



Parents, teachers and peer relations as predictors of risk behaviors and mental well-being among immigrant and Israeli born adolescents

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ABSTRACT

This study examines the roles of parents (monitoring, involvement and support at school), teachers (support) and peers (excess time spent with friends, peer rejection at school) in predicting risk behaviors (smoking and drinking) and mental well-being among 3499 Israeli-born and 434 immigrant adolescents ages 11, 13 and 15, in the 2006 WHO Health Behavior in School-Aged Children cross-national survey. Structural Equation Modeling (SEM) showed that for native Israeli youth, in line with previous developmental literature, all three relationships – parents, teachers and peers – have a significant impact on both mental well-being and risk behaviors. However, for immigrant adolescents, it was the school environment (parental support at school, teacher support and peer relationships) that proved to be the significant predictor of risk behaviors and mental health outcomes. These findings suggest that the school is an important social support in the health and mental well-being of immigrant schoolchildren.

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Main text

This study examines the role of parent, teacher and peer relationships in the development of risk behaviors (smoking/drinking) and mental well-being among Israeli-born and immigrant adolescents in Israel. It asks whether traditional developmental models, emphasizing the importance of parent and peer relations in adolescent well-being, can be seen to be relevant for immigrant adolescents or whether they need to be modified for children whose parents have immigrated to a new country.

The role of parent and peer relationships in adolescent well-being and the development of risk behaviors has been well-researched. Parental support and elevated parental monitoring have been found to be negatively related to various forms of risk behavior, including substance abuse, smoking and alcohol (Barnes, Reifman, Farrell, & Dintcheff, 2000; Dick et al., 2007; Lifrak, McKay, Rostain, Alterman, & O'Brien, 1997; Steinberg, Fletcher, & Darling, 1994). In addition, parental involvement, expectations, and communication can act as protective factors against the development of risk behaviors (Leventhal & Brooks-Gunn, 2000; Otten, Harakeh, Vermulst, Van Den Eijnden, & Engels, 2007; Resnick et al., 1997; Simons-Morton, Chen, Abroms, & Haynie, 2004).

Debate has surrounded the relative importance of parental versus peer relationships. Peer relationships influence a wide range

of risk behaviors including alcohol, substance abuse, and sexual activity (Alexander & Hickner, 1997; Beal, Ausiello, & Perrin, 2001; Gerrard, Gibbons, Zhao, Russell, & Reis-Bergan, 1999; Steinberg et al., 1994). They have generally been considered to impact in an opposite direction to parental support (Wills, Resko, AINETTE, & Mendoza, 2004), in that relationships with peers engaged in risk behaviors increase chances of adolescent involvement in risk behavior. Peer relationships may be better predictors of youth risk behavior than parental influence (Brook, Whiteman, Czeisler, Shapiro, & Cohen, 1997; Gerrard et al., 1999). The work of Dubois (DuBois, Bull, Sherman, & Roberts, 1998; DuBois, Burk-Braxton, Swenson, Tevendale, & Hardesty, 2002; DuBois, Felner, Brand, & George, 1999) suggests that what may be critical is the balance between parent and peer support such that peer relationships can be detrimental, particularly when parental support is lacking.

In relation to mental well-being, parental and peer support have consistently been found to be inversely related to internalizing behaviors such as anxiety and depression (Armsden, McCauley, Greenberg, & Burke, 1990; Dumont & Provost, 1999; Kraaij et al., 2003; Laible, Carlo, & Raffaelli, 2000; Vazsonyi & Belliston, 2006). Parental monitoring has also been found to be related to higher self esteem, life satisfaction and lower depression (Milevsky, Schlechter, Netter, & Keehn, 2007). Interestingly, longitudinal research (Young, Berenson, Cohen, & Garcia, 2005) has shown that peer support was protective against depressive symptoms among adolescents with high parental support but may act as a risk factor for adolescents with low parental support. Peer support was more significant for older adolescents. Parental support may also impact physical health, including

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headaches, stomach aches, sore throats, coughs, vomiting, skin rashes and constipation (Mechanic, 1980; Vilhjalmsson, 1994; Wickrama, Lorenz, & Conger, 1997). A curvilinear relationship between peer relationships and mental health outcomes has been shown, in which the two extremes (i.e., spending excess time with friends or experiencing social rejection or loneliness) have negative effects, whereas peer support or friendship has a positive effect (Molcho, Gabhainn, & Kelleher, 1999–2007; Rigby, 2000; Turner, 1999).

The impact of parent-child relations on the development of peer relationships (Ladd & Pettit, 2002) has been explained through attachment theory (Michiels, Grietens, Onghena, & Kuppens, 2008), and through the mediating role of social skills (Engels, Dekovic, & Meeus, 2002). Research suggests a relationship in particular between parental monitoring and involvement with deviant peers (Brown, Mounts, Lamborn, & Steinberg, 1993) and susceptibility to antisocial peer pressure (Mounts & Steinberg, 1995). Mounts (2000) identified a number of strategies used by parents to affect adolescents' peer relationships, including guiding, neutrality, prohibiting and supporting.

Cleveland, Gibbons, Gerrard, Pomeroy, and Brody (2005) suggest that adolescent risk behavior is influenced by contextual, individual and interpersonal variables. Adolescents spend large amounts of time in the school environment. Existing studies show that negative school perceptions predict greater involvement in risk behaviors, such as substance use, drinking, truancy, school bullying/fighting and impact negatively on mental well-being (Harel, 1999; Kasen, Berenson, Cohen, & Johnson, 2004; Laufer & Harel, 2003; Samdal, Wold, Klepf, & Kannas, 2000).

Few studies have examined the relationship between adolescent health and risk behavior and school (Chong, Huan, Yeo, & Ang, 2006; Demaray & Malecki, 2002). Research (LaRusso, Romer, & Selman, 2008) examining the role of school perceptions on drug use and depressive symptoms has shown that adolescents reporting more teacher support were more likely to report greater feelings of social connectedness and fewer symptoms of depression. School perceptions (including feelings of social connectedness, teacher caring and respect) have been found to be related to risk behaviors such as substance use, smoking, drinking, violence and truancy and to mental health problems such as depression, anxiety and suicidality (see Larusso, Romer & Selman, 2008 for a review). Positive relationships with non-family adult mentors (mainly teachers or guidance counselors) are related to increased physical health, self-esteem, life-satisfaction and high school completion and decreased levels of smoking, depressive symptoms and suicide ideation, risk taking, violence and gang membership (DuBois & Silverthorn, 2005a, 2005b).

While research has shown the role of parents, peers and teachers in influencing adolescent health and risk behaviors, little research has examined all three simultaneously. In addition, little is known about what happens to these relationship networks in cases of stressful life events – such as immigration, divorce and death – when changes in family structure may impact parental ability to perform tasks of support, monitoring and involvement in their adolescent children's lives.

The impact of immigration on parent-adolescent relationships

Kwak (2003) suggests three general findings of the impact of immigration on parent/adolescent relationships. Firstly, immigrant adolescents, as part of a process of developing autonomy, may accept new cultural values and practices more easily than their parents, leading to differences in family socialization (Portes, 1997). Secondly, adolescents and their parents undergo an extensive negotiation process in terms of the cultural transmission of their ethnic heritage culture. Thirdly, since construction of self is built from one's enculturation context, immigrant adolescents may have

a delayed or less consolidated self-concept. Their simultaneous experience of enculturation and acculturation may not be fully supported by parents, either psychologically or culturally (Meeus, Oosterwegel, & Vollebergh, 2002).

Widening acculturation gaps in which the adolescent learns new cultural norms, language and values faster can lead to adolescents taking parental roles (Walsh, Shulman, Bar-On, & Tsur, 2006) or "language brokering" for their parents (Buriel, Perez, de Ment, Chavez, & Moran, 1998; Valdes, Chavez, & Angelelli, 2003). The change in family dynamics and a lack of cultural knowledge and language can lead to immigrant parents being less able or confident in fulfilling roles of support, monitoring or authority and to be less involved in the lives of their children. Parents also go through their own personal acculturation process (Berry, 1997) making it difficult for them to be available for their adolescent's needs.

Research exploring the extent of internalization (e.g., anxiety, depression) and externalization (e.g., somatic complaints, social problems and aggressive behaviors) behaviors among immigrant adolescents has been inconsistent. Research has shown higher rates of alcohol and ecstasy use among immigrant adolescents from the Former Soviet Union (FSU) in Israel (Isralowitz & Reznik, 2007). Immigrant adolescents in the Netherlands have been shown to have higher anxiety levels, depression, withdrawal, somatic complaints, social problems, attention problems, delinquency and aggressive behavior (Bengi-Arslan, Verhulst, Van Der Ende, & Erol, 1997; Jansen et al., 2004; Stevens et al., 2003). Interestingly, however, recent research (Berry, Phinney, Sam, & Vedder, 2006) in 13 countries, found immigrant youth to be as well adapted as their national peers, reporting fewer psychological and behavioral problems and better school adjustment. They describe their findings as the immigrant paradox, whereby immigrants in the US, despite multiple risk factors (e.g., low SES), often show unexpected positive outcomes in physical and mental health, academic performance and psycho-social adjustment through self-selection (Berry, Phinney, Sam, & Vedder, 2008). However, they suggest these outcomes are dependent on levels of cultural integration in the particular society (including the ability/desire of the immigrant group to acculturate and degree of acceptance by the host society). Contradictory research findings highlight the importance of context in understanding the impact of immigration on well-being and adaptation.

Family changes following immigration raise questions as to whether parental support, monitoring and involvement play the same pivotal role in health and risk behaviors for immigrant adolescents, or leave parents with less influence on children's behavior. Significant relationships have been found between externalization and internalization behaviors and levels of support and monitoring from parents among immigrant adolescents (Murad, Joung, Verhulst, Mackenbach, & Crijnen, 2004; Stevens, Vollebergh, Pels, & Crijnen, 2007b). To our knowledge, no research has explored the impact of immigration on the relative ability of parents, teachers and peers to influence adolescent well-being.

The present study explores relationships between parental involvement, monitoring and support at school, teacher support and peer connectedness with adolescent mental well-being, and risk behaviors among immigrant and Israeli-born adolescents. It examines to what extent all three relationship networks are influential or whether immigrant parents have less influence. We hypothesized that for the Israeli-born adolescents, parental support, involvement and monitoring, teacher support and peer friendships would be positively related to mental well-being and negatively related to levels of smoking/drinking. As can be seen from the conceptual model in Fig. 1, in line with the above literature, we hypothesized that significant adults would have a direct and an indirect effect through their impact on peer input. Due to family changes following immigration, we hypothesized that for

the immigrant adolescents only teacher support and peer relation variables (and not parental relationship variables) would be significantly related to mental well-being and risk behaviors.

Method

This study was based on Israeli data from the 2006 WHO Health Behavior in School-Aged Children cross-national survey conducted in 41 countries in Europe and North America conducted among children aged 11, 13 and 15 (6th, 8th and 10th grade). The HBSC is a school-based survey of adolescent health behaviors and psychosocial determinants, carried out every 4 years, using an international standardized methodological protocol (Currie, Samdal, Boyce, & Smith, 2001; Harel-Fisch, Koren, & Fogel-Grinvald, in press). A standard, anonymous, self-administered in-class questionnaire includes mandatory and optional items. The Israeli questionnaire follows the international protocol and includes optional packages of injuries, bullying, involvement in violence, school perceptions, family relationships and social inequality (Harel-Fisch et al., in press).

The 2006 study included 6613 students from 122 Jewish schools (225 classrooms) and 44 Arab schools (93 classrooms). The class-level response rate was 94.4%, with a 99% response rate of children enrolled in participating classes. The classroom was the sampling unit. Using the Ministry of Education's list, classrooms were selected within one of three sub-population strata: (1) secular Jewish schools, (2) religious Jewish schools, and (3) Arab schools. For each sampled class, an additional two classes in the same school were sampled. No more than two classes in a single grade-level in any one school were sampled. All students in sampled classrooms present at the time of the survey were included. This paper is based on analyses of the Jewish sub-sample. Of the 3933 respondents (44% male), 3499 were Israeli-born adolescents and 434 were immigrant adolescents (350 born in the Former Soviet Union and 84 born in Ethiopia), most of whom would have immigrated as young children in the large waves of immigration in the 1990s. There were also small numbers of immigrants from other countries but it was decided to exclude them from the analysis. The research protocol received approval from the research ethics committees of both the Israeli ministry of education and Bar Ilan University.

Measures

Relationships with parents, teachers and peers

Three measures of parent-child relationship were used: *Parental involvement* was measured by a 10-item scale, including "How easy is it for you to talk to the following persons about things that really bother you? (mother/father separately)", measured on a 5-point

scale (1 = very easy; 5 = not at all). Eight items examined the frequency by which the parents and children do activities together ("Here is a list of things which some families do together. How often do you and your family usually do these things all together: watch TV together, play indoor games together, eat a meal together, go for a walk together, go places together, visit family or friends together, play sports together and sit and talk about things together?") measured on a 5-point scale (5 = every day; 1 = never); Cronbach's alpha was 0.85. *Parental monitoring* was measured with a 10-item scale composed of five questions asked separately for mother and father: "How much does your mother/father really know about: who your friends are, how you spend your money, where you are after school, where you go at night and what you do with your free time?". Each question was measured on a 4-point scale (3 = knows a lot; 2 = does not know at all; 0 = don't have or don't see mother/father); Cronbach's alpha was 0.89. *Parental support at school* was measured by a 5-item scale: "If I have problems at school my parents are ready to help"; "My parents are prepared to come to school to talk to my teachers"; "My parents encourage me to do well at school"; "My parents are interested in what happens to me at school"; "My parents are willing to help me with homework". Each item was measured on a 5-point scale (5 = strongly agree; 1 = strongly disagree). Cronbach's alpha was 0.85.

Teacher support was measured on a four-item scale ("My teachers encourage me to say what I think in class"; "Our teachers treat us fairly"; "When I need extra help from my teachers I can get it"; "My teachers are interested in me as a person"). Each item was measured on a 5-point scale (5 = Very much agree; 1 = Do not agree at all). Cronbach's alpha was 0.84.

Two measures of friendship were used in the study: *Excess time spent with friends* was measured by "How many evenings per week do you usually spend out with your friends?" (from 0 to 7). Responses were recoded as 1 (0–3 evenings out with friends), 2 (4–5 evenings) and 3 (6–7 evenings). *Social rejection at school* was measured by three statements/questions; "Other students accept me as I am" (1 = strongly agree; 5 = strongly disagree); "Does it happen that you feel alone?" (1 = No, 4 = Yes, very often); "How often does it happen that other pupils don't want to spend time with you and you find yourself alone?" (1 = It did not happen in the past semester; 5 = Every day). Cronbach's alpha = 0.64.

Risk behaviors

Smoking: Smoking was measured with two questions: "How often do you smoke tobacco at present?" and "How often do you smoke a nargilla (Hookah) at present?" For each question the participant answered on a 4-point scale from 1 (never) to 4 (every day). Dichotomous variables of smoking/Hookah were created (0 = never/less than once a week; 1 = once a week or more).

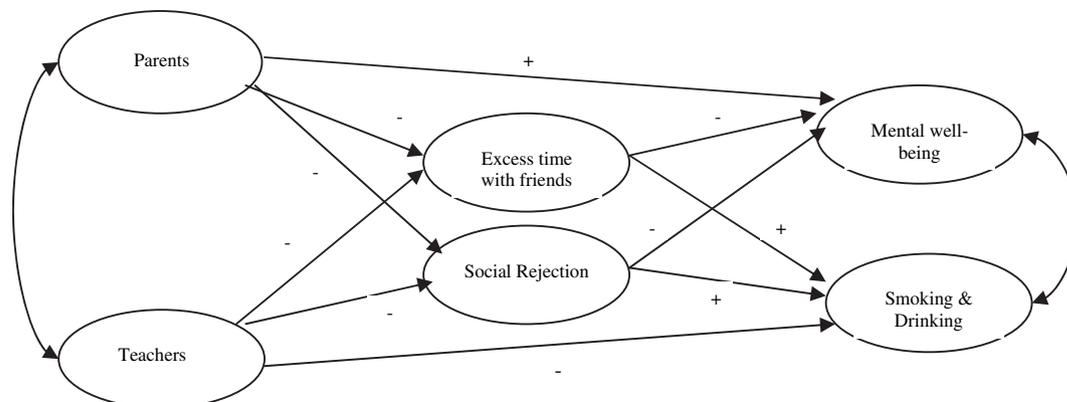


Fig. 1. Conceptual model.

Drinking: Drinking alcohol was measured through two questions: (1) “Have you ever had so much alcohol that you were really drunk?”, measured on a five-point scale (1 = No, never; 5 = Yes, more than 10 times); and (2) “In the past 30 days how many times have you drunk five drinks of alcohol or more within a period of a few hours?”, measured on a 6-point scale (1 = I have never drunk 5 units or more in a period of a few hours; 6 = four times or more). Dichotomous variables of being drunk/binge drinking were created (0 = Never; 1 = One time or more). An additional variable of substance use was created by calculating the sum of the 4 dichotomous variables (cigarette/nargilla smoking, been drunk and binge drinking), yielding a measure on a five-point scale (0 = no substance use, 4 = all 4 substances).

Mental well-being: Adolescent mental well-being (including emotional and somatic elements) was measured by eight items measured on a 5-point scale (1 = almost every day; 5 = never or very rarely): “In the past six months how often have you had the following: headache, stomach-ache, back ache, feeling dizzy, feeling low, irritability or bad temper, feeling nervous, difficulties in getting to sleep?” Cronbach alpha was 0.87.

Statistical analysis

T-tests and Mann-Whitney tests were carried out to explore differences between the two immigrant groups on all research variables. No significant differences were found between immigrants from the FSU and Ethiopia on any of the parental or teacher variables, social rejection or mental well-being, cigarette smoking or being drunk. Adolescents from the FSU reported significantly more excess time with friends and Ethiopian adolescents reported significantly more hookah-smoking and binge-drinking. Due to few significant differences, it was decided to combine the two groups in the forthcoming analyses. Following this, *t*-tests were carried out to explore differences between the Israeli-born and immigrant samples on all 6 independent variables: levels of parental support, monitoring and involvement in school, teacher support, social rejection at school and excess time spent with friends and on measures of mental well-being. Chi-square tests were carried out to compare levels of risk behaviors (cigarette/hookah smoking, binge drinking and being drunk).

Correlational analysis (Pearson's) was carried out for each population separately to explore the relationship between support measures and measures of risk behavior and mental well-being.¹ Following this, hierarchical regression analysis examined the interaction between each support measure and country of origin on substance use (the combined variable) and mental well-being. In each model, gender and school grade were included and then immigration status (Israeli-born/immigrant) together with each support measure (parent monitoring, support at school and involvement, teacher support and the two peer measures) and its interaction with country of origin. Finally structural equation modeling (AMOS) was used to explore paths of relationships between significant adults and peer relationships and risk behaviors and mental well-being. Since prior ANOVA analysis confirmed that there was no interaction effect between gender and country of origin on any of the dependent variables, gender was not included. The SEM analysis tested a conceptual model (Fig. 1) for the two populations. Adult relationships were hypothesized to impact directly on outcome variables, as well as indirectly via peer relationships. Smoking and drinking were created as factors within

AMOS (from the 4 individual variables) as it was not clear whether they could be considered overlapping or distinct behaviors.

Due to a supposed relationship between SES and immigration status, the HBSC's Family Affluence Scale (FAS) (Currie Molcho, Boyce, Holstein, Thorsheim, Richter et al., 2008) was examined. The scale includes 4 questions: Does your family own a car, van or truck (0 = No; 2 = 2 or more); Do you have your own bedroom (0 = No; 1 = Yes); During the past 12 months how many times did you travel abroad with your family (0 = none; 3 = more than twice); How many computers does your family own (0 = None; 3 = more than 2). The continuous variable created as a sum of the four questions is divided into three groups of low, medium, high FAS (see Currie, Molcho, Boyce, Holstein, Thorsheim, Richter et al., 2008 for a full review of the scale). As expected, immigrants showed significantly lower FAS results. For high/low FAS scores, the respective percentages were 44.6/15.8 (Israeli-born), 17.3/35.3 (FSU) and 8.2/78.1 (Ethiopian). Regression analysis tested the relationship between FAS and substance use/mental well-being for Israeli-born and immigrants. FAS was not found to predict significantly substance use for either sample but was similarly predictive of mental well-being for both Israeli-born ($\beta = 0.08$, $p < 0.001$) and immigrants ($\beta = 0.11$, $p < 0.001$).

Results

Differences between immigrants and Israeli-born adolescents in relationships with significant others, risk behaviors and mental well-being

Significant differences were found between the two populations on most variables (see Table 1). Israeli-born respondents reported higher levels of parental monitoring, support in school and involvement and higher levels of teacher support. Immigrant adolescents reported higher levels of social rejection at school, more excess time spent with friends, and higher levels of cigarette smoking, nargilla smoking, binge drinking and being drunk, and lower mental health.

Relationship between significant adults and peer relationships, risk behaviors and mental well-being

As can be seen from Table 2, relationships with parents (monitoring, support at school and involvement) and teachers and excess time with friends were significantly correlated with all four risk behavior measures for both populations. The greater the degree of monitoring, involvement and support at school, and the less excess time spent with friends, the lower the levels of cigarette smoking, nargilla smoking, binge drinking and being drunk for both populations.

Differences between the two populations were found for measures of well-being. All three parent measures and teacher support were significantly associated with measures of mental well-being among Israeli-born adolescents but only teacher support (and none of the parent measures) was significantly associated with mental well-being among the immigrant adolescents. Social rejection and excess time with friends were negatively related to mental well-being for both populations.

Relationship between support networks and risk behaviors/mental well-being (regression analysis of interactions with Israeli-born/immigrant groups)

Significant main effects for substance use were found for parental monitoring ($\beta = -0.20$, $p < 0.001$), parental involvement at school ($\beta = -0.17$, $p < 0.001$), parental support ($\beta = -0.10$, $p < 0.001$),

¹ Non-parametric tests were also carried out in order to compensate for any lack of normal distribution in the variables (e.g., spearman's correlations). Since no significant differences were found, it was decided to present the parametric tests.

Table 1
Means (SD) of study variables for each sample.

Variable (theoretic range)	Israeli-born (<i>n</i> = 3499)	Immigrant (<i>n</i> = 434)	Tests of significant differences
Support measures			
Parental monitoring (0–30)	24.95 (4.85)	21.84 (6.75)	<i>t</i> (659) = 10.5***
Parental involvement (10–50)	32.00 (7.33)	30.60 (7.83)	<i>t</i> (4,033) = 4.1***
Parental support at school (5–25)	22.97 (2.92)	22.18 (3.70)	<i>t</i> (660) = 4.7***
Teacher support (4–20)	14.70 (3.61)	14.28 (3.86)	<i>t</i> (3,957) = 2.5*
Excess time with friends (1–3)	1.36 (0.65)	1.53 (0.81)	<i>t</i> (679) = 4.9***
Social rejection (0–3)	0.90 (0.90)	1.05 (0.98)	<i>t</i> (4,023) = 3.6***
Health and risk behaviors			
Cigarette smoking (0–1)	0.04 (0.21)	0.10 (0.30)	$\chi^2(1) = 27.96***$
Hookah smoking (0–1)	0.05 (0.22)	0.07 (0.26)	$\chi^2(1) = 3.24$
Being drunk (0–1)	0.22 (0.42)	0.33 (0.47)	$\chi^2(1) = 27.05***$
Binge drinking (0–1)	0.13 (0.34)	0.17 (0.37)	$\chi^2(1) = 4.54^*$
Mental well-being (1–5)	3.60 (0.93)	3.52 (1.00)	<i>t</i> (635) = 1.7

p* < .05; *p* < .01; ****p* < .001.

teacher support ($\beta = -0.14$, $p < 0.001$) and excess time with friends ($\beta = -0.20$, $p < 0.001$), and significant interaction effects for parental involvement at school ($\beta = -0.28$, $p < 0.01$) and teacher support ($\beta = -0.13$, $p < 0.05$). For immigrant adolescents, school-related support (parent/teacher) was significantly more related to substance use. For mental well-being significant main effects were found for parental monitoring ($\beta = 0.20$, $p < 0.001$), parental involvement at school ($\beta = 0.19$, $p < 0.001$), parental support ($\beta = 0.13$, $p < 0.001$), teacher support ($\beta = 0.19$, $p < 0.001$), social rejection ($\beta = -0.27$, $p < 0.001$) and excess time with friends ($\beta = -0.07$, $p < 0.001$), and significant interaction effects of parental monitoring ($\beta = -0.21$, $p < 0.001$) and parental involvement at school ($\beta = -0.29$, $p < 0.01$) with country of origin. For immigrant adolescents, parental monitoring and involvement were significantly less related to mental well-being than for Israeli-born adolescents.

Structural equation modeling

Risk behaviors

For Israeli born adolescents, as hypothesized, almost all of the proposed relationships in the path model were found to be significant (see Fig. 2). Parent and teacher supports were significantly related to both smoking and drinking for Israeli-born adolescents directly and indirectly (through impact on social rejection and excess time with friends) ($\chi^2(18) = 22.06$, $p = 0.077$, $NFI = 0.995$, $RMSEA = 0.013$). The greater the levels of parental involvement, support at school, monitoring and teacher support, the less smoking and drinking. Excess time with friends was associated with higher smoking and drinking, whereas social rejection at school was associated with lower levels of smoking and drinking. Standardized path coefficients were especially high for excess time with friends, parent support in school, monitoring and teacher support.

Due to a high covariance between smoking and drinking among immigrant youth, an overall variable of *substance use* was constructed in the path analysis, in itself a significant finding. While for Israeli-born adolescents smoking and drinking were separate behaviors, for immigrant adolescents they overlapped. Path coefficients of parent

support at school, parental monitoring, teacher support and excess time spent with friends were significant for substance use (see Fig. 3). Path coefficients of parental involvement and social rejection were not significant for substance use ($\chi^2(23) = 28.32$, $p = 0.20$, $NFI = 0.958$, $RMSEA = 0.020$). Higher parental and teacher support at school and parental monitoring were associated with lower levels of substance use. Excess time with friends was associated with higher levels of substance use. All standardized path coefficients were high, notably the levels of parental support at school and excess time with friends. In sum, for immigrant adolescents, the school environment and the involvement of parents within it are critical factors, alongside time spent with friends.

Mental well-being

For Israeli-born adolescents, path coefficients showed that higher levels of parental monitoring, parent support at school and teacher support led to higher levels of mental well-being (see Fig. 4). Excess time with friends and social rejection were negatively related to mental well-being ($\chi^2(2) = 1.46$, $p = 0.481$, $NFI = 0.999$, $RMSEA = 0.000$). However, for immigrants, a very different model was found (see Fig. 5). Higher mental well-being was associated with higher levels of teacher support, lower levels of both social rejection and excess time with friends ($\chi^2(3) = 7.61$, $p = 0.055$, $NFI = 0.937$, $RMSEA = 0.052$). Non-significant path coefficients showed that none of the parental measures was significantly related to immigrant adolescents' mental well-being.

Discussion

Major findings were that Israeli-born adolescents reported higher levels of parental monitoring, support and involvement at school, and teacher support than their immigrant counterparts. However, immigrant adolescents reported higher levels of perceived social rejection at school, more excess time spent with friends, and higher levels of mental distress and risk behaviors (cigarette smoking, binge drinking and being drunk). From the immigrant adolescents' perspective, their immigrant parents were less able to provide monitoring and support roles in

Table 2
Correlations between significant others and risk behaviors and health (Israeli/immigrant adolescents).

	Cigarette smoking	Nargila	Binge drinking	Drunk	Mental well-being
Parental monitoring	-0.143**/-0.213**	-0.117**/-0.230**	-0.158**/-0.174**	-0.159**/-0.180**	0.179**/0.067
Parental involvement	-0.105**/-0.172**	-0.079**/-0.095*	-0.100**/-0.146**	-0.129**/-0.158**	0.167**/0.073
Parental support at school	-0.151**/-0.248**	-0.144**/-0.275**	-0.157**/-0.262**	-0.158**/-0.248**	0.139**/0.068
Teacher support	-0.095**/-0.199**	-0.104**/-0.140**	-0.132**/-0.185**	-0.177**/-0.208**	0.188**/0.167**
Excess time with friends	0.162**/0.246**	0.147**/0.173**	0.140**/0.157**	0.171**/0.205**	-0.073**/-0.107*
Social rejection	-0.004/0.057	-0.054**/0.061	0.009/0.069	0.007/0.040	-0.270**/-0.279**

Note. **p* < .05; ***p* < .01.

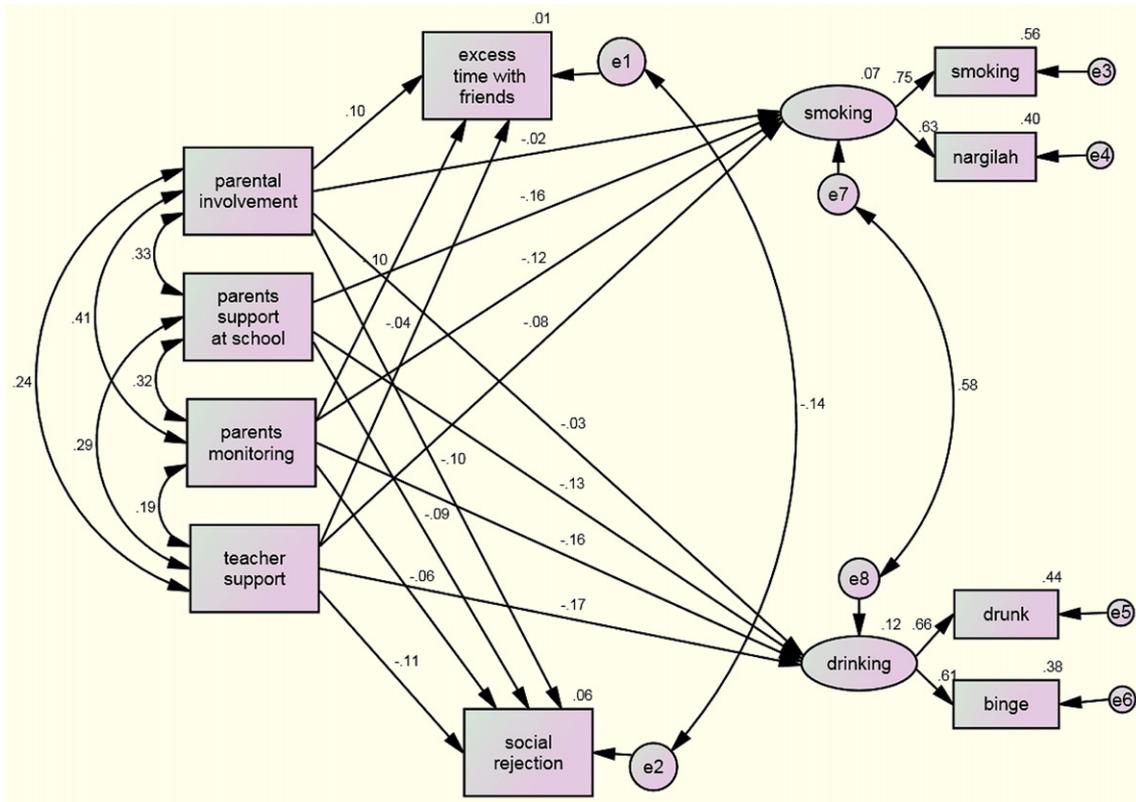


Fig. 2. Risk Behaviors – Israeli born sample.

a school context and in general. Higher levels of distress and risk behaviors are consistent with some studies (Bengi-Arslan et al., 1997; Isralowitz & Reznik, 2007; Janssen et al., 2004; Stevens et al., 2003). However, the results are inconsistent with other research (Berry et al., 2006) showing that immigrant youth were just as well adapted as their national peers. Kwak (2003) suggests that changes in family socialization patterns following immigration may be connected to economic hardship.

Economic hardship may in turn lead parents to be less supportive of their children and to engage in negative parenting practices when the family experiences economic hardship, and adolescents may consequently become psychologically distressed and engage in problematic behavior (McLloyd, 1990; Taylor et al., 2000). Immigrant adolescents did indeed report lower family affluence, which may contribute to the difference in parenting and adolescent smoking and drinking.

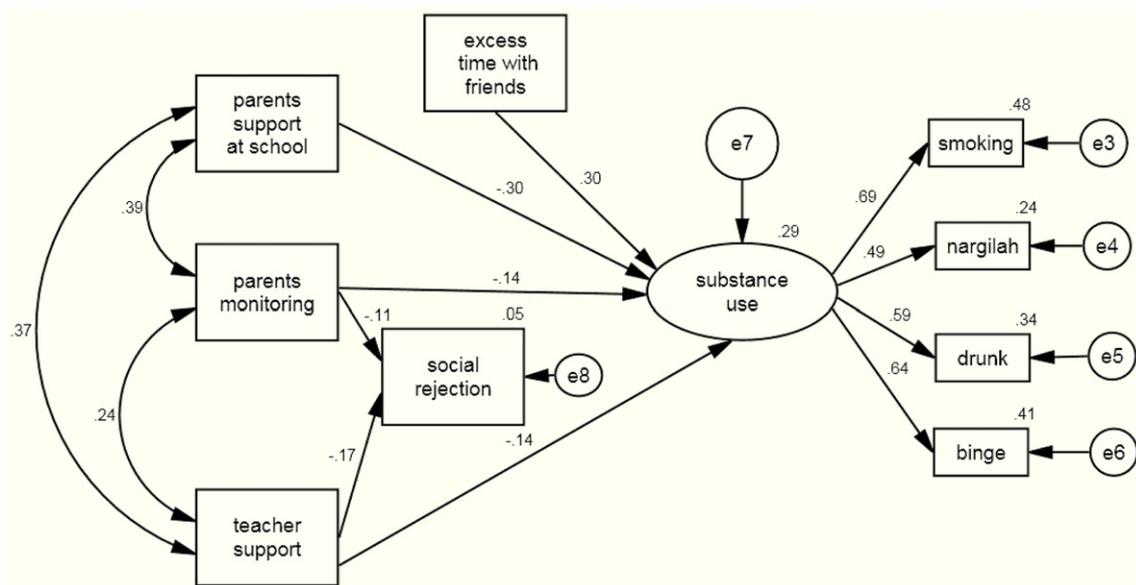


Fig. 3. Risk Behaviors – immigrant sample.

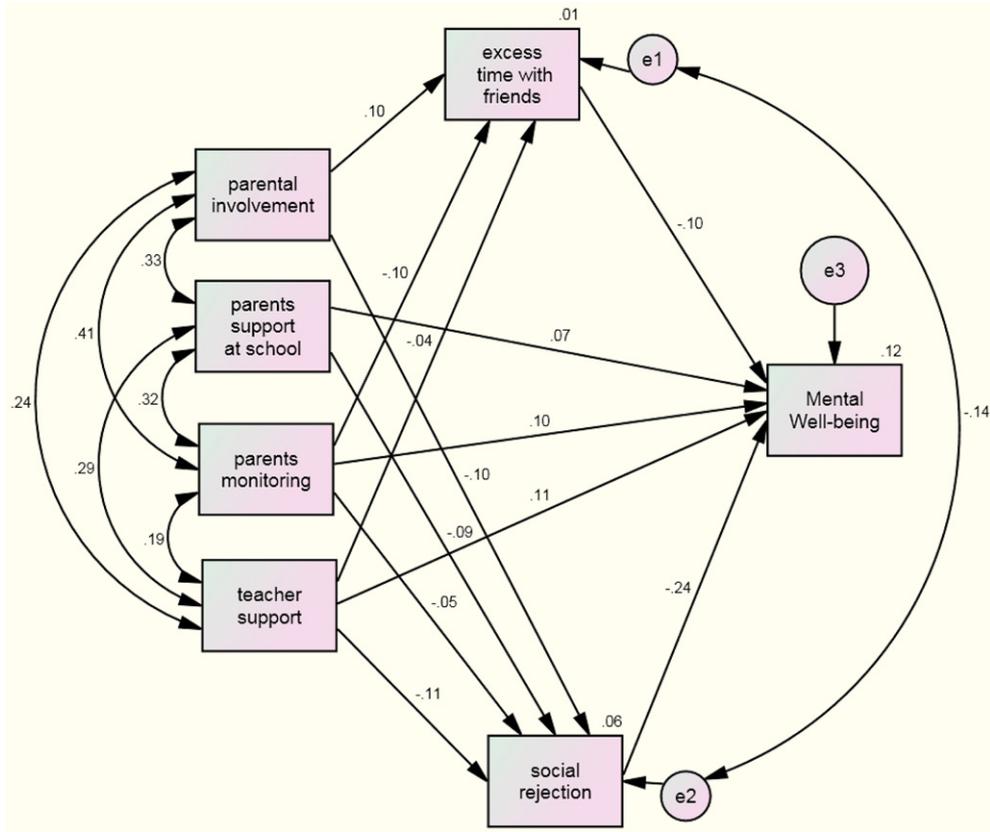


Fig. 4. Mental well-being – Israeli born sample.

Immigrant families bring with them parenting styles from their home culture. Both Russian and Ethiopian parenting styles place emphasis on discipline and authority together with a close-knit family. Mirsky (1997, 2001) describes how immigrants from the FSU in Israel bring with them elements of parenting, including solidarity of the family and close-knit, that result in often over-protective parent-child relationships. Russian-Jewish culture

emphasizes full authority of parents and limited autonomy of children. Russian parents have been found to be more controlling of their children than parents in Western countries (Tudge, Hogan, Snezhkova, Kulakova, & Etz, 2000; Tukviste, Mizera, De Geer, & Tryggvason, 2003). Among Ethiopian Jewry, the focus of child socialization was on the community and the preservation of Jewish tradition with an emphasis on respect for elders and authority

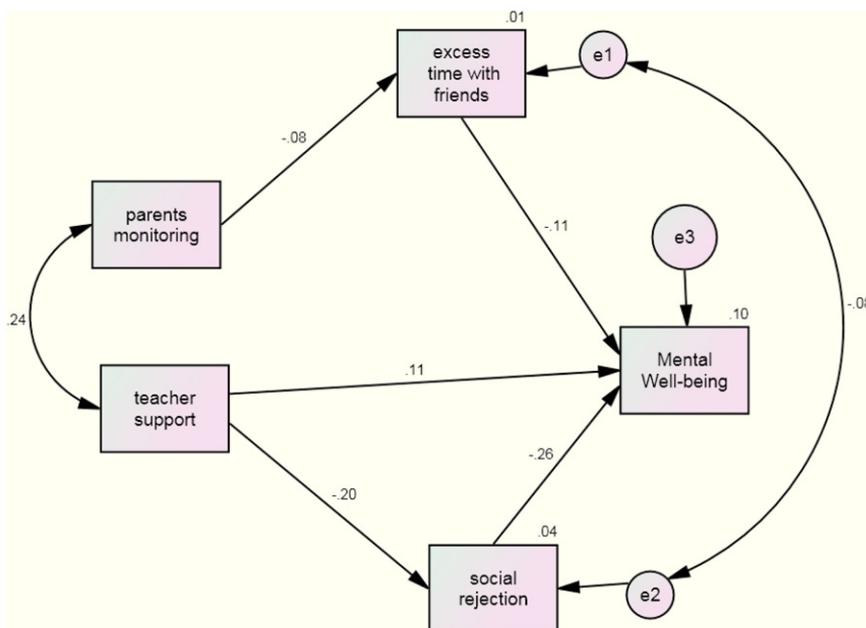


Fig. 5. Mental well-being – immigrant sample.

figures (Strier & Roer-Strier, 2005). Consequently, the lower levels of parental involvement among immigrants in the study suggest that immigration has altered the relationships between parents and adolescents.

Immigrant parent engagement has been found in other studies to be related to adolescents' positive psychological adaptation and school adjustment (Liebkind & Jasinskaja-Lahti, 2000; Liebkind, Jasinskaja-Lahti, & Solheim, 2004; Plunkett & Bamaca-Gomez, 2003; Stevens, Vollebergh, Pels, & Crijnen, 2007a). Here too parental monitoring, involvement and support at school were correlated with lower levels of risk behavior, though the effects disappeared in the path analysis due to the relatively greater importance of the school environment.

Path analysis showed different models of influence for the two populations. For Israeli-born adolescents, higher levels of parental support, monitoring, involvement at school and teacher support were related to higher mental well-being and lower smoking and drinking, while excess time with friends and feelings of social rejection were related in the opposite direction. These results are in line with the conceptual model and much prior literature showing the protective nature of parental support and monitoring for adolescent health and risk behaviors (Armsden et al., 1990; Barnes et al., 2000; Dick et al., 2007; Leventhal & Brooks-Gunn, 2000; Li, Stanton, & Feigelman, 2000; Lifrak et al., 1997; Milevsky et al., 2007; Otten et al., 2007; Steinberg et al., 1994) and also the unfavorable outcomes of problematic social relations (Alexander & Hickner, 1997; Beal et al., 2001; Gerrard et al., 1999; Wills et al., 2004). In addition, teacher support was found to be a protective factor in both mental well-being and risk behaviors (Chen, Greenberger, Farruggia, Bush, & Dong, 2003; DuBois & Silverthorn, 2005a, 2005b; LaRusso et al., 2008).

Findings pointed to the pivotal role of the school environment in adolescent immigrant development. Smoking and drinking were lower when teacher support and parental support at school and parental monitoring were higher and when less excess time was spent with friends. Levels of parental involvement were not found to be related to risk behavior. In the case of mental well-being, no parent support variables were significant. Only social rejection at school and teacher support (indirectly) were found to be associated with mental well-being. Research examining immigrant Mexican adolescents (Kuperminc, Darnell, & Alvarez-Jimenez, 2008), found a positive relationship between parent involvement in school and academic achievement. However, to the best of our knowledge, no previous research has demonstrated that the school environment, in particular the teacher-adolescent relationship, is important for the mental well-being of immigrant adolescents.

Results have various implications on an educational and social level. They suggest the pivotal role the school environment (teacher support and parental involvement in school) plays for immigrant adolescents. The school environment may be the gateway to integration, adaptation and acceptance. School is the arena in which adolescents become "Israeli" and feel a sense of belonging in the new society. Results suggest the importance in educating school teachers and principals about their critical role in the lives and development of adolescent immigrants. Immigrant parents may need guidance to enhance effective ways to become more involved in the daily lives of their adolescent children, despite cultural and situational disadvantages. Immigrant youth are in danger for adopting health demoting behaviors related to drinking and smoking, though not as much for experiencing emotional distress. Intervention strategies could be aimed at reducing the adoption of unhealthy drinking and smoking of immigrant adolescents in Israel by enhancing the support of significant adults within the school context.

One major limitation of this study is the cross-sectional nature of HBSC data. Data demonstrate associative relations between

parent/teacher involvement and child-reported outcomes. However, longitudinal research designs are necessary to support a more causal interpretation. A further limitation is that student self-report was the method used to collect data on all measures, including parent and teacher support. Finally, the date of immigration was not available. Nonetheless, this study highlights the central role that the school setting plays in the lives of adolescent immigrants. As population mobility worldwide grows rapidly, understanding the roles of significant adults, schools and communities in the lives of immigrating adolescents as they struggle to adapt to a new social environment is vital. Knowledge will enable the development of more effective policies and programs aimed at helping immigrating youth cope with their unique challenges.

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