

Community Effects on Adolescent Quality of Life*

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Abstract

Adolescent research has focused on the community/neighborhood influences on developmental outcome, such as mental health, conduct disorder, and physical risk. Quality of life, which has also broadly been used to refer to individual well-being and/or welfare, has received little attention. The extent to which community influences life quality of adolescents remains unclear. This study attempts to link the gap between adolescent research and quality-of-life studies by examining the community effects, including both contextual and interactional characteristics, on the life quality of adolescents by using a community interactional approach. The effects of family and peer are examined as well to further understand their mediating role in such an association.

Data are drawn from a panel study, "Taiwan Youth Project", by using wave one survey data obtained from the first-year junior high students (J1W1) in Fall 2000. A total of 2,080 cases were included in the analysis. Contextual variables were obtained from the 1993 population registration records. Structural equation modeling (SEM) was used to examine multivariate influences on adolescent quality of life. The results revealed the contribution of participation and interactional dimensions of community participation to adolescents' happiness and satisfactions with school and family life. The mediating role of family and friends was supported from the interactional perspective. Contextual characteristics were found to have mixed effects on adolescents' life satisfaction. Despite the possible limitation of omitted variables, a community interactional approach is demonstrated to be appropriate for better understanding adolescent quality of life.

Keywords: community interaction, adolescent, quality of life.

Introduction

Recent adolescent research has focused on linking community/neighborhood to developmental outcome. Of various effects in the development process, detrimental outcomes on individual well-being, such as mental health, conduct disorder, and physical risk, have been a particular concern for adolescents living in disadvantaged neighborhoods (Aneshensel and Sucoff 1996; Blyth and Leffert 1995; Brooks-Gunn et al. 1993; Leventhal and Brooks-Gunn 2000; Sampson et al. 1997; Simons et al. 1996). The aspects of well-being concerned in the adolescents studies mainly focused on depression and stress. However, life quality, which has also broadly been used to refer to individual well-being and/or welfare (Andrew and Withey 1976; Diener 1994; Oppong et al. 1988; Schuessler and Fisher 1985), has received little attention. Similarly, quality of life research has taken into account contextual effects for the grownups (cf. Popenoe 1983), while it has not shed lights on adolescents. The extent to which community influences life quality of adolescents remains unclear.

In previous studies, characteristics at both of the community/neighborhood level and individual level are important predictors of adolescent well-being while family and peer groups are suggested to be important mediators in the association. Structural factors in the neighborhood are commonly used to represent community-level characteristics. Although neighborhood and community have been used interchangeably to describe the same concept, these two remain distinctive (Small and Supple 2001). Neighborhood usually refers to a physical place defined by socially shared boundaries including a population of people sharing similar life chance, socioeconomic status, and physical proximity. On the other hand, community can be referred to “social relationships that

individuals have based on group consensus, shared norms and values, common goals, and feelings of identification, belonging, and trust” (Small and Supple 2001:162). Despite the difficulties of fully incorporating community-level measures (c.f. Duncan and Raudenbush 2001), it is in need to consider interactional aspects of a community when examining community effects on adolescents well-being.

This study attempts to link the gap between adolescent research and quality-of-life studies by examining the community effects, including both contextual and interactional characteristics, on the life quality of adolescents by using a community interactional approach. The effects of family and peer are examined as well to further understand their mediating role in the association of community context and an aspect of adolescents well-being—life quality. The following section presents the perspectives of a community interactional approach to understand adolescent’s well-being. Descriptions of data sources and the measurement of variables follow. In order to examine the mediating effects of family and peer, structural equation modeling is used and results of multivariate analysis are presented. The paper concludes with a discussion of implications for adolescent research.

A community interactional approach to adolescent well-being

From the perspective of interactional theory, community is an interactional field that tends to occur where people live together and interact on matters concerning their shared interest in the locality (Kaufman 1959, 1985; Wilkinson 1991). Despite advances in transportation and communication, the local community is still the primary point of contact between the individual and society. Linkages that are built through interactions

demonstrate a wide range of systemic interconnections in a community. However, they are not necessarily rooted in positive sentiment and may be affected by factors associated with local people and groups (Bridger and Luloff 1999).

The elements of an interactional field include the persons involved, designated as actors or participants, the associations and/or groups through which the action takes place, and the phases and roles of community action (Kaufman 1959). The community may be seen as a network of interrelated associations which help solve problems in the local society. Although community actions may not experience each phase, actors and groups are involved and interact in the process, which helps build an interactional field in the local community. Community provides a fundamental base for these interactions and collective actions.

The interactional approach views the community as a natural and ubiquitous phenomenon among people who share a common territory and interact with one another on place relevant matters. Community, therefore, is conceptualized as a process of place-oriented social interactions that express shared interests among residents of a local society. Community plays an important role in human experience and well-being because of “its role as the setting and the mechanism of empirical contact between the individual and society” (Wilkinson 1991: 3).

The interactional approach to community is relevant for understanding quality of life. The local community in modern society continues to be a primary setting for social interactions (Luloff 1998). As a subjective matter, social interaction is necessary for quality of life because it is the basis for the emergence and development of self (Wilkinson 1979; 1991). Through social interactions, environments that allow residents to

realize their own potentials emerge. Where social interactions are high, the opportunity for more crosscutting relationships and the development of a concern for generalized collective actions is also high. In such places, organizations representing common interests in the community are more likely to recognize the needs for and develop support networks, services, and facilities essential for a complete local society (Wilkinson 1979, 1991). Social interaction at the community level encourages conditions that allow for open communication, tolerance, collective action, and local celebration (Wilkinson 1991).

Empirical studies have documented the role of satisfaction with social interaction or interpersonal relations in the local community as an important component of subjective quality of life (DeJong and Fawcett 1981; Lewis and Lyon 1986; Mastekaasa and Moum 1984; Michalos and Zumbo 2000). Although social interaction is a process of building interpersonal ties with friends and neighbors, for instance, life quality is a perception of and satisfaction with this process. For example, in measurement terms, the quantity of social interaction is often used as an indicator of social ties (Beggs et al. 1996; Goudy 1990; St. John et al. 1986), while indicators of satisfaction with this interaction have been used as a measure of quality of life (Bell 1992; Lowe and Peek 1974).

The components of quality of life were examined to reveal its various phases and the reliability of measuring how people perceive and evaluate their life (Andrew and Withey 1976; Campbell et al. 1976; Chamberlain 1985; Lewis and Lyon 1986; Rogerson 1999; Oppong 1988). In addition to satisfaction with interpersonal relations, these components mainly focused on overall life satisfaction (Andrews and Withey 1976; Campbell et al. 1976; Hughey and Bardo 1987; Michalos et al. 2000; Rampichini and D'Andrea 1997)

and happiness (Campbell et al. 1976; Hagerty 2000; Kousha and Mohseni 2000; Michalos et al. 2000; Thoits and Hewitt 2001; Veenhoven 1995). Other studies have focused on specific life domains, such as the satisfaction with work (Andrews and Withey 1976; Kousha and Mohseni 2000; Michalos et al. 2000; Tsou and Liu 2001) or school in the case of adolescents.

Attempts to address the effects of the social environment on personal well-being or life quality (above and beyond the effects of individual social behavior) have primarily taken contextual factors into account. Researchers have analyzed the adolescence development effects of neighborhood/community-level socioeconomic status (Aneschensel and Sucoff 1996; Blyth and Leffert 1995; Leventhal and Brooks-Gunn 2000; Sampson et al. 1997) or addressed the effects of socio-demographic composition in neighborhood on well-being (Simons et al. 1996). Brooks-Gunn et al. (1993) used two data sets to examine the effects of neighborhood characteristics on the development of children and adolescents. Employing multi-level measures in the analytic model, their results revealed influential neighborhood effects on adolescent outcomes, even after controlling for family socio-economic characteristics.

Despite commonly used contextual factors representing community effects, relations built through interaction deserve special attention. As indicated in Brown's study (1993), while structural factors were found to influence how residents experienced their community, these impacts were small when personal interaction patterns were considered. Interaction in the form of participation in community activities has been found to contribute to adolescent development (Chan and Elder 2001; Dworkin et al. 2003; Guest and Schneider 2003; Hart et al. 1997). Community based-activities provide opportunities

for adolescents to build peer relationships and develop initiative and social skills, for example (Dworkin et al. 2003).

Relationships within family have been suggested to be a potential mechanism through which community may influence adolescents (see Leventhal and Brooks-Gunn 2000). Also, interactions between individual adolescents and family, schools, peer groups, and community institutions induce community effects as the direct aggregate influences of community settings where adolescents participate (Small and Supple 2001). Previous studies have demonstrated factors associated with parents and peer group as mediators when analyzing the impact of community structure on adolescent outcomes (Simons et al. 1996; also see Duncan and Raudenbush 2001; Small and Supple 2001). In regard to satisfaction with interpersonal relations, it is expected that family and friends may mediate the community effects on adolescent quality of life.

By using a community interactional approach, this paper develops an analytic framework for community effects on adolescent quality of life (Figure 1). As conventionally used in previous studies, family socio-economic status and contextual characteristics at the community level are modeled as exogenous variables. To take into account the theoretical approach, community interaction is included to examine its effects on adolescent's life quality along with other exogenous variables. Considering the mediating role of family and peer, relationships with family and with friends are added to examine their mediating effects. In regard to gender difference in terms of individual well-being (c.f. Simons et al. 1996), gender is used as a control variable.

(Figure 1 about here)

Research methods

Individual-level data are drawn from a large panel study, “Taiwan Youth Project” (TYP). Sample selected in this project include first-year and third-year junior high school students enrolled in Fall 2000. Using a multi-trait and multi-method strategy, this project aims to depict developmental process of youth in Taiwan by conducting panel surveys every academic year. Stratified sampling was employed to first determine the divisions in Taipei City, Taipei County, and I-Lan County based on the urbanization level. Number of sampled school was decided by systemic proportion to the size of students or the number of junior high school in the division, resulted in 16 schools in Taipei City, 15 schools in Taipei County, and 9 schools in I-Lan County. Surveys were conducted for all of the first-year and third-year students in two selected classes in each of the sampled school. This paper uses Wave one (W1) data for the younger cohort—first-year junior high school students (J1)—conducted in 2000. Group questionnaire interview technique was employed to obtain information about adolescents’ individual and family characteristics, interaction with family and friends, attitudes toward gender and family values, school life, and well-being. A total of 2,690 questionnaires were completed. For the purpose of this study, cases with missing data were excluded resulting in 2,080 respondents for analysis.

Measures of life quality included general happiness and indicators of life satisfaction. General happiness was measured by a question: “Taking all things together, would you say you have a happy life these days?” Responses were coded as (1) very unhappy; (2) unhappy; (3) happy; and (4) very happy. Life satisfaction included two aspects of satisfaction—school life and family life—with the things related to him/her self. School life was things about academic performance, relations with classmates and friends, and

relation with teacher. Family life included relationships with father and mother, and family economic status. Responses for these items ranged from 1 (very dissatisfied) to 4 (very satisfied). Coefficients alpha for the school-satisfaction and family-satisfaction scales were .54 and .76, respectively.

Mediating variables included scales concerned family and friend relations of the respondent. Family relations consisted of a nine-item scale examining the agreement with the description of relations among family members. The scale contains items such as “family discuss with one another when making a decision,” “we like to spent spare time together,” “every one in my family participates in family activities,” and “family members accept one other’s friends.” Responses to these items were coded from 1 (strongly disagree) to 4 (strongly agree). Coefficient alpha for the family-relation scale was .84. Friend relations consisted of a three-item scale describing friendship among the respondents and his/her best friends. These items included “they care about me,” “I often get help from them,” and “when I feel frustrated, they always soothe me.” The item responses ranged from 1 (strongly disagree) to 4 (strongly agree). Coefficient alpha for the friend-relation scale was .78.

Measures at multiple levels were used to represent community characteristics in the model. Family SES was constructed by father’s education, mother’s education, and family income. Individual-level variables were used to construct community interaction. Two dimensions of community interaction were included—Participation and Interactional dimensions. Participation dimension measured adolescent’s participation in community activities, including community events, religion-sponsored activities, and using public facilities in the community. Interactional dimension contained five items indicating

interpersonal interactions in the local community. The five items included liking the environment of current neighborhood, paying attention to what happened in the community, helpfulness of neighbors, proportion of neighbors who know each other, and number of daily contact with neighbors.

Community-level data were obtained from the 1993 population registration records for minor civil divisions (mcd) in Taipei City, Taipei County, and I-Lan County. Divisions in the same school district were grouped to create community-level indices. School district was then used as the territory boundary of a community in this study. Variables representing community dis/advantage (c.f. Simons et al. 1996) are used, including urbanization level, an index of social burden, and the labor force participation rate.¹ Communities in this paper ranged across seven urbanization levels. The index of social burden in the selected communities indicated a range from .46% to 6.58% with an average of 2.86%. Labor force participation rate ranged from 56.56% to 79.10% with an average of 70.17%. The actual values for the rate used in the analysis were the remainders after subtracting the labor force participation rate from 100 in order to be in a consistent direction with the other indicators. Coefficient alpha for the three items was .61.

Sample description of the individual-level variables was provided in Appendix. The proportions of male and female students were balanced in the sample with 50.4% of males, coded as 0 and females coded as 1. With respect to community activities, the most frequently indicated activity in which students had participated was using public facilities such as libraries or sports field (41.1%), followed by community events (32.3%) and

¹ The index of social urban was calculated by summing the proportions of elderly and disabled, percent of people aged at 65 or older, and percent of children aged at 4 or younger divided by the percent of people in the age of 20 to 64 .

religion-sponsored activities (13.2%), while 39.4% of the sample did not participate in any of the community activities. In regard to the interactional dimension of community interaction, the mean scores of the sample were above the mid-point except for contacting with neighbors, which had a mean score of 2.21 on a five-point scale. The items on the family-relation scale were summed up to have scores ranged from 9 to 36. The sample reported a warm family relation with an average of 27.67. Similarly, the respondents reported a good friend relation with a mean score of 9.75 in the range of 3 to 12. With respect to life quality, the respondents reported themselves as slightly less than happy, with an average of 2.95. Indices of school satisfaction and family satisfaction were formed by summing the three items of each to have averages of 9.10 and 9.74, respectively, indicating a high level of satisfaction with their school and family life.

Results

Structural equation modeling (SEM) was used to examine the influence of community on adolescent quality of life by considering the mediating effects of family and friends. The AMOS 5 program was utilized to perform the SEM procedures. Latent variables were measured with multiple indicators. These indicators were included in the analysis as individual items for latent variables except for those of Family Relations and Interactional Dimensions of community interaction. Three indicators of Family Relations were created by summing three items for each among the nine items on the scale. Similarly, two indicators of Interactional Dimension were created by summing three items related to knowing/helping neighbors and by summing two others related to liking and paying attention to their neighborhood.

The model of direct and indirect effects of community characteristics on quality of life was estimated. The estimation began by testing the fully recursive model. Latent variables of life quality were jointly estimated in the model with School Satisfaction as a predictor of Family Satisfaction and General Happiness and Family Satisfaction of General Happiness. The SEM results are presented in Table 1. Contextual Characteristics was significantly associated with School Satisfaction and Family Satisfaction but not with General Happiness. Also, Contextual Characteristics was significantly related to Friend Relations (-.01) but not to Family Relations. In regard to community interaction, Participation Dimension was significantly associated with all the latent variables of life quality and Family Relations but not with Friend Relations. Similar patterns were found for Interactional Dimension except that it was significantly related to Friend Relations as well.

(Table 1 about here)

Unlike previous studies have indicated, Family socioeconomic status (Family SES) was not significantly associated with any of the endogenous variables except with Family Relations (.09). In contrary, Gender used as a control variable was significantly related to most of the endogenous variables except to General Happiness. Although the Goodness of Fit index indicated the model as acceptable (GFI=.97), the SEM was repeated with the various insignificant paths deleted to obtain a more parsimonious model. The resulting changes in chi-square did not reach statistical significance. Goodness of fit indices indicated the reduced model as acceptable (GFI=.97 and RMSEA=.03).

Table 2 presents the SEM results of the parsimonious model with insignificant paths deleted. Effects which were significant in the fully recursive model remained significant

in the parsimonious mode. With respect to the effects at the community level, Contextual Characteristics was found to have a direct effect on School satisfaction (.01) and Family Satisfaction (-.01), as well as an indirect effect through Friend Relations (-.01). Both dimensions of community interaction were significantly associated with all the latent variables of life quality. Participation Dimension had direct effects on School Satisfaction (.10), Family Satisfaction (.10), and General Happiness (.17) and also had an indirect effect through its associations with Family Relations (.84). Similar to the full model, there was no evidence that Family SES had a direct effect on adolescent quality of life while there was an indirect effect through its association with Family Relations (.09). As a control variable, Gender remained directly related to School Satisfaction (-.12) and Family Satisfaction (.12) and through its associations with Family Relations (-.17) and Friend Relations (.32).

(Table 2 about here)

With respect to the mediating effects, Family Relations was found to have direct effects on School Satisfaction (.05), Family Satisfaction (.15), and General Happiness (.10) and an indirect effect through Friend Relations (.08). Friend Relations was positively associated with School Satisfaction (.18) but negatively with Family Satisfaction (-.23). The mediating effects of Family Relations and Friend Relations were significant in the parsimonious model.

These findings suggest that community effects on adolescent quality of life were mainly the contribution of the indirect effects of the Participation Dimension and Interactional Dimension of community interaction through Family Relations and Friend Relations. The standardized total effects of Participation Dimension on School

Satisfaction, Family Satisfaction, and General Happiness were .30, .47, and .27, respectively. Interactional Dimension had greater effects on School Satisfaction, Family Satisfaction, and General Happiness with .64, .77, and .53 as the standardized total effects on them, respectively. On the other hand, the standardized total effect of Contextual Characteristics on the three latent variables of life quality was smaller with less than .09 of each.

The estimated indicator loadings had all reached statistic significance at the .05 level for each of the endogenous variables (Table 2). The indicators of the exogenous variables had significant loadings as well (Table 3). Table 3 also presents the covariances among exogenous variables. These results suggested that these indicators were appropriate measures to represent the corresponded latent variables.

(Table 3 about here)

Conclusions and Discussions

Studies investigating community effects on adolescent well-being have put little attention to aspects other than mental health and/or behavior problems. Such research has been hindered by using neighborhood to refer to community while the two are different in nature (See Small and Supple 2000). From the perspective of community interactional approach, which views community as a process of place-oriented social interactions (Wilkinson 1991), this paper examined the community influences on adolescent quality of life while testing the role of family and friends as mediators. Structural equation modeling was used to test the theoretical model as shown in Figure 1.

The findings revealed the contribution of the community interactional approach to

understanding community effects on adolescent quality of life. Both of the participation and interactional dimensions of community interaction were found to be significantly related to the three variables of adolescent life quality, both directly and indirectly through their association with family and friend relations, after controlling for family SES and adolescent's gender. It is clear that interactions in local communities, in the forms of participation and interpersonal interactions, contribute to a better quality of life for the grownups (c.f. Mastekaasa and Moum 1984; Popenoe 1983), as well as for adolescents in regard to happiness and life satisfaction. Interpersonal interactions in a community have been found to be an important source of social support that contributes to well-being (Lin et al. 1986). Participating in community activities or organizations also contribute to adolescent development (c.f. Chan and Elder 2001; Dworkin et al. 2003; Guest and Schneider 2003; Hart et al. 1997). When considering adolescent life quality, it is important to understand such a predicted outcome from the perspective of community interactions.

By the same token, the present study confirmed the mediating role of family and friends for the community effects on adolescent well-being, as previous studies have indicated (c.f. Duncan and Raudenbush 2001; Simons et al. 1996). In particular, a warm relation among family members was found to play an important mediator of the community effects on adolescent quality of life. Relationship with family has been suggested to be an underlying mechanism through which community influenced adolescent well-being (see Leventhal and Brooks-Gunn 2000). This study provided evidence to support its contribution to adolescent quality of life.

In contrary to previous findings (Brooks-Gunn et al. 1993 Simons et al. 1996),

however, family socioeconomic status (family SES) was demonstrated to have little impact on adolescent life quality. Although family SES often involves economic resources that are seen beneficial to adolescent development, its effect may vary by outcome, for example, significant for girls but not for boys (Simons et al. 1996). On the other hand, socioeconomic status at the neighborhood/community level has had consistent influences on adolescent outcome (Aneshensel and Sucoff 1996; Brooks-Gunn et al. 1993; Leventhal and Brooks-Gunn 2000). In view of the close association between family SES and the socioeconomic status of a community, research on adolescent development/well-being need to take into account family SES along with other family-level variables.

As previous studies have emphasized that adolescents in disadvantaged communities may experience detrimental outcomes (Aneshensel and Sucoff 1996; Blyth and Leffert 1995), contextual characteristics representing disadvantaged socio-demographic components in a community were found to be associated with adolescent quality of life. However, the effects were mixed. Contextual characteristics at the community level had a positive effect on school-life satisfaction but negative on family-life satisfaction. In other words, adolescents who experienced more socio-economic disadvantage in the community were more satisfied with school life but less with family life.

One reason for the mixed effects of contextual characteristics on adolescent life quality may be the limited indicators, which leads to the omitted variables problem for both administrative and survey-based data (Duncan and Raudenbush 2001; also see Leventhal and Brooks-Gunn 2000). The former is mainly related to variables in need and able to capture certain kinds of community effects and the latter arises from measurement

errors. Although a representative value may be obtained by aggregating individual responses, results may be biased by problems such as multicollinearity particularly for city-specific samples (see Duncan and Raudenbush 2001). While the omitted-variable problem is commonly recognized as a difficult task to overcome (Leventhal and Brooks-Gunn 2000), researchers need to be cautious when selecting community-level variables.

This paper contributes to studies on adolescent well-being by taking a community interactional approach and to quality-of-life research by focusing on adolescents instead of adult samples. Results of structural equation modeling demonstrate the significant effects of community on adolescent quality of life. Interactional and contextual characteristics are equally important when understand adolescent well-being in a community context. The mediating role of family and friends is supported, when viewed from the perspective of community interaction in particular. Despite the possible limitation of omitted variables, a community interactional approach is appropriate to go beyond the conventional scope of adolescent studies for better understanding their quality of life.

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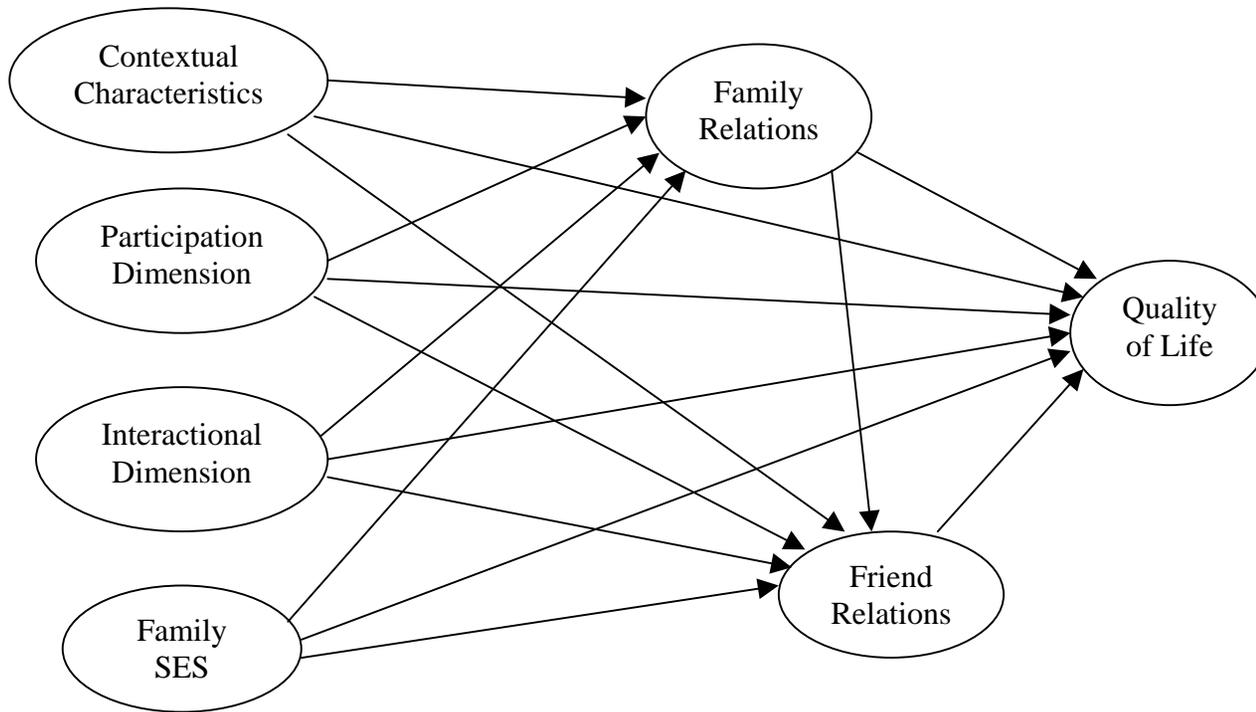


Figure 1 Model of possible direct and indirect effects of community on adolescent quality of life.

Table 1 Structural Equation Models of Adolescent Quality of Life (n=2,080)

	Family relations		Friend relations		School satisfaction		Family satisfaction		General happiness	
	Est.	s.e.	Est.	s.e.	Est.	s.e.	Est.	s.e.	Est.	s.e.
Contextual Characteristics	-.01	.01	-.01***	.00	.01**	.00	-.01**	.00	-.01	.01
Community Interaction										
-participation dimension	1.69*	.79	.45	.24	.29†	.17	.74*	.29	1.09*	.54
-interactional dimension	.93***	.16	.19***	.05	.10*	.04	.15*	.07	.29*	.12
Family SES	.08*	.03	.02	.01	-.01	.01	.00	.01	.01	.02
Gender	-.17*	.08	.31***	.03	-.11***	.02	.13***	.03	.04	.06
Family relations			.05**	.02	.05***	.01	.14***	.02	.12***	.03
Friend relations					.17***	.03	-.28***	.05	-.13	.11
School satisfaction							1.24***	.12	1.12***	.31
Family satisfaction									-.27	.20

Goodness of fit indices: Chi-square(d.f.)=808.67(232); GFI= .97; RMSEA= .04

†: p<.10; *:p<.05; **:p<.01; ***:p<.000.

Table 2 Structural Equation Models of Adolescent Quality of Life: The Parsimonious Model (n=2,080)^a

	Family relations		Friend relations		School satisfaction		Family satisfaction		General happiness	
	Est.	s.e.	Est.	s.e.	Est.	s.e.	Est.	s.e.	Est.	s.e.
Contextual Characteristics	n.a.		-.01***	.00	.01***	.00	-.01**	.00	n.a.	
Community Interaction										
-participation dimension	.84***	.12	n.a.		.34*	.14	.53*	.20	.55*	.26
-interactional dimension	1.32*	.62	.10***	.02	.10***	.03	.10*	.04	.17*	.06
Family SES	.09**	.03	n.a.		n.a.		n.a.		n.a.	
Gender	-.17*	.08	.32***	.02	-.12***	.02	.12***	.03	n.a.	
Family relations			.08***	.01	.05***	.01	.15***	.02	.10***	.02
Friend relations					.18***	.03	-.23***	.04	n.a.	
School satisfaction							1.22***	.12	.75***	.11
Family satisfaction									n.a.	
<u>Indicator loadings</u>										
Family relation-1	1.00									
Family relation-2	1.20***	.04								
Family relation-3	1.08***	.03								
Friend relation-1			1.00							
Friend relation-2			.91***	.03						
Friend relation-3			1.14***	.04						
School satisfaction-1					1.00					
School satisfaction-2					1.34***	.09				
School satisfaction-3					1.38***	.10				
Family satisfaction-1							1.00			
Family satisfaction-2							1.10***	.03		
Family satisfaction-3							.73***	.03		

Goodness of fit indices: Chi-square(d.f.)=822.76(242); GFI= .97; RMSEA= .03

*:p<.05; **:p<.01; ***:p<.000.

^a: Insignificant paths of the fully recursive model were deleted to obtain a parsimonious model. Deleted paths were denoted by “n.a.”

Table 3 Covariances and Indicator Loadings of Exogenous Variables in the Parsimonious Model

Exogenous variables	Contextual characteristics		Participation Dimension		Interactional Dimension		Family SES	
	Est.	s.e.	Est.	s.e.	Est.	s.e.	Est.	s.e.
<u>Covariances/loadings</u>								
Community Interaction								
-participation dimension	.02	.04						
-interactional dimension	.47**	.17	-.17***	.02				
Family SES	-1.71***	.19	-.05***	.01	.07	.05		
Gender	.04	.06	.01	.00	-.04*	.02	.01	.02
<u>Indicator loadings</u>								
% of non-labor participation	1.00							
Index of social burden	.24***	.01						
Urbanization level	.28***	.01						
Community events			1.00					
Religion-sponsored activities			.30***	.06				
Using community facilities			.90***	.11				
Interaction-1					1.00			
Interaction-2					.69***	.05		
Father's education							1.00	
Mother's education							.88***	.04
Family income							.80***	.05

*:p<.05; **:p<.01; ***:p<.000.

Appendix Sample Description of the Survey Variables (n=2,080)

	%/Mean	S.D.	Min.	Max.
Gender (Male)	50.4%			
Community Interaction				
Participation in community activities (Yes)				
-Community events	32.3%			
-Religion-sponsored activities	13.2%			
-Using public facilities	41.1%			
Liking neighborhood environment	3.90	.91	1	5
Paying attention to the community	2.59	.82	1	4
Neighbors helping each other	2.30	.71	1	3
Neighbors knowing each other	3.79	1.29	1	5
Contact with neighbors	2.21	.97	1	5
Family SES				
Median family income	\$54,795			
Father's education (year)	11.14	3.29	0	18
Mother's education (year)	10.60	3.12	0	18
Family Relations	27.67	5.30	9	36
Friend Relations	9.75	1.66	3	12
Quality of Life				
General happiness	2.95	.81	1	4
Satisfaction with school	9.10	1.57	3	12
Satisfaction with family	9.74	1.85	3	12