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Motives for risk-taking in adolescence: A cross-cultural study

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Abstract

Most research on adolescent risk-taking has been conducted in Western societies, but it is as yet unknown whether motives to engage in risk behaviours show cultural variety. This study sets out to investigate differences in perceived motives to engage in perceived risks in Turkish and Welsh samples of young people ($N = 922$) between 14 and 20 years of age. For this, a measurement scale to assess motives for risk-taking was constructed and validated cross-culturally. The scale was based on Kloep and Hendry's [(1999). Challenges, risks and coping in adolescence. In D. Messer, & S. Millar (Eds.), *Exploring developmental psychology* (pp. 400–416). London: Arnold] theoretical framework and the results of a study by Güney and Çok [(2006). Adolescent risk-taking: Calculated risks, Turkish experience. In Paper presented at the *10th Bi-annual conference of the European Association for Research on Adolescence*, Antalya, Turkey]. Results show that different motives are associated with different risk behaviours, confirming Kloep and Hendry's expanded model. There were small, but significant, national differences, implying that motives to take risks—as opposed to actual risks taken—could be similar across adolescent populations, independent of culture.

Keywords: Risk-taking; Risk measurement; Risky behaviour; Emerging adults; Welsh adolescents; Turkish adolescents; British adolescents

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Introduction

Most youth researchers agree that risk-taking is part of the developmental make-up of adolescence. Some see it as mainly linked to harmful consequences such as bad health (Spruijt-Metz, 1999), low self-esteem and depression (Gullone, Paul, & Moore, 2000), and presenting a danger to others (Bell & Bell, 1992). However, in recent years, some researchers have pointed out that risk behaviours may fulfil positive functions in the transition to adulthood (Ciairano, 2004; Dworkin, 2005; Hendry & Kloep, 2003; Lightfoot, 1997; Ponton, 1997). Pape and Hammer (1996), for instance, suggest that young male abstainers, and men who were latecomers to drinking, show indications of a delayed entry into adult roles, and a reluctance to adopt adult role behaviours.

A recent qualitative study conducted by Rodham, Brewer, Mistral, and Stallard (2006) showed that adolescents often make rational decisions based on an appreciation of risk, and misjudgements are more likely to be the result of inexperience than of irrational decision-making, undeveloped cognitive abilities or a perception of personal invulnerability. In contrast, Reyna and Farley (2006) suggest that the attempt to weigh cost and benefits of risks in fact *increases* risk-taking, and recommend that young people should be discouraged from using this approach in dealing with their own risk-taking behaviour.

Most of the research on adolescent risk-taking has been conducted in the Western world. This is unfortunate, because of the possible impact of tradition, culture and society on the character of adolescent risk-taking. Thus, cross-cultural comparisons could help disentangle what elements of risk-taking are affected by nature, and which by culture. For example, alcohol and drugs are not equally available in all countries, riding a motorbike or fast driving is not an issue for young people who cannot afford a vehicle, skate boarding is fashion bound, flirting with strangers in Internet chat rooms did not exist a decade ago, overeating is not an option in many third world countries, and unsafe sexual practices are not common among young people in countries where they can seldom meet potential sexual partners alone. On the other hand, in certain countries risks exist for young people that are unknown to Western teenagers, such as reading certain magazines, working in risky, unregulated conditions, drinking contaminated water, travelling on the roof of a train, or refusing to agree to an arranged marriage.

Cultural differences in the type of risk behaviours are to be expected. What would be far more interesting, from a developmental point of view, is to know whether the *reasons* why young people engage in risk-taking differ between countries. This could help us to shed light on the question whether risk-taking, or at least some forms of it, is an universal developmental task during the transition to adulthood, or whether it is the result of cultural circumstances such as a prolonged period of youth due to longer education, and gender values that encourage certain types of risk-taking more in one gender than the other.

We do not plan here to embark on an analysis of risky decision-making, when we talk about reasons for risk-taking. Rather, we want to know what main benefits do young people themselves expect to gain through their risk-taking, what do they perceive as the psycho-social functions of their risk-taking? Given the variability of risk behaviours, we can assume that they serve different purposes for different individuals. For example, Lavery, Siegel, Cousins, and Rubovits (1993) showed that frequent and infrequent risk-takers differ in the reasons for their behaviours, and that different reasons were given for different behaviours: For instance, drug taking and alcohol use

were explained by *self-centred* justifications, while *social justifications* were given for sexual risk-taking. In their recent review of adolescent risk decision-making, Reyna and Farley (2006) point out that seemingly irrational behaviour can be seen as rational, given the decision-maker's goals. Thus for any intervention it is useful to know what these goals are. And before we transfer interventional approaches from one culture to another, we should know more about the degree to which the motives behind young people's risk-taking differ between these cultures. Further, as studies of adolescent risk-taking behaviours usually show gender and age differences (e.g. Gorman-Smith & Loeber, 2005; Kuntsche, Gmel, Wicki, Rehm, & Grichting, 2006; Spruijt-Metz, 1999), it is of interest to know if the same differences are reflected in the *motives* governing these behaviours, or if the differences are mainly topographic.

According to Kloep and Hendry (1999) the motives behind risk-taking can be classified according to their functions into three categories, which should not be understood as mutually exclusive:

Firstly, there are risk-taking behaviours, which could be classified as *irresponsible behaviours*. These are not performed *because* of the risks they imply (often in the long term), but in spite of them, in order to achieve other desired, immediate goals. Such irresponsible behaviours either demonstrate the inability of individuals to see long-term consequences, or, if these are apparent, an unwillingness to abstain from the activities because of perceived short-term advantages. It is obvious that behaviours such as getting drunk or failing to use condoms are not attractive because they are risky, but are pursued for other reasons that are temporarily more salient. Short- and long-term goals are often incompatible, even for adults (Loewenstein & Schkade, 1999).

Secondly, there are *audience-controlled risk-taking behaviours*. These emerge, paradoxically as it might sound, out of security/fear motives. Concern for a loss of social support or approval within a 'significant' group leads to a lack of social security that requires social reinforcement. In order to be accepted, to find a place in the peer group and to establish a social position, to appear more 'adult' than others, individuals have to demonstrate certain qualities and abilities. Peer pressure is often a factor in beginning to experiment with substance abuse and dangerous driving (Levitt, Selman, & Richmond, 1991). Thus, it is obvious that most risky behaviours of this kind need an audience: What fun is there in trying an 'ollie' on a skate-board, if there is no one to applaud or disapprove?

Finally, there are risk-taking behaviours that can be classified as *thrill-seeking* behaviours. These activities are challengingly exciting or sensation-seeking behaviours, which also test the limits of one's capacities. They may emerge from a state of 'dynamic security' where potential or possible future boredom can create a need to move towards new challenges (Hendry & Kloep, 2002). This implies obvious risks, as young people often overestimate their abilities when they create new challenges for themselves. On the other hand, meeting challenges is an important condition for further development. Hence, thrill-seeking activities might be positive pathways of developmental potential.

Until recently, Kloep and Hendry's (1999) classification has not been tested empirically. Then, Güney and Çok (2006) conducted a series of focus group interviews with twelve 17–19-year-old Turks and asked them what kind of behaviours they regarded as risks and why young people engage in them, and analysed 198 essays about risk-taking written by Turkish adolescents aged 18–19 years. They found one additional category to the Kloep and Hendry framework, which they called *calculated risks*. This form of risk-taking implies making the decision to engage in a

behaviour seen as carrying a risk *now*, in order to overcome an obstacle on the route to attaining a desired goal in the future: For example volunteering for a job interview, moving to a different town, taking an examination, or participating in a competition, all of which encompass the risk of failure and public humiliation. They differ from irresponsible behaviours (that are governed by immediate gratification) in that an immediate risk is accepted in order to gain a long-term reward. Risks of this kind are often chosen after carefully weighing up the costs and long-term benefits, and can obviously enhance the developmental potential of those undertaking them. This category of risk-taking emerged also in a study conducted by Rodham et al. (2006). They demonstrated that adolescents define risks differently from adults. That is, they differ between *risks* as 'something where the outcome is uncontrollable' and *challenges*, which have 'a known endpoint that is difficult to achieve'. Risks were equated to making a decision about engaging in a certain behaviour, while challenges were described as completing a course of action already taken. From the young person's own point of view, challenges are seen as more difficult to deal with than risks.

This present study sets out to investigate whether the motives of adolescent risk-taking differ between two cultures, namely Turkey and Wales. Wales is a small country in the South-West of Great Britain. Its culture can be described as predominately European and based historically on Christian values. Previously, most of its economy had been based on mining. When the mines were closed down in the late seventies, many Welsh communities had to endure extreme hardship. Today, Wales still has many deprived areas, and the gross disposable household income per capita is 87% of the UK average (National Statistics Online, 2007) The rates of teenage pregnancy, binge drinking and dropping out of school are amongst the highest in OECD countries (Coleman & Schofield, 2007; UNICEF, 2001). To mention some indicators of living standards for the UK, the GDP per capita is $26,000, youth unemployment is 11%, and life expectancy at birth is 77 years (Globalis, 2007).

Turkey is a country where both traditional and modern values persist together. There are considerable regional variations, stretching from strictly conservative values in the rural areas to western lifestyles among the urban middle classes (Kagıtcıbası, 1998, 2000, 2003). With 20% of the population being in the age range between 10 and 19, the youth population is very large in the country and will be larger still in the next decade. The cultural identity is split between Asian and European, and based on moderate Muslim traditions and collective values. Particularly in larger cities such as Ankara, globalism has led to an increasing westernisation among young people, while perceived rejection from the European Union has caused some revival of fundamentalist values in the general population. With a GDP per capita of $6390 and 17% youth unemployment and a life expectancy at birth of 69 years, Turkey can be considered as considerably less wealthy than Great Britain (Globalis, 2007).

Several studies show that Turkish adolescents do engage, though to a lesser extent, in the same risk-taking behaviours as Western adolescents: smoking, drinking, drugs, taking risks in traffic (Bayar & Sayıl, 2005; Beyaz, 2004; Kıran, 2003; Yilmaz, 2000) and early sexual intercourse (Özcebe, Çiligiroğlu, Üner, & Çamur, 2003). However, Güney and Çok's (2006) qualitative study found that Turkish adolescents defined many behaviours as risky that are never mentioned in Anglo-American psychological literature on adolescent risk-taking. These included meeting the parents of one's girl or boyfriend, sneaking into special adult entertainment places, wearing revealing clothes, losing one's virginity and engaging in political activism. Accordingly, Bayar and

Sayıl (2005) added some 'Turkey-specific' items such as 'having a boy/girlfriend' and 'to participate in political meetings' to their risk-taking survey. On the other hand, many Turks do not discuss early teenage pregnancy in terms of a risk in Turkey, because it occurs nearly only within marriage.

These cultural differences in the definition of risk-taking behaviours have been neglected in the construction of risk assessment scales. Furthermore, different studies have sampled different risk behaviours from drinking alcohol, having unprotected sex to using drugs (Harris, Duncan, & Boisjoly, 2002; Miller-Johnson et al., 2003), being antisocial (Gullone, Moore, Moss, & Boyd, 2000) or engaging in delinquent activities (Jessor & Jessor, 1977; Stanton, Spirito, Donaldson, & Boergers, 2003), having an unhealthy diet (Bonino, Cattelino, & Ciairano, 2005), jeopardising academic achievement (Weitzman, Guttmacher, Weinberg, & Kapadia, 2003), taking risks in sports (Gonzalez et al., 1994), getting too little sleep (Spruijt-Metz, 1999) and physical inactivity (Michelle & Jordan-Marsh, 2004). Thus, the measurement of risk behaviours is often based on an adultist and ethnocentric perspective as to what behaviours should be regarded as risky (e.g. the Adolescent Risk Taking Scale {ARTS} by Alexander et al. (1990) and the Risk Involvement and Perception Scale {RISPS} by Siegel et al. (1994)). Moore and Gullone (1996) suggested taking into account the personal perceptions of the risk-taker. For example, whether or not mountain skiing is risky depends to a large degree on the skill level of the skier. For the purpose of this paper, we want to adopt this approach and define as risk-taking any behaviour that young persons themselves perceive as a risk. In this study, we are not interested in young people's risk perceptions and assessments, but in their perceived motives to deliberately participate in behaviour that they themselves regard as a risk. For this purpose, we construct a scale to measure risk motives, test whether it is applicable cross-culturally, and investigate whether there are differences in the motives to engage in risk behaviours between young people in Wales and Turkey.

Methodology

Design

On the basis of Kloep and Hendry's theoretical classification and the results of Güney and Çok's (2006) study, a questionnaire was designed to measure motives of risk-taking. A researcher administered this questionnaire to a sample of Turkish adolescents from different socio-economic backgrounds. All agreed to complete the questionnaire anonymously during school or university lectures. To establish test–retest reliability, the questionnaire was administered a second time to the Turkish university students 2 weeks after the initial survey.

The data were factor analysed, and only the items with the highest loading on each of the five factors were then translated into English by the second and third author. Thereafter the English was improved and adapted to daily language usage by a native English speaker. The corrected version was translated back into Turkish to check for changes in meaning.

The resulting questionnaire, together with a scale measuring frequency of a number of risk behaviours (constructed for this study), was then administered by a research assistant to a sample of Welsh adolescents during university and school lectures and in a youth club setting.

To establish test–retest reliability, the questionnaire was administered a second time to the Welsh university students 3 months later.

The data were factor analysed, and items with unsatisfying loadings were eliminated stepwise, until a solution with a reasonable single structure was achieved. The remaining items were used as the basis of comparison between the two samples.

Instruments

Motives for risk-taking

To start with, we created a pool of 69 items, which were designed to measure different motives for risk-taking, without defining specific behaviours. Items were given as complete sentences including different types of motives, and rated on a four-point scale ranging from "disagree totally"(1) to "agree totally"(4). The items were formulated to complete the sentence "I sometimes take risks or do something dangerous, because …" and to measure the following functional categories:

- Thrill seeking behaviour, for example "… it is thrilling".
- Audience controlled behaviour, for example "… others expect me to behave like that".
- Irresponsible behaviour, for example "… when I am taking risks I don't believe anything can go wrong".
- Calculated risks, for example "… in the long run, I believe it benefits me".

The items were then presented to 10 colleagues at the University of Ankara for comments on language and content validity, and piloted on 52 adolescents. After discarding some items and rewording others, a total of 53 items remained (Güney, Çok, & Kloep, 2007).

Frequency of risk behaviours

Given the cultural constraints of validated assessment scales to measure the frequency of risk behaviours (none of them has been validated in Wales), a new scale was constructed. Items were selected to reflect the variety of different risk-taking behaviours mentioned in the literature and a few items were added that are not normally included in risk-taking scales, because they are not seen as risk from an adult perspective, but by adolescents, for example 'volunteering to speak in front of a group'. This resulted in 15 items (see Table 2), all set in the format "How often do you ….?" followed by the behaviour, and rated from 1 to 4 on a scale ranging from 'never' to 'very often'. This scale was only included in the Welsh study.

Sample

In Turkey, the State Institute of Statistics provides information about regions of Ankara as to which neighbourhoods in the city are considered as low, middle or higher socio-economic status based on their survey. High schools from three social backgrounds were recruited and a purposive sample was obtained: A total of 510 adolescents, 271 females and 239 males (from various socio-economic backgrounds of which 94 came from a high school in a high, 138 in a middle and 153 in a low SES area in Ankara, and 125 were students of the University of Ankara), equally distributed

over the age range 14–20 years, completed the questionnaire anonymously during school lessons and university lectures.

The Welsh sample consisted of a total of 412 young people (227 females, 185 males) within the age range 14–20 years. Using ACORN post-code classification, schools were selected to reflect a variety of socio-economic backgrounds. This resulted in 120 participants from two Comprehensive schools in low income areas, 80 from a Comprehensive school in a wealthy area, 66 from a youth club (to include a proportion of young people over 16 years who had left school at the minimum statutory leaving age in Wales), 71 from a College, and 75 from the University of Glamorgan, South Wales. Thus, a fair spread of different socio-economic areas was achieved.

Results

Scale properties

Exploratory factor analyses (EFA) (maximum likelihood extraction, Promax rotation with Kaiser normalisation) were performed on the data, allowing the factors to correlate. Inspection of eigenvalues and scree plots suggested a five-factor solution, with a fifth factor, called 'hedonistic motives' emerging alongside the expected factors 'thrill-seeking', 'audience-controlled', 'irresponsible' and 'calculated' risk motives. This new factor consisted of items describing the positive emotions attached to risk-taking and seemed to describe the original category of 'thrill seeking' in Kloep and Hendry's (1999) framework, where risk-taking had been described as a means to encounter boredom and stagnation ('it is important just to enjoy the present'). In contrast, the new 'thrill seeking' factor contained items that described the sensations associated with taking the risk itself as main motive ('it gives me a kick').

The items with the highest loading on each of the five factors were then translated into English and administered in Wales. The resulting data were subjected to a series of EFA. Again, inspection of eigenvalues and scree plots showed a five-factor solution as best suited to the data. To reduce the number of items, items with a factor loading of less than .45 on their main factor were eliminated stepwise, so that a new EFA was performed after elimination of each item. This was repeated until a five-factor solution with a reasonable single structure was achieved, leaving 26 items. These items were selected for the final scale, and submitted to an EFA with Promax variation for the pooled sample. Table 1 shows the factor loadings of each item on the different factors (loadings under .20 suppressed).

In order to control whether the factor structure emerging from the British data was similar to the factor structure from the Turkish data, a pooled data method was used (Garson, 2006). The data of the two samples were pooled, and nationality was added as a dummy variable (Turkish = 1, British = 2). The factor loadings of this dummy variable would indicate the factors for which the groups' mean factor scores would be most different. Nationality emerged as a factor on its own (in a five-factor solution as well as in a six-factor solution), not changing the initial factor solution, and thus implying that the factor structure for the two samples was not significantly different. This solution remained the same even when all items were dichotomised into dummy variables to equalise variation.

Table 1
Motives for risk-taking: items and their pattern matrix after maximum likelihood extraction, Promax rotation (loadings <.20 suppressed) for the pooled sample ($N = 923$), means and standard deviations for each factor

Item	Audience controlled	Irresponsible	Thrill seeking	Hedonistic	Calculated
This way I can impress others	**.788**				
It makes others care for me	**.763**				
I get the attention of others	**.722**				
I enjoy acting cool	**.570**				
It is important for me to be popular	**.616**				
Others expect me to behave like that	**.511**				
I don't care even if I regret it later		**.652**			
I believe that it won't hurt me at all		**.703**			
When I'm taking risks I don't think anything can go wrong		**.578**			
Most of the time I don't believe that I might get hurt		**.644**			
I hate being careful		**.553**			
I don't worry much about the future consequences of my behaviour		**.487**			
I don't know how to stay away from these things		**.462**			
It gives me a kick			**.945**		
To feel the excitement is wonderful			**.625**		
It is thrilling			**.684**		
It makes my heart beat faster			**.683**		
I love to live for the moment				**.701**	
It is important just to enjoy the present				**.743**	
Even though I may have to pay a price it's important for me to live for the moment		.215		**.571**	
I don't want to miss enjoying the experience				**.593**	
I only live once, and I want to try everything				**.675**	
It gives me the courage to try new things		.			**.538**
I think it is important to achieve goals in the future					**.566**
Having new experiences makes me happy		.325	.266		**.367**
I want to achieve goals that can lead to future successes					**.479**
Mean	2.02	2.08	2.71	2.76	3.04
Standard deviation	.633	.578	.712	.742	.542

Highest loadings in bold.

Internal consistency (calculated on the pooled sample) for audience-controlled risk-taking was $\alpha = .84$, irresponsible risk-taking $\alpha = .79$; thrill seeking $\alpha = .83$, hedonistic risk-taking $\alpha = .83$, and calculated risks $\alpha = .61$.

The test–retest reliabilities for the Turkish and the Welsh sample were, respectively, for audience control $r = .74$ and .59, for irresponsible $r = .73$ and .73, for thrill-seeking $r = .41$ and .68, for hedonistic $r = .73$ and .83, and for calculated risk $r = .51$ and .53 (calculated between mean scores in each factor).

Table 2
Frequencies of risk-taking: items and their factor loadings after Varimax Rotation (loadings <.20 suppressed) for the Welsh sample ($N = 387$), means and standard deviations for each factor

Item	Delinquent risk-taking	Anti-authority risk-taking	Social risk-taking
Carry a weapon	**.703**		
Nick something from a shop	**.686**		
Damage something, e.g. public phones, parked cars or bus seats	**.656**	.317	
Hitchhike	**.569**		
Deliberately wind up somebody		**.626**	.212
Defy an authority figure (e.g. a teacher or policeman)	.388	**.612**	.262
Go to an exam without studying for it		**.574**	
Cheat in school work	.417	**.496**	.348
Take chances in street traffic	.276	**.440**	.418
Gamble for money	.294	**.425**	
Drink alcohol		**.380**	.254
Organize an activity for your friends			**.542**
Defend an unpopular issue that you believe in		.293	**.515**
Volunteer to speak in front of a group			**.490**
Mean	3.74	2.81	2.50
Standard deviation	.420	.872	.821

Highest loadings in bold.

Post hoc tests for within subject contrasts after a repeated measures ANOVA ($F = 699.04$, $df = 4$, $N = 923$) revealed that all means differed significantly from each other, with audience-controlled motives showing the lowest, and calculated risk motives showing the highest mean (see Table 1).

The items from the risk frequency scale were submitted to a principal component analysis in order to reduce the data (see Table 2). Three factors emerged: The first one was named delinquent behaviour ($\alpha = .78$), the second anti-authority behaviour ($\alpha = .78$) and the third social risks ($\alpha = .55$). Smoking did not load on any of these factors.

Risk motives as predictors for risk behaviour frequency

Multiple regression analyses were performed with gender, age and the factor scores for the five risk-taking motives as independent variables, and the factor scores of the risk-taking frequencies as dependent variables. Multiple regression analyses were also performed using gender, age and the sum score of the whole motives for risk-taking scale as independent variables. Table 3 shows the beta coefficients of the independent variables for each regression. Age emerged as a significant positive predictor only for social risks (older individuals taking more frequent risks). Being male was significantly positively associated with delinquent and anti-authority behaviours.

Different risk motives predicted different risk behaviours: Irresponsible and audience controlled motives were *positively* linked, and calculated risk motives *negatively* associated with delinquent behaviour. Anti-authority behaviour was mainly associated with irresponsible and

Table 3
Results of multiple regression analyses of risk motives factors on frequencies of different risk categories, Welsh sample only ($N = 391$)

Independent variable	Standardized beta coefficients		
	Delinquent $R = .489$	Anti-authority $R = .505$	Social $R = .364$
Audience controlled	**.170**	−.081	.016
Irresponsible	**.269**	**.249**	−.057
Thrill	.041	.104	.067
Hedonistic	−.039	**.275**	**.290**
Calculated	**−.106**	**−.159**	−.047
Age	−.062	−.077	**.246**
Gender (0 = female)	.257	**.109**	−.017

Significant ($p < .05$) coefficients in bold.

hedonistic motives (and negatively with calculated risk motives), while social risks were only predicted by hedonistic motives.

Cultural, gender and age differences

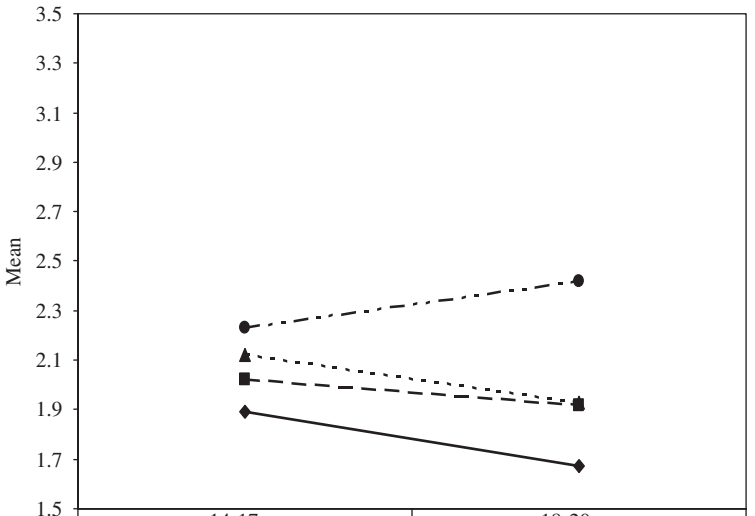
The scores of the Turkish sample were then compared to the Welsh sample, using ANOVAs with nationality, gender and age group (under/over 18 years) as independent, and the mean scores of the five risk motive categories as dependent variables.

As Fig. 1 shows, there was a significant age × nationality interaction effect ($F(1,922) = 5.11$) for audience controlled risk motives: Only the Turkish adolescents' scores decreased with age. However, the effect size is small ($\eta^2 = .006$). The main effects for gender ($F(1,922) = 26.12$, $\eta^2 = .03$) and nationality ($F(1,922) = 17.80$, $\eta^2 = .02$) were significant, indicating that Welsh respondents and males had higher scores in this category than Turkish and female respondents, respectively. The main effect for age was not significant.

In the category of irresponsible risk motives, a weak gender × nationality interaction occurred (see Fig. 2; $F(1,922 = 4.78$, $\eta^2 = .005)$, indicating that the main effect for gender ($F(1,922) = 15.95$, $\eta^2 = .02$) and nationality ($F(1,922 = 16.35$, $\eta^2 = .02$) was mainly due to Welsh males scoring higher than the others in this category. The main effect for age was not significant.

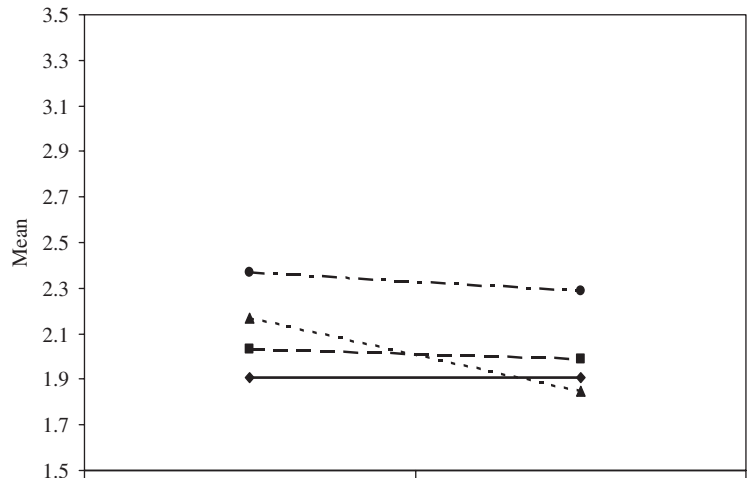
A significant age × nationality effect occurred in the category of hedonistic risk-taking ($F(1, 922) = 6.67$, $\eta^2 = .01$), due to a decrease in scores between the younger and the older group in the Turkish sample only. This was mainly responsible for the significant main effect for age ($F(1,922) = 7.32$, $\eta^2 = .01$). There was also a significant main effect for nationality ($F(91, 922) = 37.16$, $\eta^2 = .04$), due to the Welsh sample scoring higher than the Turkish sample (see Fig. 3). The main effect for gender was not significant.

No interaction effects occurred for the category of thrill seeking motives. Women scored lower than men (main effect for gender $F(1,922) = 16.86$, $\eta^2 = .02$) and Welsh respondents scored higher than Turkish (main effect for nationality $F(1,922) = 9.03$, $\eta^2 = .01$). No significant effect for age was found (see Fig. 4).



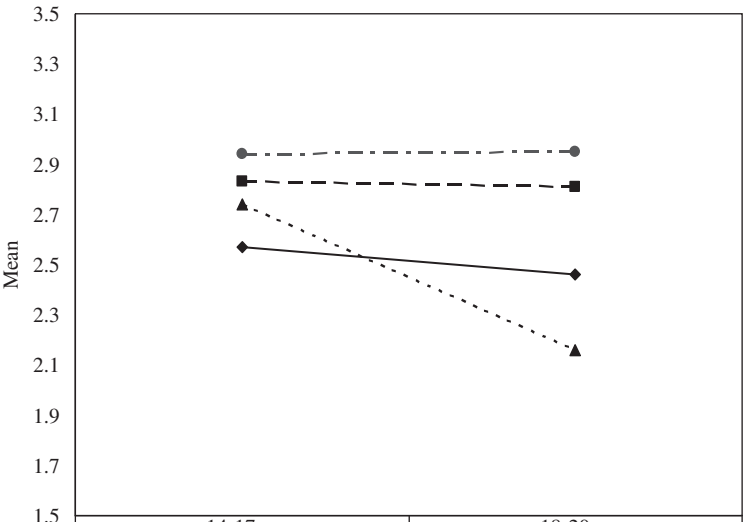
	14-17 years	18-20 years
Turkish women	1.89	1.67
Welsh women	2.02	1.92
Turkish men	2.12	1.93
Welsh men	2.23	2.42

Fig. 1. Means for audience controlled risk motives, separate for gender and nationality.



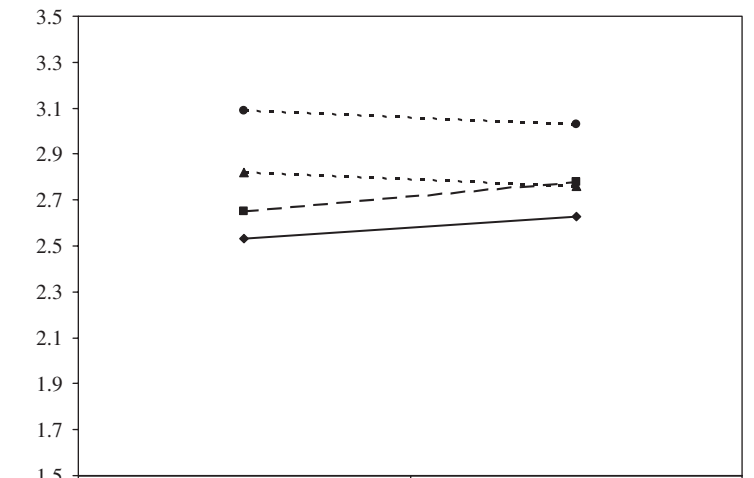
	14-17 years	18-20 years
Turkish women	1.91	1.91
Welsh women	2.03	1.99
Turkish men	2.17	1.85
Welsh men	2.37	2.29

Fig. 2. Means for irresponsible risk motives, separate for gender and nationality.



	14-17 years	18-20 years
Turkish women	2.57	2.46
Welsh women	2.83	2.81
Turkish men	2.74	2.16
Welsh men	2.94	2.95

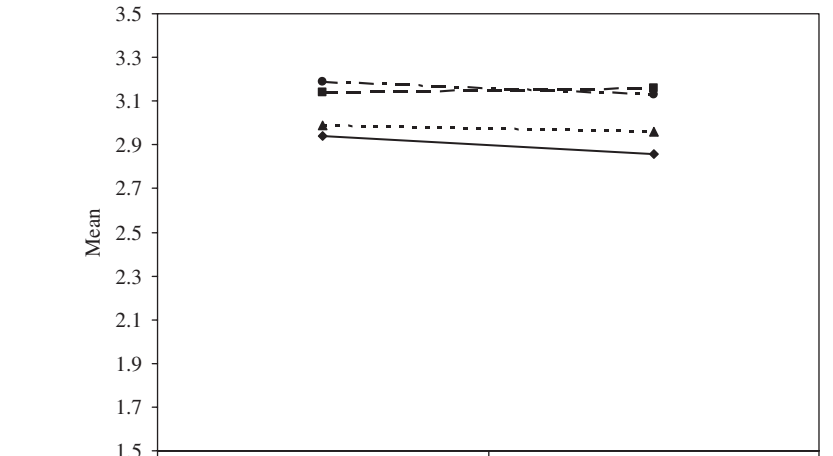
Fig. 3. Means for hedonistic risk motives, separate for gender and nationality.



	14-17 years	18-20 years
Turkish women	2.53	2.63
Welsh women	2.65	2.78
Turkish men	2.82	2.76
Welsh men	3.09	3.03

Fig. 4. Means for thrill seeking risk motives, separate for gender and nationality.

In the category of calculated risks, only the main effect for nationality turned out to be significant ($F(1,922) = 19.45$, $\eta^2 = .02$), with the Turkish group scoring lower than the Welsh group (Fig. 5).



	14-17 years	18-20years
Turkish women	2.94	2.86
Welsh women	3.14	3.16
Turkish men	2.99	2.96
Welsh men	3.19	3.13

Fig. 5. Means for calculated risk motives, separate for gender and nationality.

Discussion

The aim of this study was to investigate cultural differences in the motives for adolescent risk-taking. Based on Kloep and Hendry's (1999) theoretical concept of different functions of adolescent risk-taking together with the results of a Turkish study by Güney and Çok (2006), a scale was constructed aimed at measuring what motivates adolescents to take risks. The psychometric properties of the scale have been shown to be satisfactory, and it was demonstrated that the scale can be used in cross-cultural research. In using a scale devised for use in the two cultures, instead of solely adapting translated versions of existing scales from other countries, the possibility that cultural differences are artefacts of the item wording have been considerably reduced.

The results were based on self-report measures, and therefore they need to be interpreted with caution, as there is always the possibility that the answers were flawed by the impact of social desirability. Further, although the scales were constructed on the background of qualitative interviews, we might still have missed other categories of risk-taking motives, particularly as the interviewed sample was quite small. Another drawback was the limited age range of the participants in both countries: we might have found more distinctive age differences by including older age groups.

Cultural differences were found on all categories of risk-taking motives, with Turkish respondents generally scoring lower than Welsh respondents. However, effect sizes were small. Contrary to expectations in the literature, it was interesting to note that adolescents in both cultures reported to engage mostly in calculated risks, risks that they perceived leading to a desirable goal in the future. On the other hand, 'typical adolescent' risk-taking to impress the peer

group (audience controlled motives) figured lowest in their reasons for taking risks. This seems to indicate that young people may be more sophisticated in their behaviour than has been previously suggested (Steinberg, 2004), or at least *perceive* themselves not to be influenced by immediate gratification motives.

Multiple regression analyses performed on different categories of risk-taking frequencies showed that different motives were associated with different risk behaviours. This is in line with research that shows that high risk-takers in one behavioural group (for example sports) can be either high or low risk-takers with regard to other behaviours (such as drug taking, gambling or speeding in traffic; Gonzalez et al., 1994). However, the irresponsible risk-taking motive was associated with more than one risk-taking category, suggesting that adolescents might engage in risk-taking behaviours that look structurally the same, while the underlying motives are different—and the same underlying motives can lead to different behavioural expressions. In other words, measures of how often young people in different cultures drink alcohol or engage in delinquent behaviour might show striking differences, but will not tell us anything about the reasons why they do it, which might be surprisingly similar.

Knowing the reasons young people choose to engage in certain risks would help us to identify whether we should address their motives or their behaviours in intervention programmes. Sometimes, it is not the behaviour itself that is problematic, but the underlying motives for engaging in it that can cause future problems. For example, a high dependence on audience approval can lie behind a relatively harmless set of behaviours such as defying an order from a teacher. If this motivation persists, however, it might lead to more dangerous risk-taking (Loeber & Hay, 1997). In this case, interventions should concentrate on the motives, not on the behaviour. On the other hand, certain behaviours might seem to be extremely risky, although the underlying motives are potentially favourable for development. For instance, a young person wanting to embark on a sports career might choose to take 'calculated risks', but overestimate their resource/challenge ratio and actually engage in highly dangerous risk-taking. In this case, behaviours such as risk assessment should be trained, and the motive behind the behaviour left unchanged.

Another interesting result of this study was the small age differences in both samples. The general notion is that risk behaviour mainly occurs during adolescence and tends to disappear in adulthood for the majority (e.g. Bonino et al., 2005; Ponton, 1997; Steinberg, 2004). This notion has been questioned by Hendry and Kloep (2002), who claimed that it is the topography, and not necessarily the frequency of risk behaviours that change with increasing maturity. In other words, adults take different kinds, but not necessarily fewer, risks than adolescents. They suggest that those, for example, who can afford to indulge in unprotected sex with prostitutes on holidays abroad and to pre-book tickets to fly to the moon, brew home-made alcohol in their garage, and boost their work performance with legal and illegal drugs are more often in middle age than in their teenage years.

From the results of this study it seems as if there were few age differences in the *motives* underlying risk-taking, while there were the expected differences in the *frequency* of certain risk-taking behaviours (anti-authority and social). However, the age range of our sample only included young people up to the age of 20 years. Recently, it has been suggested that this age range should be regarded as the period of 'emerging adulthood'—a stage in between adolescence and adulthood (Arnett, 1999). Nelson & McNamara Barry (2005) found that those who defined themselves as adults within this life-phase engaged in less risk-taking than those who still saw themselves as

adolescents. Given that most of the young people in the oldest age range in our study were still in further or higher education, we can assume that the proportion of 'emerging adults' in our sample was high, explaining their 'adolescent-like' behaviour (Hendry & Kloep, 2007). There might have been more pronounced age differences if older young people, and young adults who are no longer in education, had been included in the study.

Overall, gender, age and national differences *were* significant, but small, implying that motives to take risks—as opposed to actual risks taken—might be part of a general human disposition, not particularly influenced by cultural and structural variables—and not constrained solely to the adolescent years.

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