

Dimensions of concerns: the case of Turkish adolescents

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The purpose of the present study is to explore the type and seriousness of concerns reported by Turkish adolescents and to investigate the association of these concerns with self-reported psychological distress. The subjects were 957 secondary school students, 471 females and 486 males (ages 11 to 19) sampled from six different schools representing three socio-economic status levels in Ankara, Turkey. A 40-item, Adolescent Concerns Scale was administered to subjects together with the Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI-T) and the UCLA Loneliness Scale. An exploratory factor analysis revealed that the concerns could be grouped into five distinct clusters. These were concerns related to "personal future", "interpersonal relations", "local-universal issues", "social identity" and "use of drugs". Among them, "concerns over social identity issues" were found to be related to and predicting the anxiety scores. Even though concerns over the "use of drugs" received the lowest rating, as a factor subscale this cluster was also found to be related to depression, anxiety and loneliness scores. The results were compared with the four-factor model of adolescent concerns proposed by Violato and Holden (1988). Cultural differences were observed in the ranking of the importance attributed to each concern cluster.

INTRODUCTION

Adolescence is viewed as a transition period between childhood and adulthood, in which the individual experiences simultaneously, a number of important biological, psychological and social changes (Dusek, 1987). In the contemporary treatments of adolescents, two rather contradictory pictures emerge. One approach emphasizes the multiple transitions faced by the adolescents in a rapid succession, which are assumed to tax their coping resources and lead to inevitable adjustment difficulties mimicking

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clinical pathology (for a review see Hill, 1993). The second view, largely supported by research on large groups of adolescents, holds that the majority seem to go through these transitions without any sign of serious *malfunctioning* (Offer and Offer, 1975).

The relatively difficult transitions of adolescence seem to be handled successfully by most adolescents although the mechanisms of this achievement are less known. One hypothesis is to assume that issues are confronted by the adolescent in a sequence, or tackled one by one, instead of simultaneously, as emphasized in the "focal theory" of developmental tasks (Coleman, 1978). Adolescents' coping resources, (Patterson and McCubbin, 1987) social support networks, goals, values and future orientations (Nurmi, 1989, 1992) are also among the mechanisms which attenuate the impact of these multiple transitions.

Adolescents place priorities on major issues in their lives, and the relative importance of these issues and the emotions invested into them may change as a result of their hierarchy of goals, value orientations and future plans. One method of obtaining a glimpse of the issues that are considered to be of importance in the lives of adolescents is to ask them to report their current concerns. This is partly the reason why adolescent concerns have been subjected to detailed studies in the recent past. Some of these concerns are assumed to be driven partly by internal dynamics, stemming from the developmental needs of the individual, like the search for identity, and some are considered to be bound necessarily to the cultural context and its priorities. For this reason, research conducted into the type and seriousness of adolescent concerns as reported by the adolescents themselves has both theoretical and practical relevance.

Researchers demonstrated remarkable similarities and differences among concerns and values of adolescents living in different cultural environments (Collins and Harper, 1974; Offer and Offer, 1975; Nicholson and Antill, 1981; Bibby and Posterski, 1985; Wilks, 1986). Certain categories of concerns repeatedly appear as common issues. For example, grades, educational problems, future educational and vocational plans were ranked as the most pressing concerns in several studies conducted with American, Canadian, Australian and Chinese adolescents (Smith, 1980; Sundberg *et al.*, 1983; Poole and Evans, 1988; Violato and Holden, 1988; Kwok and Violato, 1993). The second concern area was physical appearance (Eme *et al.*, 1979), followed by interpersonal concerns, such as relationship with family, friends and the opposite sex (Kenny, 1987; Youniss and Ketterlinus, 1987; Malhotra, 1989; Papini *et al.*, 1989).

Nevertheless, there are noticeable differences in the prioritization of these concerns depending on demographic variables such as gender (Burke and Weir, 1978; Newcomb *et al.*, 1986; Sobal, 1987; Tolan *et al.*,

1988; Stark *et al.*, 1989; Wagner and Compas, 1990; Kwok and Violato, 1993), age, future orientation (Nurmi, 1989, 1992; Lau, 1990), and nationality (Feather, 1991). For example, Kwok and Violato (1993) comparing the concerns of Chinese and Canadian adolescents (mean age, 16.1) found that females showed more concerns in both cultures. The female adolescents in Hong Kong were found to be more concerned about their present and future schooling, employment when they finished school, and self-image, whereas the Canadian females showed a greater number of concerns in the areas of some universal and social issues. A study which compared Australian and Singaporean adolescents showed that, the Singaporean adolescents rated concerns with one's own country, education, work and political issues as more important, whereas the Australian adolescents gave higher ratings to environmental, lifestyle and psychological concerns (Poole and Cooney, 1987). Another study which compared the value systems and anomie among South Africans, Indians and Europeans, found that African adolescents gave higher ratings to religious issues. African adolescents, who are more collectively- and socially-oriented, also emphasized obedient attitudes, while their European peers, having a more individualistic-private outlook on life, endorsed more autonomous attitudes (Furnham, 1984).

A study which compared Italian, Spaniard and Greek adolescents (Mediterranean cultures) with German adolescents (Malhotra, 1989), revealed that, although both groups thought relationships with their family and parents were important, family was found to play a greater role in the emotional life of the former group. This is possibly one reason why behavioral autonomy or identity concerns do not get a comparable high rating in traditional societies (Feldman and Rosenthal, 1991).

Integrating some of this empirical accumulation, Violato and Holden (1988) proposed a "four-factor model" of adolescent concerns, based on a 14-item questionnaire representing the four themes found in different studies. These authors tested this model with 439 adolescents ranging in age from 12 to 19 years and found that, even though there were age and gender-related differences in the priorities assigned to each concern area, the individual concerns themselves could successfully be categorized into four factors as predicted by the model (Violato and Holden, 1988). These factors were labeled as, concerns related to "Health & Drugs", "Future and Career", "Personal Self" and "Social Self". The authors concluded that this "... four-factor model is a parsimonious and powerful explanatory framework of adolescent concerns and that the varied and apparently disparate concerns seem to emanate from four basic factors" (Violato and Holden, 1988, p. 112).

Recently, using these 14 items, Adwere-Boamah and Curtis (1993)

subjected the four-factor model to a confirmatory factor analysis on a sample of American inner city, lower SES, predominantly African-American adolescents (7th through 10th grades). They found that although there was high degree of similarity of the hierarchy of concern categories between the American and Canadian samples, the four-factor model did not fit the data of the American females.

We believe that the term "concern", as used in the above studies, needs to be defined with precision. Is it different, for instance, from "interest", "emotional investment", "attitude", "problem" or other related concepts? In their discussion of the appropriate terms for motivation, Novacek and Lazarus (1990) have mentioned this issue as : ".....People don't become emotional about matters that are unimportant, but about values and goals to which they have made a strong commitment" (Novacek and Lazarus, 1990, p. 694). These authors have stated that the terms "personal projects", "personal strivings", "current concerns", "life tasks", and "goals", all refer to what an individual is trying to do, wants to accomplish, and seeks to attain. According to these conceptualizations, some issues may not be a "concern" at all. Thus, using factor analysis alone to identify the dimensions of a variance field, can sometimes be misleading. Issues like "smoking", "alcohol use" and "drug abuse", may appear as strong determinants of some factors just because that item cluster consists of the least frequently endorsed items. High intercorrelations among such items can be artifacts of consistent low ratings assigned to them. For example, "smoking", which was ranked as the last item in the Violato and Holden (1988) study, may not be a concern for many adolescents who do not smoke. It is important, therefore, to be considered a concern, these issues should be further investigated and associated with other dimensions, like certain emotions, thoughts or behaviors which demand a person's energy to some degree.

The present study is an attempt to obtain converging evidence pertaining to the four-factor model of adolescent concerns proposed by Violato and Holden (1988), in the Turkish cultural context. The relationship between these concern dimensions and certain indicators of adolescent distress, such as dysphoria, anxiety and loneliness is also explored.

METHOD

Subjects

In order to obtain an age range that would represent diverse concerns and enable us to study the developmental pattern of concerns, a total of 957

subjects between the ages of 11–19-years-old ($M = 14.94$; $S.D. = 2.02$) were included in this study. There were 323 students from the 11–13-years-old range; 327 students from the 14–16-years-old range and 307 students from the 17–19-years-old range. Subjects were sampled from six public and private high schools in Ankara, largely representative of the country's urban SES levels. There were 272 students from the low SES; 336 students from the middle SES and 349 students from the high SES schools. In terms of their grades in school, 309 subjects were sampled from among the 6th graders (Age mean = 12.93; $S.D. = 0.80$); 318 subjects from among the 8th graders (Age mean = 14.43; $S.D. = 0.93$) and 330 subjects from among the 12th graders (Age mean = 17.36 $S.D. = 0.88$). The number of males and females in the total sample was 471 and 486, respectively.

Scales

Adolescent Concerns Scale (ACS)

This is a 40-item Likert-type scale developed especially for this study. Thirty items of the scale were borrowed from Violato's Revised Form of the Seriousness of Concerns Scale (C. Violato, personal communication, 29 May, 1989). These 30 items were translated and checked for the accuracy of translation by the authors and an independent reviewer. It was applied in this form, to a pilot sample of 100 adolescents between 12 to 15 years-of-age, who were asked to mark the items which were not properly understood. During this pilot study, the students were also asked to indicate, in an open-ended question, any other concerns that they thought were important, but not included in the list. A frequency count of these added concerns was obtained and the 10 most frequently mentioned additional concerns which were not present in the original 30-item "Seriousness of Concerns Scale", were included to make up the final 40-item Adolescent Concerns Scale used in the present study. These additional items were; "health problems of a family member", "my own health problems", "egoism seen in people", "passing the university entrance examination", "passing the entrance examination to a special high-school", "religious issues", "loneliness", "political events in our society", "increase in my country's population", "my economic status" and "the competition between me and my peers".

The term "concern" was defined as: "issues important in one's life, in terms of preoccupying one's thoughts, taking one's time, and influencing one's emotions". Respondents indicated their degree of concern for each item on a 4-point Likert scale (1 = never; 2 = sometimes; 3 = frequently; 4 = constantly).

Distress scales

Beck Depression Inventory (BDI) This is a 21-item self-report inventory which measures the presence and severity of affective, cognitive, motivational, psychomotor and vegetative manifestations of depression (Beck *et al.*, 1961). The 1978 version of the BDI was used in this study which has a score range between 0 to 63. The psychometric properties of the BDI are well-known and it is probably the most widely-used research instrument in studies related to depression. The Turkish version of the BDI was found to be a reliable and valid instrument to measure depressive symptoms on clinical and student populations; the split-half reliability corrected for length over odd and even numbered items was 0.85 and the Cronbach's alpha was 0.80 (Hisli, 1989). The validity of the instrument was assessed by correlating it with the MMPI-D Scale, a previously standardized measure of psychopathology. This correlation was found to be, 0.50.

State Trait Anxiety Inventory - Trait Form (STAI). This is a self-report measure of both current feelings of anxiety (State-Form) and generalized experiences of anxiety (Trait-Form), (Spielberger *et al.*, 1970). Each anxiety concept is measured by a separate scale consisting of 20 statements. The psychometric properties of the Turkish version of the STAI were previously studied and it was found to be a reliable and valid instrument in the Turkish cultural context. The internal consistencies of the Turkish STAI were between $\alpha = 0.81$ and $\alpha = 0.90$. The test-retest correlations were found to be $r = 0.74$ and $r = 0.86$ (LeCompte and Öner, 1976). The values obtained for the scale's construct, criterion and discriminative validities were satisfactory (Öner and LeCompte, 1985).

UCLA Loneliness Scale is a 20-item self-report inventory designed to measure the perceived loneliness of the individual (Russell *et al.*, 1980). Ten of these items are reversed before final scoring. Each item is marked on a 4-point Likert-type scale. The score range is between 20 and 80. The increase in scores indicates an increase in the loneliness experienced by the individual. The scale is reported to have good reliability $\alpha = 0.94$, test-retest $r = 0.73$ and validity (its correlation with the BDI is $r = 0.67$) in American samples. It was translated and adapted for the Turkish students, with an alpha coefficient $\alpha = 0.96$, and a test-retest correlation of $r = 0.94$. The correlation coefficients with the BDI and the Social Introversion Subscale of the MDI (Multiscore Depression Inventory), were $r = 0.77$ and $r = 0.82$, respectively (Demir, 1989).

Procedure

The scales were group-administered to the subjects in their classrooms. Participation was not compulsory but no subject refused to answer the scales. The data collection was completed in a single session lasting 25-45

minutes. The Adolescent Concerns Scale (ACS) was administered to the total sample, i.e. the 6th graders ($n = 309$), the 8th graders ($n = 318$), and the 12th graders ($n = 330$). The 8th graders, in addition to ACS were also given the UCLA Loneliness Scale and the STAI-A Trait, while the 12th graders were administered the ACS, the UCLA Loneliness Scale and the BDI. The 6th graders were not given any of the distress measures because the psychometric properties of these instruments were not previously tested on this age group.

RESULTS

The means obtained on the STAI-Trait, the BDI and the UCLA Loneliness Scale were comparable to the means obtained on the same scales with similar samples in Turkey (Şahin, 1990; Şahin and Şahin, 1992*a, b*). There were no significant gender differences on the BDI in the high school sample. However, on the STAI-A Trait Scale, the junior school females scored significantly higher compared to junior males (Females $M = 46.35$, S.D. = 9.35; Males $M = 44.02$, S.D. = 7.61, $t = 2.44$; $p < 0.02$). In the high school sample the males scored significantly higher on the UCLA Loneliness Scale ($M = 42.15$, S.D. = 9.43) compared with the females ($M = 39.99$, S.D. = 10.28; $t = 1.99$, $p = 0.05$). The alpha coefficient obtained for the 40-item Adolescent Concerns Scale (ACS) used in this study, was $\alpha = 0.86$ for the total sample.

Factor analysis

The responses to the items of the Adolescent Concerns Scale were subjected to an exploratory factor analysis using the method of principal factoring with iterations in the SPSS package (Nie *et al.*, 1975). According to the "eigenvalue greater than one" criterion, 10 factors emerged in the initial factor extraction, accounting for 51% of the total variance. These factors were rotated to varimax criterion. After rotation, five factors were found to be meaningfully interpretable accounting for 36.6% of the total variance (81.7% of the common variance). To include as many items as possible into the factors, loadings above 0.30 were accepted to be included in a factor. Overall, 31 of the 40 items of the ACS had loadings at least 0.30 or above on these five factors. The remaining factors were mostly singletons. Item communalities in the factor solutions ranged between 0.20 and 0.62. The factors and the pattern of loadings are presented in Table 1.

The first factor was named *Social Identity Concerns* ($\alpha = 0.73$). It was composed of nine items: my personal appearance (0.47), my sexual feelings (0.43), getting and going on dates (0.60), my height and weight

(0.45), becoming more popular (0.57), having nice clothes and dressing well (0.59), loneliness (0.30), my economic status (0.30), and the competition between me and my peers (0.30). The second factor was named *Local and Universal Concerns* ($\alpha = 0.76$), it also consisted of nine items; nuclear

Table 1. Factor analysis of the Adolescent Concerns Scale (40 items)

Concerns	Factors				
	Social identity concerns	Local and universal concerns	Interpersonal relations concerns	Personal future concerns	Drug use
	1	2	3	4	5
2. Nuclear War		0.49			
3. My personal appearance	0.47				
4. Getting along with my parents			0.67		
5. Smoking					0.37
7. Getting along with my friends			0.45		
9. World hunger		0.61			
10. Getting a job when I finish school				0.35	
11. Drinking					0.75
12. The destruction of the environment		0.52			
13. Deciding on a career				0.32	
14. Drugs					0.40
15. My sexual feelings	0.43				
19. Getting along with my brothers and sisters			0.62		
20. My future schooling				0.60	
21. Getting and going on dates	0.60				
22. World peace and disarmament		0.61			
23. My height and weight	0.45				
24. My achievement in school				0.41	
25. The AIDS Problem		0.38			
26. Getting a good education				0.46	
27. Becoming more popular	0.57				
28. Getting along with my family			0.65		
29. Egoism seen in people		0.30			
30. Having nice clothes and dressing well	0.59				
31. Poverty and injustice in the world		0.45			
33. Passing the univ. entrance examination				0.49	
36. Loneliness	0.30				
37. Political events in our society		0.33			
38. Increase in my country's population rate		0.38			
39. My economic status	0.30				
40. The competition between me and my peers	0.30				
% of common variance	42.6	14.1	11.8	7.4	5.8
% of total variance	16.6	6.6	5.7	4.1	3.6

war (0.49), world hunger (0.61), the destruction of the environment (0.52), world peace and disarmament (0.61), the AIDS problem (0.38), egoism seen in people (0.30), poverty and injustice in the world (0.45), political events in our society (0.33), and increase in my country's population rate (0.38). The third factor, *Interpersonal Relations Concerns* ($\alpha = 0.75$), was composed of four items, getting along with my parents (0.67), getting along with my friends (0.45), getting along with my brothers and sisters (0.62) and getting along with my family (0.65). The fourth factor was named *Personal Future Concerns* ($\alpha = 0.69$) and it consisted of six items, getting a job when I finish school (0.35) deciding on a career (0.32), my future schooling (0.60), my achievement in school (0.41), getting a good education (0.46), and passing the university entrance examination (0.49). The last factor was named *Use of Drugs* ($\alpha = 0.48$). It consisted of three items, smoking (0.37), drinking (0.75) and use of drugs (0.40).

Subscale-based analyses

On the basis of the results of the factor analysis, five factor-based subscales were created and they were treated as separate dependent variables so that, any difference that might be masked during total score comparisons, could be detected.

Several ANOVA computations, carried out separately on the five factor-based subscales, using Age (3 levels), Gender (2 levels) and SES (3 levels) as between subject variables, revealed a significant main effect of age on the "social identity concerns" ($F(2,938) = 14.50; p < 0.001$), indicating an increase in these concerns with age. There was also a significant two-way interaction of age and SES on the same scores ($F(4,938) = 2.322; p < 0.05$). Significant main effect of gender and SES were observed on scores of "local-universal concerns", females scoring higher ($F(1,938) = 15.885; p < 0.001$) and high SES students scoring lower ($F(2,938) = 6.76; p < 0.001$). There was no significant interaction effect of any of these variables. However, on the "interpersonal relations concerns", a significant interaction effect of age and SES was observed ($F(4,938) = 4.452; p < 0.001$), as well as a significant main effect of SES ($F(2,938) = 10.40; p < 0.001$), high SES students scoring lower. On the "personal future concerns", all of the sociodemographic variables (age, gender and SES) were found to have significant main effects. These figures were ($F(2,938) = 13.645; p < 0.001$) for age, scores increasing significantly as students get older; ($F(1,938) = 14.630; p < 0.001$) for gender, female students scoring higher, and ($F(2,938) = 9.312; p < 0.001$) for SES, the high SES students scoring lower than both the middle and low SES students. On personal future concerns, a significant interaction effect of age and SES was also observed ($F(4,938) = 3.093; p < 0.01$). On the "use of drugs" subscale, a

significant main effect of age ($F(2,938) = 16.37; p < 0.001$), the oldest group showing more intense concerns, and interaction effect of age and gender ($F(2,938) = 4.88; p < 0.008$) was found.

Correlations with external measures

Table 2 gives the intercorrelations of these subscales as well as their correlations with the distress measures such as the UCLA Loneliness Scale, with the STAI-Trait, and the BDI. The intercorrelations among the subscales were moderately high and significant. The correlations ranged between $r = 0.06$ ($p < 0.05$) and $r = 0.44$ ($p < 0.001$). In the junior school sample, the "social identity" subscale and the "use of drugs" subscale correlated significantly with the STAI scores, the coefficients were $r = 0.32$ and $r = 0.25$, $p < 0.001$, respectively. The correlations of these subscales with loneliness (UCLA) were equal ($r = 0.11$; $p < 0.05$) (Please see Table 2). In the high school sample, the scores on the use of drugs subscale correlated significantly with depression scores ($r = 0.11$; $p < 0.02$). In the combined sample of the junior school and high school students ($n = 647$, age 13 excluded), correlations of similar magnitude were obtained between social identity concerns and UCLA, and between use of drugs and UCLA (see Table 2).

Table 2. *Correlations among factor subscales and distress measures[†]*

Subscales	<i>n</i> = 647					<i>n</i> = 318 Junior high		<i>n</i> = 329 Senior high	
	2	3	4	5	UCLA	UCLA	STAI	UCLA	BDI
1. Social identity concerns	0.14***	0.40***	0.35***	0.09***	0.07*	0.11*	0.32***	—	—
2. Local & universal concerns		0.30***	0.32***	—	—	—	—	—	—
3. Interpersonal relations			0.44***	—	—	—	—	—	—
4. Personal future concerns				-0.13***	—	—	—	—	—
5. Use of drugs					0.06*	0.11*	0.25***	—	0.11*

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

[†]Since the 13-year-old group were not given any of the distress measure they were excluded from this analysis.

In order to compare the ratings given to the subscale scores by the total sample, the subscale scores were divided by the number of their constituent items. The highest mean was obtained on the "personal future concerns" ($M = 19.30/6 = 3.22$), followed by "interpersonal relations concerns" ($M = 11.52/4 = 2.88$), "social identity concerns" ($M = 22.46/9 = 2.49$), "local and universal concerns" ($M = 21.72/9 = 2.41$) and concerns over "drug use" ($M = 3.56/3 = 1.19$).

Regressions

The pattern of relationships found in the ANOVAs were replicated with the hierarchical multiple regression solutions. Changing the order of predictors in each computation yielded the same pattern of relations, i.e. age predicting social identity and drug use concerns, SES predicting the interpersonal concerns, SES and gender predicting local universal concerns and all three demographic variables significantly predicting personal future concerns.

These hierarchical multiple linear regression solutions were extended to the analyses with the distress measures, yielding some interesting patterns. With the junior school sample, in the first round of analyses, the sociodemographic variables and the UCLA scores were entered as a single block to predict trait anxiety. This yielded a multiple $R = 0.50$ ($F = 26.33$; $p < 0.001$), and T values were significant for age, gender and UCLA scores. After the effect of these variables were partialled out, concerns over the use of drugs and social identity issues were found to be significant predictors of anxiety. After entering the use of drugs subscale into the equation, the multiple R increased to 0.53 ($F = 17.71$; $p < 0.001$), and after the inclusion of the social identity scores the equation yielded a multiple correlation of $R = 0.59$ ($F = 20.26$; $p < 0.001$), the incremental R being significant for each step.

In the high school sample, after the effects of age, gender and UCLA scores were partialled out (Multiple $R = 0.41$ ($F = 16.54$; $p < 0.001$)), the use of drugs subscale continued to be a significant predictor of depression scores. Inclusion of this subscale into the equation, resulted in a significant change in the multiple R ($R = 0.43$; $F = 10.38$; $p < 0.001$).

Item-based analyses

To provide data for comparison with the published studies on adolescent concerns, the 40 items are listed in Table 3 according to the degree of endorsement in the total sample. The first 10 concerns with highest ratings, were related to grades, future education, relations with family and friends, and career decisions.

The t -test comparisons revealed that males and females differed

significantly in their endorsement of the concern items. There were 19 concerns out of 25, to which females assigned significantly higher scores. There were only six concerns on which males scored higher and these were: "drinking", "my sexual feelings", "having a part time job", "getting

Table 3. *List of Turkish adolescents' concerns in order of importance*

Item no. (<i>n</i> = 957)	<i>M</i>	S.D.
26. Getting a good education	3.43	0.86
33. Passing the university entrance examination	3.32	1.02
20. My future schooling	3.15	0.97
1. My grades in school	3.06	0.87
28. Getting along with my family	3.03	1.07
8. Health problems of a family member	3.02	1.04
24. My achievement in school	3.01	0.98
7. Getting along with my friends	2.99	0.93
10. Getting a job when I finish school	2.99	1.09
13. Deciding on a career	2.96	0.98
4. Getting along with my parents	2.93	1.13
31. Poverty and injustice in the world	2.92	0.99
32. Earning money	2.87	1.01
12. The destruction of the environment	2.82	0.98
18. My own health problems	2.72	1.05
19. Getting along with my brothers and sisters	2.70	1.13
3. My personal appearance	2.68	1.03
39. My economic status	2.62	1.06
30. Having nice clothes and dressing well	2.62	1.08
9. World hunger	2.59	0.95
27. Becoming more popular	2.58	1.09
29. Egoism seen in people	2.58	0.99
16. Discovering what I am really like	2.58	1.01
35. Religious issues	2.55	1.05
22. World peace and disarmament	2.45	1.10
23. My height and weight	2.44	1.05
40. The competition between me and my peers	2.35	1.06
34. Passing the entrance examination to a special high school	2.33	1.25
21. Getting and going on dates	2.20	1.05
38. Increase in my country's population rate	2.19	0.98
36. Loneliness	2.16	1.02
15. My sexual feelings	2.12	1.03
37. Political events in our society	2.11	0.99
6. Questions about "who am I"	2.08	1.01
2. Nuclear war	2.03	0.98
25. The AIDS problem	1.78	1.02
17. Having a part-time job while in school	1.64	0.91
5. Smoking	1.20	0.59
14. Using drugs	1.16	0.51
11. Drinking (i.e. alcohol)	1.12	0.48

and going on dates", "earning money" and "religious issues". Females were more concerned over issues like "grades", "achievement in school", "future schooling", "getting a good education", "deciding on a career", "getting along with parents and friends", "health problems of a family member", "identity concerns", "concerns over becoming more popular", "height and weight", and universal concerns like, the "AIDS problem", "poverty and injustice in the world", "world hunger", "egoism seen in people", "destruction of the environment", "nuclear war" and "loneliness" (see Table 4).

Some of the concerns which did not change significantly according to gender were; "personal appearance", "having nice clothes", "own health", "getting along with siblings", "getting along with family", "passing the

Table 4. Comparison of adolescent concerns in terms of gender

Concern	Females (n = 471)		Males (n = 486)		t
	M	S.D.	M	S.D.	
1. My grades in school	3.19	0.84	2.95	0.88	4.33***
2. Nuclear war	2.11	0.94	1.95	1.03	2.41**
3. Getting along with my parents	2.76	1.03	2.60	1.03	2.36*
6. Questions about "who am I"	2.14	1.04	2.02	0.99	1.92*
7. Getting along with my friends	3.05	0.91	2.93	0.95	2.02*
8. Health problems of a family member	3.10	0.99	2.95	1.08	2.29*
9. World hunger	2.67	0.93	2.53	0.95	2.50**
11. Drinking (i.e. alcohol)	1.08	0.39	1.16 b	0.55	2.79**
12. The destruction of the environment	2.92	0.95	2.72	1.03	3.01**
13. Deciding on a career	3.05	0.98	2.86	0.97	2.97**
15. My sexual feelings	1.94	0.95	2.30 b	1.07	5.61***
16. Discovering what I am really like	2.68	1.02	2.47	0.99	3.24***
17. Having a part-time job while in school	1.55	0.86	1.73 b	0.94	2.99**
20. My future schooling	3.26	0.98	3.06	0.98	3.07**
21. Getting and going on dates	2.11	1.02	2.29 b	1.08	2.55**
23. My height and weight	2.58	1.08	2.31	1.00	4.05***
24. My height and weight	3.11	0.97	2.91	0.98	3.09**
25. The AIDS problem	1.88	1.02	1.68	1.00	3.06**
26. Getting a good education	3.52	0.81	3.35	0.91	3.07**
27. Becoming more popular	2.68	1.10	2.49	1.08	2.75**
29. Egoism seen in people	2.73	0.96	2.43	1.00	4.82***
31. Poverty and injustice in the world	3.07	0.94	2.77	1.03	4.71***
32. Earning money	2.77	1.03	2.96 b	0.98	3.05**
35. Religious issues	2.46	0.99	2.63 b	1.09	2.54**
36. Loneliness	2.26	1.03	2.07	1.00	2.87**

* $p = 0.05$; ** $p = 0.001$; *** $p = 0.0001$.

b = higher score for males

university entrance examination", "passing the examination to a special high school". Although detailed analyses were conducted on individual items to reveal the differences according to age, SES and gender combinations, these results are not given in detail here, since the analyses with subscale scores reported above, give a fairly accurate summary of the patterns in the data.

Rank-order correlations

The hierarchy of endorsements for concern items reported in Kwok and Violato (1993) for the Chinese and Canadian adolescents were compared with the hierarchies obtained in the present study over 30 items that were common between studies. The endorsement means were converted into ranks, and Spearman's rank-order correlations were computed separately for the total samples, males and females. The matrix of intercorrelations is given in Table 5. These rank-order correlations might be interpreted as indices of similarity among samples. As can be seen in Table 5, there are high levels of commonality among these groups. Not surprisingly, the similarity is highest between males and females in the same culture. Furthermore, note the higher similarity between Turkish and Chinese samples (both males and females), as compared with their rank-order similarity with the Canadian sample.

Table 5. Rank-order correlations among samples in three cultures

	Canadian total	Canadian male	Canadian female	Chinese total	Chinese male	Chinese female	Turkish female	Turkish male
Turkish total	0.72	0.68	0.70	0.91	0.92	0.87	0.99	0.99
Turkish male	0.71	0.69	0.67	0.87	0.90	0.82	0.96	
Turkish female	0.71	0.66	0.72	0.93	0.93	0.91		
Chinese female	0.68	0.61	0.72	0.98	0.94			
Chinese male	0.66	0.62	0.66	0.98				
Chinese total	0.67	0.62	0.70					
Canadian female	0.98	0.91						
Canadian male	0.98							

DISCUSSION

The results of the present study indicate that, in general, Violato and Holden's four-factor model of adolescent concerns is applicable, with some qualifications, to the Turkish context. The four-factor model of adolescent concerns proposed by Violato and Holden was derived from the analysis of a 14-item scale. Later, this scale was extended by the addition of 16 new items, some of which were related to environmental, universal and social issues. The present authors could not locate any factor analysis of this 30-item Adolescent Concerns Scale. Although a 40-item scale was used in the present study, Turkish adolescents seem to be preoccupied with similar concerns stated in the above-mentioned model. The relative importance attributed to each concern area, however, is considerably different. In addition, a fifth factor emerged consisting of items on universal, environmental, and social issues.

Similar to the findings of other studies (Offer and Offer, 1975; Nicholson and Antill, 1981; Violato and Holden, 1988), Turkish students also ranked, personal future concerns like "getting a good education", "passing the university entrance examination", "future schooling", "achievement, and grades in school" as the most pressing concerns. The great majority (85.5%) of the students have stated that getting a good education is a concern they frequently or constantly are preoccupied with, followed by concerns over passing the university entrance examinations (81%). In the highly selective and competitive educational system of Turkey, the adolescents' elevated concern with these educational issues is understandable. Among approximately one million high school graduates applying for the university entrance examinations each year, only one out of seven can expect to be placed in a program. Even among those entering into the universities, a still smaller minority are placed in departments leading to occupational security. Most of the others face unemployment after graduation. Apparently these school-related pressures are felt both by high school and junior school students, regardless of age, gender and SES.

The "interpersonal relations" are the second group of concerns which preoccupy the minds of Turkish adolescents. This is an expected pattern in a culture where people are more affiliation- and family-oriented. As the ANOVA comparisons and the regression analyses have shown, SES seems to be the main variable predicting these concerns pointing to the more traditional, family-oriented values among the lower SES adolescents.

The third concern area named as "social identity" was found to be associated with age. As expected, this is an issue the early adolescents are involved with, confirming the formulations of the theories on developmental tasks (Coleman and Hendry, 1990).

The significant main effects of SES and gender on the fourth concern area, local universal concerns, are interesting and they might be a reflection of cultural specificity. In the Turkish culture, adolescents are very much involved with politics and other local universal issues, but it seems this is mostly a preoccupation of the females and the middle SES adolescents in general.

The gender differences observed in this study, indicating that females have a greater number of, and more intense concerns, are consistent with findings reported in previous studies (Burke and Weir, 1978; Langan-Fox, 1991; Nurmi, 1989; Kohn and Milrose, 1993; Kwok and Violato, 1993). Some writers attribute this tendency to the way females perceive and conceptualize their stress experiences (Newcomb *et al.*, 1986; Tolan *et al.*, 1988). Others attribute it to the way females perceive their competence and efficacy, due to sex-role socialization and the ideology of family structure within the society (Poole and Evans, 1989). However, unlike other studies which found females to be more worried about physical appearance (Eme *et al.*, 1979), in the present study females reported more intense concerns on "personal future" and "local universal" issues.

This characteristic of the typical Turkish female student is also reflected in their similarity to both the Canadian and Hong Kong females (Kwok and Violato, 1993). Turkish females share with their Canadian cohorts the universal concerns like AIDS, poverty in the world and good education, whereas with their Chinese cohorts they share personal future concerns, like grades, future school, achievement and a job after school. This is not so surprising, when the frequently observed "fragmented equalitarianism" phenomenon in urban families is taken into consideration. These families have high academic expectations for their daughters along with expectations for traditional sex roles. It seems that the Turkish female adolescent reflects a mixture of modernity and traditionalism in their commitments.

The finding related to the males' higher scores on the item, "my sexual feelings" was also found in all previous studies, (Adwere-Boamah and Curtis, 1993; Kwok and Violato, 1993; Şahin 1993; Şahin *et al.*, 1992), and was accepted as the reflection of a goal with higher priority in the development of males (Langan-Fox, 1991).

Items related to smoking, drugs and drinking received the lowest means in the 40-item scale used in this study. Almost all of the adolescents (92.5%) mentioned that drinking is never a concern for them, followed by drugs (89.2%) and smoking (87.9%). The rank-order of these items seems to be replicated in all previous studies (Adwere-Boamah and Curtis, 1993; Eme *et al.*, 1979; Kwok and Violato, 1993; Violato and Holden, 1988).

Comparisons according to age indicated that concerns over "social identity" issues decrease, but "personal future" (academic) concerns increase towards late adolescence. Similar trends were reported by researchers investigating self-concept in different cultures (Lau 1990; Nurmi, 1989). On all factor-based subscales, the high SES students received the lowest scores, indicating that they might have a smoother transition compared to adolescents in either of the other two SES groups. The middle SES students were more concerned with "personal future" and "local-universal" issues.

It is interesting that, in the factor analysis, the two items on personal identity formation ("discovering what I am really like", and "questions about who I am"), did not load on any of the factors. This might be an indication of the postponement of personal identity development to early adulthood in cultures where there are so many external demands on adolescents, and in which the autonomous attitudes are discouraged (Hill, 1993). This, of course, calls for future research on the interactions between societal variables and identity formation.

The results of this study are interesting in that no clear picture emerged reflecting the relationship between concern intensity and distress when the distress measures were correlated with the total score of adolescent concerns. However, the expected relationship between concern intensity and distress measures could be captured at the level of subscale scores, through correlation and regression analyses. In the junior school sample, the "social identity" and "drug use" subscales had significant correlations with anxiety. In the high school sample, the drug use subscale correlated significantly with the depression scores. The regression analyses also revealed that the two distress measures (anxiety and depression) could be predicted by the concerns over drug use, even though this concern cluster received the lowest rating. These findings are certainly relevant for the planning of preventive mental health services.

In conclusion, we can say that, there seems to be two main determinants of the adolescent concerns. One of these is the assumed universal developmental dynamics, and developmental tasks the adolescents face. This is reflected in the similarity of the concern categories found in the present study and other studies reported in the literature. These are mainly issues related to future and career, social identity, interpersonal relations, and local and universal problems. The other determinant is related to the cultural environment and the salient problems associated with that culture. More precisely, even though the dimensions of concerns are similar across cultures, the cultural milieu determines the priorities of these dimensions, either through setting up clearly defined achievement criteria, or by limiting opportunities and subjecting the

attainment of some goals to difficult selection procedures. Thus, the cultural–social milieu with its norms, expectations and economical opportunities, acts as a regulator of adolescent development. Naturally, the type and intensity of concerns may show changes depending upon the nature of the interaction between the adolescent and the society. “Adolescent distress” can more fruitfully be studied by taking into consideration the interaction between the number of concern areas, seriousness of these concerns and the internal and external psychological resources available to the adolescent. Although the scientific research has discarded the storm and stress models in adolescent development, the proportion of those reporting distress, and the possible implications of the unattended problems at this period continue to be of central importance. The alarming increase in adolescent problems, for instance in adolescent suicide is not specific to Western countries but is a global issue (Şahin *et al.*, 1994).

We believe that in future research it is worth probing into the relationship between concerns related to social identity and anxiety. In addition, comparisons should be carried out among the concerns of different adolescent groups, such as non-student employed/unemployed adolescents, rural adolescents, and those who are in various risk groups. The generalizability of the models of adolescent concerns can be more accurately tested after such replications.

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