

Adolescents' family obligation and activities in rural and urban Vietnam: Implications for social change

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This study examined how urbanisation may modify adolescents' values and activities concerning family obligation by surveying 572 adolescents ($M_{\text{age}} = 15.75$, $SD = .73$) in rural and urban Vietnam. Compared with their rural peers, urban adolescents reported a stronger sense of family obligation but spent less time actually engaging in family assistance, findings that were partly explained by urban households' less financial hardship and higher parental education levels. As expected, stronger family obligation values were associated with greater family assistance activities across rural and urban Vietnam. However, stronger family obligation values were associated with more study hours only in urban Vietnam, indicating that urbanisation may broaden the meaning of family obligation to encompass the academic domain. Additionally, weaker family obligation values were associated with more employment hours only in rural Vietnam, suggesting that rural adolescents with little attachment to the traditional value of family obligation may pursue autonomy through employment outside the home. In traditionally familistic societies undergoing urbanisation, family obligation may take on different meaning depending on adolescents' ecological settings that construct cultural values and behavioural norms.

Keywords: Family obligation; Vietnam; Urbanisation; Social change; Adolescence.

The longstanding notion that Asian adolescents hold a strong sense of family obligation (Fuligni, 2001; Fuligni, Tseng, & Lam, 1999; Greenfield, Keller, Fuligni, & Maynard, 2003) poses the danger of perpetuating cultural stereotypes and the view that culture is static. In response to the issue, scholars have increasingly highlighted the pressing need to examine culture as a dynamic system (Greenfield, 2009; Markus & Kitayama, 2010) that is malleable under conditions of social change such as urbanisation (Greenfield, 2009; Kağıtçıbaşı, 2005, 2013; Park, 2016). Shifts from relatively rural to urban settings in Asian nations may erode the tradition of family obligation as independence-promoting activities gain importance (Greenfield, 2009). Additionally, urbanisation may lead Asian adolescents to incorporate a sense of family obligation into their daily activities in newly adaptive

ways (Kağıtçıbaşı, 2005, 2013). Based on Greenfield's (2009) and Kağıtçıbaşı's (2005, 2013) theories linking social change and human development, this study examines how urbanisation may modify adolescents' family obligation and activities in contemporary Vietnam.

Social change in Vietnam

Vietnam offers an ideal case for studying how urbanisation shapes adolescents' family obligation and activities in an Asian nation with a strong tradition of filial responsibility. Traditionally, Vietnam's Confucian and Buddhist heritage prescribes youngsters values and practices of respect for their parents and elders (Shohet, 2013), and children who demonstrate a sense of family obligation are recognised as morally good (Burr, 2014). The centrality

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of family obligation gives weight to activities such as family assistance (Fuligni, Yip, & Tseng, 2002), which typically takes the form of household chores for adolescents (White & Brinkerhoff, 1981). Relative to filial responsibilities, there may be less cultural emphasis on independence-promoting activities such as academic competition and participation in market economy (Greenfield, 2009) given Vietnam's history of agricultural setting and subsistence economy under the influence of the socialist government (Beresford, 1990; Kerkvliet, 2006).

Nonetheless, Vietnam has been under clear influences of economically-driven social change, as evidenced by remarkable growth in the GNI per capita that has soared from \$130 USD in 1990 to \$410 in 2000, \$1250 in 2010, and then \$2160 in 2017, as well as the post-secondary school enrolment rate that has increased from 3% in 1990 to 9% in 2000, 23% in 2010 and 28% in 2016 (The World Bank, 2019). Economic and educational growth are key facets of urbanisation (Greenfield, 2009), and accordingly, Vietnam's urban population has increased from 20% in 1990 to 24% in 2000, 30% in 2010 and 35% in 2017 (The World Bank, 2019). With 65% rural population and 35% urban population as of 2017 (The World Bank, 2019), rural and urban settings coexist to reflect contemporary Vietnam in the midst of urbanisation. Thus, comparing rural and urban settings within Vietnam provides an approach for understanding adolescents' values and activities in an Asian nation undergoing urbanisation.

Changes in values and activities via ecological and socio-demographic shifts

Based on the concepts of socio-cultural ecologies developed by the sociologist Tönnies (1957), Greenfield's (2009) theory of social change and human development proposes that socio-demographic shifts from rural to urban ecological settings cause changes in values and activities. According to the theory, distal rural ecology has proximal socio-demographic characteristics of subsistence economy, limited financial resource, low education levels and large family size, which foster tight-knit, family-oriented communal values and activities. On the other hand, distal urban ecology has proximal socio-demographic characteristics of commerce, wealth, education and small family size, which promote individualistic values and activities that prize competition and individual achievement. Thus, the theory predicts that urbanisation and concomitant socio-demographic shifts would reduce the relevance of family obligation while encouraging academic and economic activities.

Supporting the erosion of family obligation, urban male adolescents endorsed weaker family obligation values compared with their rural peers in China (Fuligni & Zhang, 2004), and Chinese adults in wealthier cities reported lower levels of filial piety compared with those

in poorer cities (Cheung & Kwan, 2009). Additionally, the links between urbanisation and increased high school attendance and commerce participation have been observed in intergenerational (Manago, 2014) and longitudinal (Greenfield, Maynard, & Childs, 2003; Greenfield, Maynard, & Martí, 2009; Maynard & Greenfield, 2008) studies of families in indigenous communities under the influence of urbanisation. Urbanisation is also associated with reduction in the number of siblings, leading to more child-centred caregiving that focuses on individuals rather than the group (Greenfield et al., 2009). Indeed, increased physical distance and face-to-face contact between caregivers and children—markers of individualistic caregiving—have been found as a function of urbanisation in several societies (Keller et al., 2009; Keller, Borke, Lamm, Lohaus, & Dzeaye Yovsi, 2011; Maynard, 2004).

Therefore, adolescents in urban Vietnam may report weaker family obligation values and engage in less family assistance activity, while they may demonstrate greater participation in academic and economic activity compared with their peers in rural Vietnam. Furthermore, these distal rural versus urban differences may be explained by proximal socio-demographic factors such as higher education levels, greater wealth and fewer siblings in urban households as compared with rural households (Greenfield, 2009; Weinstock, Ganayiem, Igbaria, Manago, & Greenfield, 2015).

Incorporation of family obligation values into independence-promoting activities

Cultural adaptation during urbanisation may also take a hybrid form of integrating traditional values into independence-promoting activities in ways that are adaptive in urban setting. Kağıtçıbaşı's (2005, 2013) family change theory separates behavioural agency from psychological distance; it suggests that shifts from rural to urban settings may create a synthesis of self that pursues behavioural autonomy while maintaining psychological relatedness, a model referred to as autonomy-related self. On one hand, affluence made available through urbanisation decreases the practical need for dependency among family members, thereby releasing adolescents from family assistance duties while offering them more opportunities to pursue autonomy-promoting activities, particularly schooling (Kağıtçıbaşı, 2013). Yet psychological relatedness with family members can be maintained through upholding traditional values concerning family connectedness (Kağıtçıbaşı, 2005, 2013). Thus, one pathway through which family obligation values are retained may be reconsidering the traditional values in ways that are behaviourally adaptive in autonomy-promoting urban setting.

The model of autonomy-relatedness (Kağıtçıbaşı, 2005, 2013) requires examining whether *relations*

between family obligation values and adolescents' activities may depend on rural versus urban setting, rather than focusing on rural versus urban group-mean differences in values and activities. The group-mean differences do not capture whether family obligation values take varied meaning in rural and urban settings that are theorised to demand different types of daily activities for adolescents. Instead, linking adolescents' family obligation values to their activities as a function of the ecological setting sheds light on the ways in which changing lifestyles may shape the meaning of traditional values. Variations in the link between family obligation values and adolescents' activities as a function of the setting would indicate that Vietnamese adolescents might understand and fulfil their sense of family obligation differently depending on their ecological setting. On the other hand, similar relations between family obligation values and adolescents' activities across the settings would suggest homogeneity in how family obligation values guide adolescents' activities in Vietnam.

Family obligation values may be ubiquitously linked to family assistance activity across rural and urban Vietnam given that participating in chores and assisting family members at home is an unambiguous marker of fulfilling family obligation. Indeed, higher family obligation values have been associated with greater family assistance behaviour across ethnically diverse adolescents (Fuligni & Pedersen, 2002; Telzer, Gonzales, & Fuligni, 2014; Tsai, Telzer, Gonzales, & Fuligni, 2015). However, the association between adolescents' family obligation values and their independence-promoting activities outside the home may vary between rural and urban settings because the traditional value of family obligation may take on new meanings beyond direct family assistance in urban settings. As urbanisation promotes educational achievement (Greenfield, 2009; Kağıtçıbaşı, 2013), adolescents in urban Vietnam may enact their sense of family obligation through school achievement as a pathway to family success. Similarly, urban Vietnam may create settings where commerce is key (Greenfield, 2009), marking employment outside the home a way of fulfilling family obligation.

The current study

In the current study, rural versus urban comparisons were employed to cross-sectionally examine the extent to which urbanisation may shape adolescents' values and activities concerning family obligation in contemporary Vietnam. Drawing upon Greenfield's (2009) and Kağıtçıbaşı's (2005, 2013) theories linking social change and human development, two research questions and related hypotheses were tested.

First, do distal ecological settings and proximal family socio-demographic characteristics predict adolescents'

family obligation values and family assistance, academic and employment activities? Based on Greenfield's (2009) theory, we hypothesised that urban setting would predict weaker family obligation values and less family assistance hours, but more study and employment hours. We further hypothesised that the links would be explained by higher parental education, less financial hardship and fewer siblings among urban adolescents relative to rural adolescents.

Second, does the link between adolescents' family obligation values and their activities vary as a function of the ecological setting? Based on Kağıtçıbaşı's (2005, 2013) family change theory and autonomy-relatedness model, we hypothesised that stronger family obligation values would be associated with more study and employment hours only in urban Vietnam. Additionally, we hypothesised that stronger family obligation values would be associated with more family assistance hours across urban and rural Vietnam.

METHOD

Participants

A total of 572 Vietnamese adolescents (52% female, $M_{\text{age}} = 15.75$, $SD = .73$) from five high schools in Vietnam participated in the study. Approximately half of the participants (45%) lived in rural communities (Hoa Bac and Hoa Hai, located near mountain and coastal villages, respectively) in central Vietnam. They were recruited from two rural high schools that served communities with low income and education levels. Participants living in urban Vietnam were recruited from three high schools located in the city centres of Ho Chi Minh City and Da Nang, which are among the largest and most populated cities in Vietnam (WorldAtlas, 2018). The urban high schools served students from primarily middle-class family backgrounds. As expected, urban adolescents had higher parental education ($M = 3.05$, $SD = .09$) compared with rural adolescents ($M = 1.89$, $SD = .09$), $t(493) = -9.20$, $p < .001$. Additionally, urban adolescents reported less financial hardship ($M = 1.52$, $SD = .04$) compared with rural adolescents ($M = 1.84$, $SD = .05$), $t(545) = 5.45$, $p < .001$. Urban adolescents also had fewer siblings ($M = 1.28$, $SD = .05$) compared with rural adolescents ($M = 1.90$, $SD = .08$), $t(557) = 6.79$, $p < .001$.

Research staff made announcements in 10th and 11th grade classrooms to describe the study and distributed packets that included consent forms and a demographic questionnaire. Research staff returned to schools to collect the packets and provided small non-monetary gifts to those who returned the completed forms. Adolescents who provided their parents' and their own consent were invited to participate in the online survey that took on

average 1–1.5 hours. Participants completed the survey on the internet in school computer labs during afterschool hours or on Saturdays, as schools permitted. The participants received monetary compensation equivalent to approximately \$16.20 USD.

Measures and procedure

The measures in the study were Vietnamese translations of English measures used in prior studies with adolescents from Asian cultural groups. Experienced bilingual and bicultural teams of researchers underwent extensive discussion and piloting; the teams had 10 years of experience adapting measures for Vietnam, including the use of Likert scales and anchors. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed parental consent was obtained from parents of all participants in the study; assent was obtained from the participants.

Family obligation values

A total of 17 items from the widely used family obligation scale (Fulgini et al., 1999) assessed adolescents' family obligation values. These items measured the importance—not the actual behaviour—of three overlapping aspects of family obligation, respect, current assistance and future support (e.g. How important is it to “make sacrifices for your family,” “run errands that the family needs done,” “help your parents financially in the future?”), on a 5-point scale (1 = *not important at all*; 5 = *very important*). Depending on the study goals, researchers have used average scores across the items (Juang & Cookston, 2009; Telzer et al., 2014; Telzer, Tsai, Gonzales, & Fulgini, 2015; Tsai et al., 2015) or separately examined the three subscales (Fulgini et al., 1999; Fulgini & Zhang, 2004). Given the current study purpose to capture adolescents' overall valuation of family obligation, we averaged across the items to obtain a single overall mean score (Juang & Cookston, 2009; Telzer et al., 2014, 2015; Tsai et al., 2015). The items demonstrated high item reliability ($\alpha = .93$).

Family assistance, study and employment activity

Self-reported time use items were administered to assess the extent to which adolescents engaged in family assistance, education and employment activities. Specifically, adolescents were asked to report how many hours per week they usually spent doing chores or helping their family at home (family assistance hours/week), how many

hours per day they typically spent studying on an average weekday and weekend, which were averaged (study hours/day), and how many hours per week they usually spent working at a paid job (employment hours/week).

Family socio-demographic factors

Parental education level. Adolescents indicated the highest level of education their father and mother each received (1 = *less than high school*; 2 = *high school graduate*; 3 = *some college or vocational school*; 4 = *graduated from college or vocational school*; 5 = *graduate/professional degree*; 6 = *do not know or this question does not apply to me*). “6 = *don't know or this question does not apply to me*” was treated as a missing response, thus higher scores indicated higher levels of education for father and mother. Education levels of father and mother were averaged to obtain parental education level.

Financial hardship. Financial hardship was assessed through a 7-item measure concerning family financial circumstances (e.g. “My family can't afford the kind of housing that we really need”). Adolescents rated how true each statement had been in the past 3 months, on a 5-point scale (0 = *do not know*, 1 = *not true*, 2 = *a little true*, 3 = *somewhat true*; 4 = *very true*). The items were averaged to produce a mean financial hardship score, with “0 = *don't know*” treated as a missing response. The items demonstrated high item reliability ($\alpha = .84$).

Number of siblings. Adolescents were asked to report the total number of siblings in their family.

Data analysis strategy

After running preliminary bivariate correlations, multiple regression and mediation analyses were conducted to test our first research question that examined the associations between the ecological setting and adolescents' family obligation values and activities, and whether the associations would be explained by family socio-demographic factors. In a series of multiple regression models, rural versus urban setting was entered along with age and sex control variables to predict family obligation values and family assistance, study and employment hours as separate outcomes. Subsequently, mediation analyses including estimates of indirect effects were conducted using PROCESS macro in SPSS version 24; the method had the power to conduct formal significance tests of indirect effects based on non-parametric bootstrapping, a computationally intensive estimation method that repeatedly samples from the data without assuming normality of the sampling distribution (Preacher & Hayes, 2004, 2008). As such, this approach was suitable for detecting our

proposed mediation effects, as well as suppression effects, which were types of indirect effects that held mathematical equivalence (MacKinnon, Krull, & Lockwood, 2000).

The mediation models included urban versus rural setting as the predictor variable, age and sex as covariates, parental education, financial hardship and number of siblings as mediators, and family obligation values and family assistance, study and employment hours as outcome variables. A bootstrap sample size of 5000 was applied to yield an inference about the size and significance of the indirect effect from the proposed mediators. 95% confidence intervals for indirect effect were generated based on the distribution of the 5000 samples, and the indirect effects were considered significant if the confidence intervals did not include zero. Significant indirect effects suggested mediation in case of reduced significance of the association between predictor and outcome variables, while significant indirect effects indicated suppression in case of increased significance of the association between predictor and outcome variables (MacKinnon et al., 2000; Preacher & Hayes, 2004, 2008).

Next, moderation analyses were conducted to examine whether the links between adolescents' family obligation values and their activities varied as a function of the ecological setting. In multiple regression models, rural versus urban setting and family obligation values were entered along with age, sex and socio-demographic variables to predict adolescents' family assistance, study and employment hours. Subsequently, the interaction terms between the setting and family obligation values were added to the aforementioned models. Significant interactions were followed by tests of simple slopes, with relations between family obligation values and activity hours estimated for rural and urban settings using the parameter estimates from the full model (Cohen, Cohen, West, & Aiken, 2003). Moderation analyses were conducted using Stata 15.

RESULTS

Preliminary bivariate associations

Bivariate correlations among all study variables are shown in Table 1 along with descriptive statistics. Stronger family obligation values were associated with more time providing family assistance ($r = .10, p = .021$) and studying ($r = .12, p = .006$), but less employment hours ($r = -.13, p = .002$). Older adolescents had weaker family obligation values ($r = -.09, p = .030$), while they spent more time working ($r = .14, p < .001$). Male adolescents had weaker family obligation values ($r = -.09, p = .033$) and spent less time on family assistance ($r = -.16, p < .001$). Adolescents with higher parental education levels spent less time on family assistance ($r = -.17, p < .001$) and in employment ($r = -.15,$

$p < .001$). Greater financial hardship was associated with weaker family obligation values ($r = -.15, p < .001$) and longer study ($r = .10, p = .017$) and employment ($r = .18, p < .001$) hours. Additionally, adolescents with more siblings spent more time engaging in family assistance ($r = .14, p = .001$) and employment ($r = .11, p = .014$).

Ecological setting predicting family obligation values and activities through family socio-demographic factors

Table 2 presents results from multiple regression models where the ecological setting predicted adolescents' family obligation values and three types of activities, controlling for age and sex. Coefficients for intercept showed that adolescents, overall, valued family obligation ($b = 3.54, SE = .06, p < .001$). Additionally, they spent 5.35 hours/week engaging in family assistance ($b = 5.35, SE = .36, p < .001$), 3.92 hours/day studying ($b = 3.92, SE = .20, p < .001$), and 1.25 hours/week in employment ($b = 1.25, SE = .16, p < .001$).

As described in the following subsections, urban setting was associated with higher family obligation values, less family assistance hours and less employment hours. Study hours were comparable between urban and rural settings. Five sets of indirect effects through parental education and financial hardship were observed as depicted in Figure 1.

Family obligation values: Indirect effect through financial hardship

Urban setting was associated with stronger, rather than weaker, family obligation values ($b = .19, SE = .07, p = .008$) prior to including the mediators (Figure 1a). Tests of the indirect effects revealed that financial hardship mediated the association between the ecological setting and family obligation values ($b = .05, SE = .02, 95\% \text{ CI } [.01, .10]$), reducing the association to marginal significance ($b = .13, SE = .07, p = .059$). Urban setting predicted less financial hardship ($b = -.33, SE = .06, p < .001$), which in turn predicted stronger family obligation values ($b = -.15, SE = .05, p = .002$). Thus, urban adolescents' stronger family obligation values were explained by their less financial hardship relative to that of rural adolescents.

The indirect effects through parental education level ($b = .02, SE = .03, 95\% \text{ CI } [-.03, .08]$) and number of siblings ($b = .01, SE = .02, 95\% \text{ CI } [-.03, .05]$) were not significant.

Family assistance hours: Indirect effect through parental education

Urban setting predicted adolescents' less engagement in family assistance ($b = -1.35, SE = .42, p = .006$)

TABLE 1
Bivariate correlations

| | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------------------------|---------------|-----------|--------|---------|---------|---------|-------|--------|--------|--------|
| 1. Age | 15.68 | .69 | | | | | | | | |
| 2. Sex | 54.36% female | | .08* | | | | | | | |
| 3. Parental education | 2.53 | 1.51 | -.03 | .04 | | | | | | |
| 4. Financial hardship | 1.66 | .69 | .07 | -.01 | -.32*** | | | | | |
| 5. Number of siblings | 1.63 | 1.17 | .01 | -.12** | -.19*** | .08 | | | | |
| 6. Family obligation values | 3.48 | .72 | -.09* | -.09* | .07 | -.15*** | -.05 | | | |
| 7. Family assistance (hours/week) | 3.48 | 4.51 | .01 | -.16*** | -.17*** | .09 | .14** | .10* | | |
| 8. Study (hours/day) | 3.60 | 2.39 | .06 | -.01 | -.06 | .10* | .03 | .12** | .20*** | |
| 9. Employment (hours/week) | .84 | 2.50 | .14*** | .00 | -.15*** | .18*** | .11* | -.13** | .20*** | .34*** |

Note: Sex was coded as 0 = female and 1 = male.

* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 2
Ecological setting predicting adolescents' family obligation values and activities

| | Family obligation values | | Family assistance (hours/week) | | Study (hours/day) | | Employment (hours/week) | |
|--------------------|--------------------------|---------|--------------------------------|---------|------------------------|---------|-------------------------|---------|
| | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β |
| Intercept | 3.54 (.06)*** | | 5.35 (.36)*** | | 3.92 (.20)*** | | 1.25 (.16)*** | |
| Age | -.09 (.05) | -.08 | .13 (.29) | .02 | .25 (.15) | .07 | .51 (.13) | .17*** |
| Sex | -.14 (.07) | -.09* | -1.54 (.42) | -.16*** | -.14 (.23) | -.03 | -.09 (.18) | -.02 |
| Ecological setting | .19 (.07) | .12** | -1.35 (.42) | -.14** | .00 (.23) | .00 | -.75 (.19) | -.17*** |

Note: Sex was coded as 0 = female and 1 = male. Ecological setting was coded as 0 = rural Vietnam and 1 = urban Vietnam. Age was centred.

* $p < .05$. ** $p < .01$. *** $p < .001$.

prior to including the mediators (Figure 1b). Tests of the indirect effects revealed that parental education mediated the association between the ecological setting and family assistance hours ($b = -.47$, $SE = .17$, 95% CI $[-.83, -.14]$), reducing the association to non-significance ($b = -.78$, $SE = .49$, $p = .111$). Urban setting predicted higher parental education ($b = 1.12$, $SE = .13$, $p < .001$), which in turn predicted less time adolescents spent on family assistance ($b = -.42$, $SE = .16$, $p = .009$). As such, higher parental education explained urban Vietnamese adolescents' less engagement in family assistance compared with rural Vietnamese adolescents.

The indirect effects through financial hardship ($b = -.10$, $SE = .11$, 95% CI $[-.33, .09]$) and number of siblings ($b = -.26$, $SE = .16$, 95% CI $[-.61, .02]$) were not significant.

Study hours: Indirect effect through financial hardship

Prior to including the mediators, urban setting was not associated with adolescents' study hours ($b = .00$, $SE = .23$, $p = .988$) (Figure 1c). Yet there was a significant indirect effect of the ecological setting on study hours through financial hardship ($b = -.12$, $SE = .07$, 95% CI $[-.28, -.02]$), which increased strength of the association between urban setting and adolescents' study hours ($b = .12$, $SE = .23$, $p = .595$), indicating

suppression effect. Urban setting predicted less financial hardship ($b = -.33$, $SE = .06$, $p < .001$), which in turn predicted less study hours ($b = .37$, $SE = .16$, $p = .024$).

The indirect effects through parental education level ($b = -.14$, $SE = .12$, 95% CI $[-.40, .08]$) and number of siblings ($b = -.04$, $SE = .07$, 95% CI $[-.19, .10]$) were not significant.

Employment hours: Indirect effects through parental education and financial hardship

Urban setting was associated with less, rather than more, employment hours ($b = -.75$, $SE = .19$, $p < .001$) (Figure 1d). Strength of the association reduced when parental education ($b = -.25$, $SE = .23$, $p = .282$) and financial hardship ($b = -.61$, $SE = .19$, $p = .001$) were included, suggesting mediation. Tests of the indirect effects revealed that parental education ($b = -.23$, $SE = .09$, 95% CI $[-.45, -.09]$) and financial hardship ($b = -.14$, $SE = .06$, 95% CI $[-.28, -.05]$) each explained urban adolescents' less employment hours compared with rural adolescents. Specifically, urban setting predicted higher parental education ($b = 1.14$, $SE = .13$, $p < .001$), which predicted less employment hours ($b = -.20$, $SE = .08$, $p = .008$). Urban setting also predicted less financial hardship ($b = -.32$, $SE = .06$, $p < .001$), which predicted less employment hours ($b = .44$, $SE = .13$, $p < .001$).

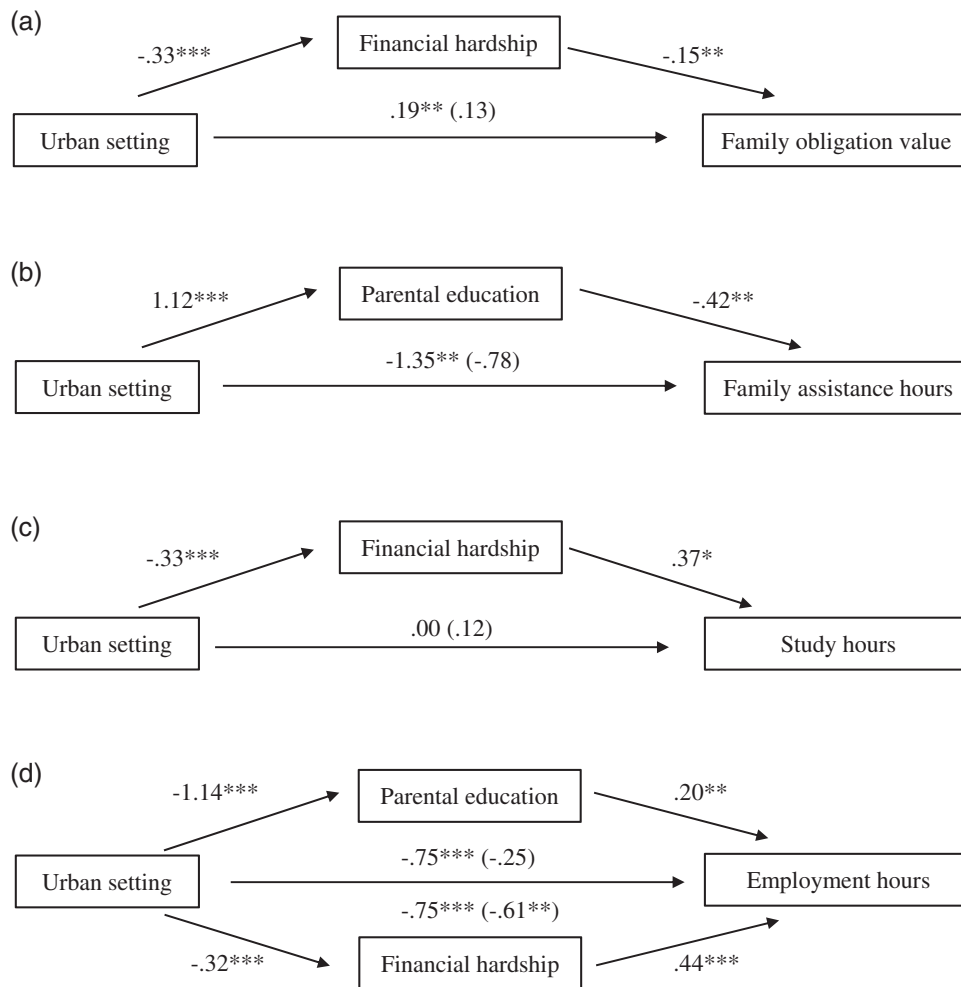


Figure 1. Significant indirect effects of the urban setting on adolescents' family obligation values and activities through parental education and financial hardship. (a) Indirect effect through financial hardship, $b = .05$, $SE = .02$, 95% CI [.01, .10]. (b) Indirect effect through parental education, $b = -.47$, $SE = .17$, 95% CI [-.83, -.14]. (c) Indirect effect through financial hardship, $b = -.12$, $SE = .07$, 95% CI [-.28, -.02]. (d) Indirect effect through parental education, $b = -.23$, $SE = .09$, 95% CI [-.45, -.09], and financial hardship, $b = -.14$, $SE = .06$, 95% CI [-.28, -.05]. The numbers in parentheses indicate direct effect when accounting for the mediating (a, b, and d) and suppressing (c) effects. * $p < .05$, ** $p < .01$, *** $p < .001$.

The indirect effect through number of siblings ($b = -.09$, $SE = .08$, 95% CI [-.29, .04]) was not significant.

Associations between family obligation values and adolescents' activities as a function of ecological setting

Table 3 shows the main (Step 1) and interactive (Step 2) effects of family obligation values and the ecological setting on adolescents' time given to family assistance, study and employment. Stronger family obligation values were associated with more time providing family assistance ($b = .85$, $SE = .31$, $p = .006$). This association did not vary as a function of the setting ($b = .35$, $SE = .61$, $p = .562$), indicating that stronger family obligation values were associated with

greater family assistance activity across rural and urban Vietnam.

On the other hand, the setting moderated the link between family obligation values and study hours ($b = .90$, $SE = .33$, $p = .006$). As shown in Figure 2a, tests of simple slopes revealed that stronger family obligation values were associated with more study hours only in urban Vietnam ($b = 1.00$, $SE = .23$, $p < .001$) but not in rural Vietnam ($b = .10$, $SE = .24$, $p = .672$).

Additionally, the link between family obligation values and employment hours varied as a function of the ecological setting ($b = .56$, $SE = .27$, $p = .037$). As shown in Figure 2b, tests of simple slopes indicated that weaker family obligation values were associated with more time spent in employment in rural Vietnam ($b = -.41$, $SE = .19$, $p = .036$). The association was non-significant in urban Vietnam ($b = .15$, $SE = .19$, $p = .422$).

TABLE 3
Family obligation values predicting adolescents' activities as a function of the ecological setting

| | Family assistance | | | | Study | | | | Employment | | | |
|-------------------------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|
| | Step 1 | | Step 2 | | Step 1 | | Step 2 | | Step 1 | | Step 2 | |
| | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β | <i>b</i> (<i>SE</i>) | β |
| Intercept | 5.06 (.43)*** | | 5.05 (.43)*** | | 3.87 (.23)*** | | 3.84 (.23)*** | | 1.00 (.19)*** | | .98 (.19)*** | |
| Age | .52 (.32) | .08 | .52 (.32) | .08 | .30 (.17) | .08 | .29 (.17) | .08 | .54 (.14) | .18*** | .54 (.14) | .18*** |
| Sex | -1.51 (.47) | -.15** | -1.51 (.47) | -.15** | -.02 (.25) | .00 | -.02 (.25) | .00 | -.08 (.21) | -.02 | -.07 (.21) | -.02 |
| Parental education | -.34 (.17) | -.10 | -.34 (.17) | -.10 | -.06 (.09) | -.03 | -.06 (.09) | -.03 | -.10 (.08) | -.07 | -.10 (.08) | -.06 |
| Financial hardship | .41 (.36) | .06 | .41 (.36) | .06 | .37 (.19) | .09 | .36 (.19) | .09 | .38 (.16) | .12* | .37 (.16) | .12* |
| Number of siblings | .15 (.21) | .03 | .15 (.22) | .03 | .16 (.12) | .07 | .16 (.12) | .07 | .20 (.09) | .10* | .20 (.09) | .10* |
| Ecological setting | -.97 (.52) | -.10 | -.97 (.52) | -.10 | .10 (.28) | .02 | .11 (.28) | .02 | -.25 (.23) | -.06 | -.25 (.23) | -.06* |
| Family obligation value | .85 (.31) | .13** | .66 (.44) | .10 | .57 (.17) | .16* | .10 (.24) | .03 | -.12 (.14) | -.04 | -.41 (.19) | -.14* |
| Setting \times Fam ob | | | .35 (.61) | .04 | | | .90 (.33) | .18** | | | .56 (.27) | .14* |

Note: Sex was coded such that 0 = female and 1 = male. Ecological setting was coded as 0 = rural Vietnam and 1 = urban Vietnam. All continuous variables were centred.
* $p < .05$. ** $p < .01$. *** $p < .001$.

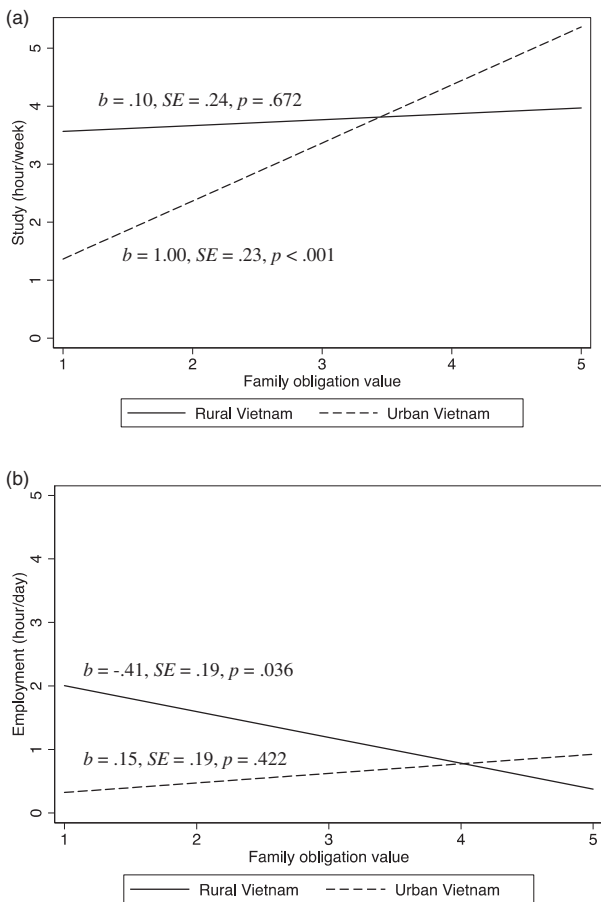


Figure 2. Family obligation values are associated with (a) study hours in urban Vietnam and (b) employment hours in rural Vietnam.

DISCUSSION

Economically-driven social change and concomitant shifts from rural to urban ecological settings have

implications for adolescents' values and daily activities. Our findings indicate that the nature and directionality of cultural change is complex and multifaceted. In contemporary Vietnam, adolescents growing up in urban settings appear to devote less time to household chores and employment compared with their rural peers, despite upholding a strong sense of family obligation. Some of the urban versus rural differences may emerge from higher parental education and less financial hardship in urban households relative to rural households. In addition, a sense of family obligation may take on different meaning in adolescents' daily activities depending on their ecological settings, notably through devoting more time to study in urban settings.

Urban adolescents' less engagement in household chores and employment as compared with rural adolescents, which were explained by urban adolescents' higher parental education levels, highlights the role of schooling in cultural change. As economically-driven social change affords more educational opportunities in urban Vietnam, adolescents in urban households are more likely than their rural peers to be raised by parents with more schooling. Given that schooling is associated with more individualistic values (Greenfield, 2009) and child-centred caregiving (Keller et al., 2009, 2011), educated urban parents may consider household chores and employment to be less pertinent activities for their adolescents. Thus, this set of findings provide partial support for Greenfield's (2009) theory that predicts shifts from rural to urban settings to reduce interdependence-promoting activities such as family assistance through the pathway of increased schooling.

Yet it is worth noting that urbanisation may not only decrease the relevance of family assistance but also employment in adolescents' lives, which does not align as well with Greenfield's (2009) theoretical notion of increased participation in commerce following urbanisation. Involvement in commerce may be a more likely

outcome of urbanisation for adults rather than for adolescents whose autonomy-promoting behaviour may emerge in different contexts such as academics. Supporting this idea, a three-generation study in an indigenous community in Mexico demonstrated that participants' endorsement of independent values was predicted by involvement in market economy among mothers and grandmothers, but by high school attendance among adolescents (Manago, 2014). For adolescents in urban Vietnam, employment may be considered interruptive to their academic endeavours (Kağıtçıbaşı, 2013) or viewed as an adult-role responsibility from which adolescents should be protected (Twenge & Campbell, 2018; Twenge & Park, 2017).

Greenfield's (2009) theory also predicts that relatively wealthier lifestyles in urban settings as compared with rural settings promote more independence-promoting activities. Thus, we expected to find less financial hardship in urban Vietnam relative to rural Vietnam, and that less financial hardship, signalling greater affluence, would lead to more engagement in adolescents' independence-promoting activities of study and employment. While urban setting indeed predicted less financial hardship, less financial hardship was associated with less, rather than more, study and employment hours. Stated otherwise, rural adolescents perceived greater financial difficulty in the family, which led them to spend more time studying and working. It is possible that our financial hardship variable captured adolescents' sense of economic pressure (Conger, Ge, Elder, Lorenz, & Simons, 1994) beyond their family's economic resources (Greenfield, 2009). Adolescents who were more in tune with their family's financial hardship might have felt greater economic pressure, which could have motivated them to work harder both in school and at employment as potential pathways to establish future stability.

In this potential pursuit of stability through independence-promoting activities, rural adolescents' perceived economic pressure may increase their psychological distance from the family. In line with this possibility of psychological distancing, rural adolescents' greater financial hardship explained their weaker family obligation values relative to their urban peers. Given that a sense of family obligation is a way of experiencing psychological relatedness and closeness with family members in traditionally collectivistic cultures (Fuligni, 2007; Fuligni et al., 1999), weak family obligation values may be a sign of poor family relationship in rural Vietnamese households with financial hardship. In general, family stressors such as financial hardship have been associated with disruptions in family dynamics and relationships (Conger et al., 1994; Conger, Conger, & Martin, 2010).

Even when financial hardship was taken into account, family obligation values were strong and comparable

between rural and urban Vietnam, suggesting that the traditional value is maintained despite significant urbanisation in Vietnam. One mechanism through which the traditional interdependent value of family obligation is maintained in urban Vietnam may be the redefinition of the meaning of family obligation in adolescents' daily activities. Indeed, stronger family obligation values were associated with more study time in urban adolescents but not in rural adolescents, suggesting that the meaning of family obligation may become integrated into academic pursuits in urban settings. For instance, adolescents may study hard as a way of respecting their parents. Relatedly, they may connect their academic achievement to future successes that would allow them to assist and support their parents later in adulthood. Such blending would be possible if urbanisation constructs an environment that continues to emphasise the traditional value of family obligation while also welcoming academic achievement as key socialisation goals for adolescents; in such environments, adolescents would adapt to the dual demands by integrating their family obligation values into academic behaviour. Thus, the finding supports Kağıtçıbaşı's (2005, 2013) autonomy-relatedness model that describes the integration of psychological interdependence and behavioural autonomy as a normative developmental process among adolescents in traditionally familistic societies undergoing urbanisation (Kağıtçıbaşı, 2005, 2013).

Similar links between a sense of family obligation and academic motivation have been reported in Asian American adolescents with immigrant backgrounds (Fuligni, 2001; Tseng, 2006; Zhou & Bankston, 1998). These past findings have often been interpreted as the positive function of traditional Asian familistic cultural values in the lives of adolescents with Asian immigrant backgrounds. In the context of past research, it is important to note that rural Vietnamese adolescents in our study did not show a link between family obligation values and study hours. The limited link in urban Vietnam suggests that family obligation may function to encourage Asian adolescents' academic motivation and success only in urban settings that promote academic achievement as a key pathway for success. That is, the meaning and function of cultural values may vary among adolescents with Asian backgrounds depending on their ecological and socialisation settings. As such, our findings caution against making homogeneous assumptions about ethnic groups socialised in divergent locations.

Interestingly, family obligation values were associated with employment hours in rural Vietnam rather than in urban Vietnam. Moreover, the direction of association was unexpected, wherein weaker, not stronger, family obligation values were associated with more time in employment. Adolescents in rural Vietnam may pursue their autonomy by seeking employment outside the home during the relatively early period of adolescence if

they feel less obliged to adhere to the tradition of family obligation. Alternatively, rural adolescents who work longer hours may report weaker family obligation values because longer hours spent at work outside the home may lead them to feel short of expectations regarding family obligation as well as disrespectful towards their family.

Across rural and urban Vietnam, higher family obligation values were associated with more time engaging in chores and assisting family in the home. Given that family assistance is a clear behaviour that fulfils family obligation, adolescents growing up in different ecological settings appear to be commonly motivated by their sense of family obligation when helping their family members in the home. In sum, although family obligation values have a shared way of encouraging family assistance behaviour, the same values appear to function differently in informing adolescents' academic and work behaviour in rural versus urban settings.

Our study poses limitations of cross-sectional self-report data. Longitudinal studies and analyses of historical data would be meaningful in continuing to address the question of social change and urbanisation. For instance, it would be interesting to longitudinally examine the values and activities of these urban adolescents after education has brought them individual success, as well as to understand more about the historical background and longitudinal trend of rural families. Moreover, daily measures and ecological monitoring assessments would be valuable tools that more accurately estimate adolescents' time use and daily activities, and qualitative narrative data may shed further light on the meaning of family obligation in adolescents' lives. Additionally, we might have missed other important activities in adolescents' lives beyond family assistance, study and employment that could be guided by adolescents' family obligation values. Another meaningful future direction would be to investigate variations in family obligation among different ethnic groups within collectivistic cultures, such as comparing between adolescents with Asian and Latino backgrounds.

In conclusion, our findings shed light on cultural adaptation among adolescents growing up in traditionally familistic societies that are under the influence of economically-driven social change and urbanisation. The current study shifts from homogeneous assumptions about the relevance of family orientation in Asian cultural groups by attending to the role of ecological settings in guiding adolescents' values and behaviour. Culture is not bound to one's ethnicity, and adolescents with a shared ethnicity may consider family obligation differently depending on the ecological settings that construct their cultural values and behavioural norms. Additionally, our focus on underrepresented Vietnamese adolescents expands the experiences of Asian adolescents beyond East Asian cultural groups and brings to light

the significant and timely social changes taking place in Vietnam. As urbanisation brings global cultural changes, scholars and practitioners working with diverse cultural groups of adolescents and families should increase their cultural sensitivity and attend to intersecting cultural factors rather than relying on stereotypical assumptions about ethnic groups.

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