one is loved and cared for, esteemed and valued and part of a network of communication and mutual obligations.*’^[13] Numerous studies have indicated the direct and indirect effects of social support on mental and physical health. Previous research suggests that people with high levels of social support may experience fewer mental health problems when they

confront a stressful experience. For example, in one study^[14], the question of whether social support reduces the impact of occupational stress on job-related strain and health among over 2000 men in various white and blue-collar occupations was examined. Emotional and tangible social support was measured from supervisors, co-workers, wife and family. The results showed that the employees who received high-level social support reported lower psychological strain. Other studies have also shown that social support reduces stress from various sources. For example, social support and stress during the first year of graduate school were examined in another study.^[15] It was found that there was an inverse relationship between the frequency of social interactions with peers and stressful events experienced during their first 6 months of graduate study and the number of emotional and physical problems encountered during that period. Although socially active students experienced slightly more life changes than less active students, the results showed that these events were generally less intense and disruptive for a shorter period than in isolated individuals. Social support also seems to benefit people's physical health.^[16,17] Other studies have also shown that social support increases recovery among people who are already ill.^[18,19]

As a result of this summary, it is possible to conclude that social support seems to influence health. At this point, the critical question is how social support influences health. Two alternative models have been suggested to explain the beneficial effects of social support on health.^[20] The stress-buffering model proposes that social support is related to the well-being of people under stress. In other words, this model posits that social support protects individuals from the potentially harmful influence of stressful events. The alternative, the main-effect model, proposes that social support is generally beneficial during non-stressful and highly stressful times.

The present study examined the main and buffering effects of social support on the subjective health of Turkish and English first-year university students. The following questions were addressed in this study:

1. Are the two countries' psychosocial factors and outcome measures different?
2. Are there any differences between the two countries regarding the associations between psycho-social factors and subjective health?

METHODS

The study was carried out with the approval of the local ethics committee and the informed consent of the participants. A cross-sectional design was used to compare Turkish and English first-year undergraduate students.

Participants

Two hundred and ninety-three first-year university students participated in this study. Seventy-six of them were from England, and 217 of them were from the North of Turkey. The age range was 16 - 40 years, with a mean of 19 years. Of the Turkish sample, 44 % were female and 56 % were male subjects, whereas of the English sample, 60 % were female and 40 % were male. Ninety-seven per cent of the participants were single.

Data collection

The procedure for distributing the questionnaires was different in each country. Two hundred and twenty-five questionnaires were distributed to Turkish first-year university students at the end of the lecture by the lecturer in the class. The Turkish students were required to fill in the questionnaires and return them to the lecturer. One hundred per cent of the questionnaires were returned. Two hundred and seventeen of them were used in the analysis. Eight questionnaires were not used because they were not filled in correctly. Eighty-three English first-year university students also filled in the questionnaires. The questionnaire was distributed to the participants by post and returned to the Health Psychology Research Unit when completed. Seventy-six of these questionnaires were used. Seven questionnaires were not filled in correctly and were not used.

Measures

The participants completed a set of questionnaires which consisted of the Interpersonal Support Evaluation List (ISEL),^[20] Hassles,^[8] Profile of Fatigue Related States (PFRS),^[21] Mood States This Week (MSTW),^[22] and Perceived Stress Scale (PSS).^[23]

The Interpersonal Support Evaluation List (ISEL) consisted of 40 items. The ISEL was designed to evaluate the perceived availability of four components of support: appraisal, self-esteem, belonging, and tangible support. Each scale consisted of 10 items. The responses to these questions were made on a four-point scale: 1= definitely false, 2= probably true, 3= probably false, and 4= definitely true.

The hassles scale measures irritating and distressing demands and includes 117 items. The responses were on a three-point scale: 1= somewhat severe, 2= moderately severe, and 3= extremely severe. The participants were asked to mark only the items that caused a problem within a specified period.

The Profile of Fatigue-Related States has four subscales, which evaluate emotional distress (ED-pfrs), cognitive difficulty (CD-pfrs), fatigue symptoms (fatigue-pfrs), and somatic symptoms (SS-pfrs). Each scale consists of a different number of items. The items were rated on a seven-point scale: 1 = not at all, to 7 = extremely. The Mood States This Week (MSTW) scale included two sub-scales, which consisted of a list of positive and negative emotional items. The participants were asked how they had been feeling during the past week. The responses were scored on a 5-point Likert scale: 0= not

at all, 1= a little, 2= moderately, 3= quite a bit, 4= extremely. The Perceived Stress Scale (PSS) was designed to measure the degree to which events in one's life are perceived as stressful (where demands exceed the ability to cope). In this questionnaire, which included 14 items, the respondents were asked to indicate their feelings and thoughts during the last month. They were asked to rate the impact of events on a scale ranging from never (0) to very often (4). Finally, a demographics questionnaire included questions about the person's age, gender, and marital status. All questionnaires were translated from English to Turkish and back-translated by three Turkish university students doing PhDs at the University of Bristol.

RESULTS

The results were analysed using the BMDP statistical package programme. Analysis of variance, covariance, and factor analysis were carried out in this study. Levene's test of equality of variance was initially considered; if this was not significant, then the statistics from the analyses of variance were examined. However, if the variances were not equal, statistics from the Brown - Forsythe test were considered. This last test allows one to compare means without assuming equality of variance. However, this is only achieved at the cost of losing degrees of freedom. Hence, some analyses reported here have different degrees of freedom from the ANOVA analyses.

Factor analysis

Factor analysis was carried out to see whether the

psychosocial factors and outcome measures were grouped into meaningful factors in England and Turkey (in the same or different ways). Factor analysis of both data sets yielded two factors (social support and hassles) accounting for nearly 70 % of the variance. Similarly, two factors (social support and hassles) emerged, accounting for about 70 % of the variance for the Turkish sample and accounting for 66 % of the variance for the English sample. Factor analysis of the outcome measures (PFRS, MSTW, PSS) showed that one factor accounted for 65 % of the variance for the English sample and 67 % for both data sets. Factor analysis of the Turkish sample data yielded two factors (pfrs; mstw and pss) accounting for 78 % of the variance.

The differences between Turkish and English first-year university students in terms of psycho-social factors and outcome measures

Analysis of variance was applied to see whether there were any differences between Turkish and English first-year undergraduate students in terms of psycho-social factors and outcome measures.

Psychosocial factors

Interpersonal Support Evaluation List (ISEL)

The results showed differences between the two countries regarding the total score and some of the sub-scales of the ISEL questionnaire, namely, tangible and belonging support (Table 1). Generally, Turkish students reported lower levels of social support.

Table 1. Differences between English and Turkish first-year undergraduate students in terms of the ISEL scores.

Scales	ENGLAND Mean/sd.	TURKEY Mean/sd.	F's / d.f.s / p's
ISEL A	31.89 / 5.64	30.59 / 6.65	2.30 / 1,285 / p = NS
ISEL S	30.49 / 4.21	31.01 / 3.57	1.01 / 1, 278 / p = NS
ISEL T	31.15 / 3.58	27.70 / 5.32	37.81/1,202 / p < 0.001
ISEL B	33.22 / 4.53	30.80 / 0.37	12.26 / 1,280 / p < 0.001
TOT - ISEL	126.55 / 1.81	120.57 / 1.31	6.41 / 1, 247 / p < 0.05

(Isel A = appraisal support; S = self-esteem support; T = tangible support; B = belonging support)

Hassles

The results demonstrated differences between the two countries regarding cumulative severity, frequency and

intensity of hassles (Table 2). Turkish students reported more frequent, intense and severe hassles than English students.

Table 2. Differences between English and Turkish first-year undergraduate students in terms of Hassles.

Scales	ENGLAND Mean/sd.	TURKEY Mean/sd.	F's / d.f.s / p's
Cumulative severity	28.79 / 27.01	67.06 / 40.65	69.21/1,206/ p < 0.001
Frequency	19.65 / 19.90	35.95 / 19.51	34.16 / 1,217/ p < 0.001
Intensity	1.44 / 0.34	1.84 / 0.42	58.66 / 1,181/ p < 0.001

Outcome measures

Profile Fatigue Related Syndromes (PFRS)

Differences between Turkish and English first-year undergraduate students were found in each sub-scale of the PFRS questionnaire. Turkish students experienced more emotional distress, cognitive difficulty, fatigue and

somatic symptoms than the English students (Table 3).

Table 3. Differences between English and Turkish first-year undergraduate students' PFRS scores

Scales	ENGLAND Mean/sd.	TURKEY Mean/sd.	F's / d.f.s / p's
Emotional distress	34.95 / 16.15	54.69 / 19.69	73.39 / 1,162/p / p < 0.001
Fatigue	29.27 / 14.22	40.16 / 17.64	28.42 / 1,161 / p< 0.001
Cognitive difficulty	27.78 / 12.18	37.61 / 13.12	34.97 / 1,142/p / p< 0.001
Somatic symptoms	27.43 / 11.30	38.03 / 16.01	38.51 / 1,189 / p < 0.001

Mood States This Week (MSTW)

The results indicated a difference between Turkish and English first-year undergraduate students regarding

positive and negative moods (Table 4), with English students reporting a more positive mood than Turkish students.

Table 4. Differences between English and Turkish first-year undergraduate students in terms of MSTW scores.

Scales	ENGLAND Mean/sd.	TURKEY Mean/sd.	F's / d.f.s / P's
Positive mood	33.41 / 9.11	31.03 / 8.75	4.02 / 1, 286 / p < 0.05
Negative mood	18.83 / 9.87	27.55 / 11.16	36.08 / 1, 282 / p < 0.001

Perceived stress scale (PSS)

Differences emerged between English and Turkish university students regarding perceived stress scores ($F=39.56$, $df=1$, 277 , $p < 0.001$). Turkish students (mean=27.96, sd=7.24) reported more stress than English students (mean=21.74, sd=7.64).

Effects of TOT-ISEL and Hassles (frequency) on outcome measures

The literature about hassles and health leads to the prediction that those who reported more hassles will show higher symptoms. On the other hand, the literature on social support predicts that those who report more social support will show lower symptoms (either all the time or when stressed). Analysis of variance was conducted, including the factors of country, level of hassles (high and low groups split at the median) and level of social support (high and low groups divided at the median).

Outcome measures**MSTW (Positive / Negative mood)**

The main effect of the country was significant for negative mood ($F=8.10$, $df=1,179$, $p<0.01$) but not for positive mood ($F=0.84$, $df=1,81$, $p=ns$). Significant effects of total social support were found for both positive ($F=17.28$, $df=1$, 181 , $p < 0.001$) and negative mood ($F=7.32$, $df=1$, 179 , $p < 0.01$). Similarly, there were effects of hassles frequency on positive mood ($F=6.92$, $df=1$, 181 , $p < 0.01$) and negative mood ($F=35.28$, $df=1$, 179 , $p < 0.001$) (Table 5). However, no significant total-isele x frequency nor country x total-isele x frequency interactions were found for positive or negative mood.

PFRS scores (Emotional distress: ED- pfrs; Fatigue: Fatigue - pfrs; Cognitive difficulty: CD - pfrs; Somatic symptoms: SS -pfrs)

The main effect of the country was significant for all sub-scales of pfrs: ed-pfrs ($F=23.57$, $df=1,176$, $p < 0.001$),

fatigue -pfrs ($F=7.71$, $df=1$, 178 , $p < 0.01$), cd- pfrs ($F=10.62$, $df=1,81$, $p < 0.01$) and ss-pfrs ($F=9.08$, $df=1,179$, $p < 0.01$). The effect of total social support was found only for ED-pfrs ($F=5.54$, $df=1,176$, $p < 0.05$). Effects of frequency were found for all subscales of pfrs: ED-pfrs ($F=34.97$, $df=1$, 176 , $p < 0.001$); Fatigue-pfrs ($F=10.02$, $df=1$, 178 , $p < 0.01$); CD-pfrs ($F=17.75$, $df=1$, 181 , $p < 0.001$); SS-pfrs ($F=9.71$, $df=1$, 179 , $p < 0.01$) (Table 5). However, the frequency x total-isele and country x totot-isele interactions were not significant for any of the sub-scales of PFRS.

Perceived stress scale

The main effect of the country was significant for the perceived stress scale ($F=11.12$, $df=1,77$, $p < 0.001$). Effects of social support ($F=20.89$, $df=1$, 177 , $p < 0.001$) and frequency were found as well ($F=24.49$, $df=1$, 177 , $p < 0.001$). However, there was no interaction between frequency x totot-isele and country x totot-isele x frequency for the PSS (Table 5).

Table 5. The effects of the level of social support and frequency of hassles on outcome measures for the Turkish and English samples.

Outcome measures	TURKEY				ENGLAND			
	LT-LFrq.	LT-HFrq.	HT-LFrq.	T-HFrq.	LT-LFrq.	LT-HFrq.	HT-LFrq.	HT-HFr.
	mean /sd.	mean /sd.	mean/sd.	mean/sd.	mean/sd.	mean/sd.	mean/sd.	mean/sd.
Positive mood	30.90 6.56	28.02 6.80	33.90 7.89	31.78 9.87	30.95 8.46	25.80 9.81	38.60 7.54	34.29 6.97
Negative mood	26.45 11.76	32.27 10.01	21.60 7.42	28.31 11.56	17.75 9.31	31.70 9.00	13.80 6.01	26.57 10.06
Emotion. Diff. -pfrs	48.68 18.28	65.16 18.15	49.95 18.38	54.94 20.85	31.54 14.01	59.00 11.22	26.77 9.79	45.71 11.94
Fatigue - pfrs	33.89 17.16	47.48 17.73	38.76 16.85	36.97 15.79	28.96 15.11	40.30 15.93	23.73 10.08	34.43 12.29
Cognitive diff. -pfrs	30.25 11.52	42.68 13.93	37.71 12.68	36.69 12.65	25.70 10.58	38.90 9.73	22.87 10.48	33.00 10.02
Somatic sym - pfrs	31.90 13.93	42.33 16.49	34.32 17.83	39.06 13.76	27.25 13.92	35.00 8.79	24.60 9.22	31.71 11.77
Perceived stress	28.24 6.95	31.41 6.70	23.80 6.24	26.88 7.41	22.21 6.06	31.30 4.55	17.13 6.61	24.43 7.73

*LT - LFrq.: Low total support - Low frequency; LT - HFrq.: Low total support - High frequency.

HT - LFrq.: High total support - Low frequency; HT - HFrq. High total support - High frequency

DISCUSSION

The first question addressed in this study was whether there were any differences between the two countries regarding psychosocial factors and health outcome measures. Global differences between English and Turkish university students were found regarding psychosocial factors and outcome measures. English students reported greater social support, tangible belonging, total social support, and positive mood. In contrast, Turkish students reported more hassles, negative mood, emotional distress, cognitive difficulty, fatigue, somatic symptoms and perceived subjective stress. Some of these global differences between Turkey and England can be easily explained by factors such as Turkish students reporting receiving less tangible support due to high inflation and the economic problems in Turkey. However, other findings are more difficult to explain, such as Turkish students reporting receiving less belonging and total support. In general, Turkish students may have more negative perceptions of life.

The main question addressed in this study was whether there were any differences between the two countries regarding the relationship between psychosocial factors and subjective health reports. It was found that the effects of psychosocial factors on health were similar in the two countries. For example, those who reported more social support (total - Isel) and fewer hassles (frequency) had high positive and lower negative outcomes in both countries. Similarly, those who reported less total social support and more hassles (frequency) had higher scores for all sub-scales of the profile of fatigue-related symptoms (PFRS) and perceived subjective stress (PSS) in both countries. The relationships between hassles and health supported previous results, which showed that daily hassles were related to more negative symptoms.^[8,9,10] Similarly,

regarding social support and health, the present results supported earlier findings^[14,15], which showed that receiving more social support was associated with positive health. In this study, an interaction between stress (hassles - frequency) and social support (tot-isel) for the outcome measures was not found, showing a main effect of social support rather than buffering effects of social support.

Overall, the present results demonstrated differences between the countries regarding psychosocial variables and health outcomes. However, these factors appeared to show similar relationships to one another in the two countries. Therefore, differences between countries do not reflect the operation of different mechanisms.

CONCLUSION

There has been considerable research on associations between stress, social support, and physical and mental health. Cultural differences in such effects were examined in the present study by comparing first-year university students in England and Turkey. Two hundred and seventeen first-year university students from Turkey and 76 first-year university students from England participated in this study. They completed questionnaires measuring perceived social support (the Interpersonal Self-Evaluation List), daily hassles, perceived stress, emotional distress, fatigue, cognitive difficulties, somatic symptoms and mood states. The results showed significant differences between English and Turkish first-year university students regarding psychosocial factors (stress and social support) and outcome measures. The Turkish sample reported a more negative psychosocial and health profile. However, the results also showed that both countries had similar associations between psychosocial factors and health. In summary,

cross-cultural differences in psychosocial predictors and health outcomes were observed in the present study. However, similar psychosocial models were present in both countries.

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