Early Adolescents’ Stereotypes About Teens in Hong Kong and Chongqing: Reciprocal Pathways With Problem Behavior

Yang Qu
Northwestern University

Eva M. Pomerantz
University of Illinois at Urbana–Champaign

Qian Wang and Florrie Fei-Yin Ng
The Chinese University of Hong Kong

To elucidate the processes underlying the cultural construction of adolescence, this research examined youth’s stereotypes about teens in Hong Kong and Chongqing, a relatively less developed city in Mainland China. Youth (N = 1,269) reported on their teen stereotypes and problem behavior in the fall and spring of 7th grade. Youth in Hong Kong (vs. Chongqing) saw adolescence as a time of dampened family obligation as well as heightened individuation from parents, disengagement from school, and orientation toward peers. The tendency for youth in Hong Kong (vs. Chongqing) to see teens as less obligated to their family and more disengaged from school undergirded their greater problem behavior over the 7th grade, with problem behavior appearing to contribute to the maintenance of the two stereotypes.

Keywords: adolescence, culture, family obligation, problem behavior, stereotypes

Although biological changes contribute to how youth navigate adolescence (for reviews, see Casey, Getz, & Galvan, 2008; Luciana & Collins, 2012), social constructions of this phase also do so (e.g., Buchanan & Hughes, 2009; Madon, Guyll, Spoth, Cross, & Hilbert, 2003). Both adults and youth may hold stereotypes (i.e., widely held, oversimplified beliefs) about teens shaped by the culture in which they reside. For example, youth in the United States view teens (vs. younger children) as more irresponsible when it comes to fulfilling family obligations than do their counterparts in Mainland China (Qu, Pomerantz, Wang, Cheung, & Hilbert, 2003). Both adults and youth may hold stereotypes (i.e., widely held, oversimplified beliefs) about teens shaped by the culture in which they reside. For example, youth in the United States view teens (vs. younger children) as more irresponsible when it comes to fulfilling family obligations than do their counterparts in Mainland China (Qu, Pomerantz, Wang, Cheung, & Hilbert, 2003). Although stereotypes about teens may often be inaccurate, they predict changes over time in youth’s neural processing (i.e., bilateral ventrolateral prefrontal cortex activation during self-control) and behavioral adjustment (i.e., academic engagement and problem behavior) during adolescence (e.g., Qu et al., 2016; Qu, Pomerantz, McCormick, & Telzer, 2018), with differences in American and Chinese youth’s stereotypes accounting for differences in their engagement in school (Qu et al., 2016).

There is also substantial variation among youth in their teen stereotypes within the United States and China (e.g., Buchanan & Holmbeck, 1998; Qu et al., 2016, 2018). In China, one source of variation may be exposure to Western culture. Although such exposure varies in urban and rural areas (e.g., Chen, Wang, & Wang, 2009; Fuligni & Zhang, 2004), it may also vary between major cities (e.g., Beijing and Shanghai) that have enjoyed relatively long periods of economic development due to their socio-political history and geographic location, and relatively less developed cities (e.g., in inland China). Western culture may be particularly strong in Hong Kong given that it is a former British colony and special administrative region of China. As a consequence, youth in Hong Kong may have more Western views of teens than do their counterparts in Mainland China, particularly those who do not reside in major cities.

The goal of the current research was to extend knowledge on the role of culture in shaping adolescence by examining youth’s stereotypes about teens in Hong Kong and Chongqing, a relatively less developed city in Mainland China. This is important in moving beyond prior cultural research on teen stereotypes, which has focused on variation between countries (Qu et al., 2016). In addition, guided by Markus and Kitayama’s (2010) idea of a “cycle of mutual constitution” (p. 421) in which individuals and their culture jointly influence one another, a key endeavor was to identify if there are reciprocal pathways between youth’s stereotypes and behavior that may maintain differences in how youth navigate adolescence in the two Chinese regions. We focused on youth’s problem behavior (e.g., lying or stealing) given that it is more prevalent during adolescence in not only the United States (e.g., Greenberger, Chen, Beam, Whang, & Dong, 2000; Jessor et al., 2003) but also Hong Kong than it is in Mainland China (e.g., Cheung, Ngai, & Ngai, 2007; Zhang, 2008). Both correlational and experimental research implicate youth’s stereotypes of teens as irresponsible when it comes to fulfilling family obligations in youth’s problem behavior (Qu et al., 2018; Qu, Pomerantz, & Wu, 2003).
2020), but research has not examined if such stereotypes undergird differences in youth’s problem behavior in Hong Kong and Mainland China.

**Teen Stereotypes**

Adults and youth possess beliefs about the characteristics of individuals based on their membership in social categories—for example, being female (Bigler, Jones, & Lobelner, 1997; Ceci, Williams, & Barnett, 2009). A salient social category is being a teen, with both adults and youth holding stereotypes about teens (e.g., Buchanan & Holmbeck, 1998; Holmbeck & Hill, 1988). Similar to other stereotypes, teen stereotypes are likely grounded to some extent in base rate information; however, extreme, but memorable, instances of behavior are also likely to contribute (Gilliam & Bales, 2001; Nichols & Good, 2004). Also influential may be societal messages conveyed via such conduits as exaggerated media depictions of teens or rules at middle school based on the assumption that teens are irresponsible. Notably, portrayals of teens are often motivated not by youth’s behavior, but instead by societal concerns with regulating youth’s behavior to achieve policy aims (e.g., Dodge, 2008; Enright, Levy, Harris, & Lapsley, 1987). Similar to other stereotypes, stereotypes about teens are beliefs about what is normative. As such, they may often be inaccurate, as well as oversimplified; even when they correctly reflect normative trends, they will not be characteristic of the many teens who do not conform to such trends.

Cultural norms and values may shape ideas about adolescence. In the West, youth’s entry into adolescence is considered a first step toward adulthood in which there is a focus on youth individuating from parents to establish their own identity—a process often encompassing a greater orientation toward peers (e.g., Collins & Steinberg, 2006; Grotevant & Cooper, 1986). This perspective on adolescence is also evident in American lay views of this phase of development (e.g., Hines & Paulson, 2006). For example, both American youth and adults view teens as more rebellious (e.g., testing limits) and conforming to peers (e.g., easily influenced by friends) than younger children (e.g., Buchanan & Holmbeck, 1998). American youth also hold stereotypes of teens as less concerned with fulfilling family obligations (e.g., meeting parents’ expectations) and more disengaged from school than are their younger counterparts (Galván, Spatzier, & Juvonen, 2011; Qu et al., 2016).

**Teen Stereotypes in China**

The Confucian culture in China places strong emphasis on filial piety, which includes youth repaying the family for their efforts in raising them, bringing honor to the family, making sacrifices for the family, and materially and psychologically supporting the family (e.g., Ho, 1996; Ikels, 2004). Confucianism also views learning as a moral endeavor (e.g., Li, 2005). In contemporary China, achievement in school has a larger impact than in the West on career and financial success (Gao & Smyth, 2015; Ge & Yang, 2011). Adolescence in China may thus be marked further by fulfilling responsibilities to parents (Nelson & Chen, 2007; Yu, 1996), particularly in terms of school, rather than individuating from parents as in the United States (Pomerantz, Qin, Wang, & Chen, 2011). Qu and colleagues (2016) compared teen stereotypes held by American youth to those held by Chinese youth residing on the outskirts of Shandong, a northeastern province in Mainland China. Shandong is often considered the cradle of Chinese civilization as it is the birthplace to Confucius and holds annual ceremonies celebrating his legend. When comparing teens to younger children, Chinese youth saw teens as more concerned with individuating from parents and more oriented toward peers, but less so than American youth. Unlike American youth, Chinese youth did not see teens (vs. younger children) as less concerned with fulfilling family obligations and saw teens as less disengaged from school.

Not all regions of China, however, are as traditional in terms of Chinese culture as Shandong. Thus, although teen stereotypes in other parts of China may overlap substantially with those documented among the Chinese youth studied by Qu and colleagues, in major cities youth’s teen stereotypes may be more similar to those held by American youth. This may be particularly true in Hong Kong, which although rooted in the Confucian tradition, is also heavily influenced by Western culture due to its unique history as a British colony from 1841 to 1997. Indeed, Hong Kong is culturally similar in many ways to much of Mainland China (e.g., Hofstede & Bond, 1988; Hofstede Insights, n.d.), but its educational, political, economic, and legal systems are built in part on Western ideas and practices. Although Hong Kong returned to China in 1997, it has more or less retained a Western societal structure, with Western culture being quite accessible under the “one country, two systems” policy. For example, Hong Kong has greater access to Western media via the Internet. Advertisements in this region depicting a Western lifestyle are also more common than in Mainland China (Chan & Cheng, 2002). Given such exposure to Western culture, Hui, Lau, Li, Tong, and Zhang (2006) argued that findings on youth in Mainland China should not be generalized to youth in Hong Kong without caution.

**Reciprocal Pathways Between Youth’s Teen Stereotypes and Their Problem Behavior**

Differences in Hong Kong and Mainland China in youth’s teen stereotypes may create differences in their problem behavior given that stereotypes of teens as irresponsible (e.g., in regards to fulfilling family obligations and engaging in school) appear to contribute to such behavior (Qu et al., 2018, 2020). Youth’s teen stereotypes in large part reflect their perceptions of what is common or typical among teens. As such, they serve as descriptive norms, which are quite influential (e.g., Cialdini, Reno, & Kallgren, 1990; Paluck & Shepherd, 2012). Buchanan and Hughes (2009) made the case that youth’s ideas about adolescence act as self-fulfilling prophecies in that they influence the expectations and standards youth set for themselves, which guide their behavior. Teen stereotypes also shape how youth see the consequences of their behavior (Qu et al., 2020): The more youth see behavior as normative, the less they see it as leading to undesirable consequences (e.g., lying or stealing is unlikely to be treated severely) as they assume it is simply what teens do. Thus, youth may be more likely to engage in behavior in line with teen stereotypes, particularly as it may engender peer acceptance.

Both correlational and experimental research indicates that stereotypes of teens as irresponsible in regards to fulfilling family obligations or engaging in school contribute to youth’s behavior.
over early adolescence. In their study of American and Mainland Chinese youth, Qu and colleagues (2016) found that during early adolescence, the more youth see teens (vs. younger children) as ignoring family obligations and disengaging from school, the less engaged youth were in school six months later over and above their earlier engagement. In a small study of American youth, youth’s stereotypes of teens as irresponsible in fulfilling family obligations during middle school were predictive of their problem behavior as they made the transition to high school, as well as changes in their bilateral ventrolateral prefrontal cortex activation during self-control, over and above a variety of potential confounds (Qu et al., 2018). In an experimental study with youth in middle school in a major city in Mainland China, youth experimentally induced to see teens as responsible subsequently had higher engagement in school and lower problem behavior than did their counterparts in the control condition (Qu et al., 2020). Given such findings, one reason problem behavior may be higher during adolescence in Hong Kong than Mainland China (e.g., Cheung et al., 2007; Zhang, 2008), with an increase over the middle school years (e.g., Shek & Lin, 2014, 2017; Shek & Zhu, 2018) in Hong Kong but not Mainland China (e.g., Liu, Zhang, Pan, Ma, & Lu, 2017; Liu et al., 2001), is that Hong Kong (vs. Mainland China) youth may view teens as less irresponsible.

Although teen stereotypes reflect social constructions of adolescence shaped by culture, they are not static given that culture is dynamic (e.g., Chen, Cen, Li, & He, 2005; Markus & Kitayama, 2010). Indeed, in the United States, portrayals of adolescence have changed over time as societal needs have changed (e.g., when teens are needed in the workforce they are portrayed as responsible, but when they are not needed they are portrayed as irresponsible; Enright et al., 1987). Moreover, as reflected in Markus and Kitayama’s (2010) idea of a “cycle of mutual constitution,” youth may not only be sensitive to cues in their environment (e.g., provided by peers) about what is normative for teens (e.g., Buchanan et al., 1990; Nichols & Good, 2004), but also rely on their own behavior, which may be shaped in part by their own idiosyncratic characteristics (e.g., temperament) and experiences (e.g., exposure to Western culture). In addition, youth may want to see their behavior as meeting the norms of the peer culture to engender peer acceptance (e.g., Chang, 2004; Galván et al., 2011). Thus, as part of a cycle of mutual constitution between youth and their culture, there may be reciprocal pathways over time between youth’s teen stereotypes and their behavior. Unfortunately, prior research has not examined if youth’s behavior contributes to their teen stereotypes.

Overview of the Current Research

To extend knowledge on the role of culture in shaping adolescence via youth’s stereotypes about teens, we investigated such stereotypes in Hong Kong and Chongqing, a relatively less developed city in Mainland China. Both cities are rooted in Chinese culture, but also differ in terms of their exposure to Western culture. We focused on three key issues. First, we examined whether youth in Hong Kong and Chongqing differ in their views of adolescence. We anticipated that although youth in the two cities would overlap in their stereotypes of teens, youth’s stereotypes in Hong Kong (vs. Chongqing) would be more Westernized—that is, youth in Hong Kong would see teens as less irresponsible. Second, we investigated if there are reciprocal pathways between youth’s teen stereotypes and problem behavior over time. Such pathways were expected to be evident in both regions for youth’s stereotypes of teens as irresponsible in terms of meeting family obligations and being engaged in school, which have been found in prior research to be predictive of youth’s behavior (e.g., Qu et al., 2016, 2018, 2020). Third, we tested if (a) differences between Hong Kong and Chongqing in youth’s teen stereotypes undergird the tendency for problem behavior to be more prevalent among youth in Hong Kong (vs. Chongqing) over early adolescence, and (b) whether the difference in problem behavior contributes to differences in youth’s stereotypes.

Youth in Hong Kong and Chongqing participated in the research in the fall and again in the spring of their first year of middle school (i.e., 7th grade) given that this is a time that youth may be particularly sensitive to information about teens as they are taking on a new role and may be in active search of guiding information (Ruble, 1994). Moreover, problem behavior often increases among youth in the West (e.g., Allen, Moore, & Kuperminc, 1997; Steinberg, 2007; Véronneau & Dishion, 2010) as well as Hong Kong (e.g., Shek & Lin, 2014, 2017; Shek & Zhu, 2018) during this time, but does not appear to do so in Mainland China (e.g., Liu et al., 2001, 2017). Chongqing, which is a large city in southwest China, enjoys the same municipal status as Beijing and Shanghai—directly governed by the Central Government rather than through the governance of a province since 1997 to facilitate economic development of undeveloped western regions in China (Han & Wang, 2001). For decades, Chongqing has served as the political, economic, and cultural center of southwest China. However, it is less westernized than other major cities in the eastern coastal areas due to its history, location, and delayed economic development. Because youth’s pubertal status is associated with some of their teen stereotypes (Qu et al., 2016) as well as youth’s problem behavior (e.g., Smith, Chein, & Steinberg, 2013), we had youth report on such status and included it in our analyses as a covariate, along with parent’s educational attainment which is also associated with some of youth’s teen stereotypes (Qu et al., 2016) and problem behavior (e.g., Nagin & Tremblay, 2001; Santelli, Lowry, Brener, & Robin, 2000).

Method

Participants

Youth in Hong Kong and Chongqing completed surveys during the fall and spring of seventh grade. In Hong Kong, there were 487 Chinese youths (224 boys; M age = 12.69 years in the fall of seventh grade) recruited from five middle schools located in working- and middle-class areas that have long been urbanized. In terms of achievement, two schools were below average and three were above average, with some variability within each school. Almost all (94%) of the population in the area is of Han descent (Hong Kong Home Affairs Department, 2016). In regards to parents’ highest level of educational attainment, approximately a fourth of Hong Kong youth reported their mothers (27%) and fathers (29%) had at least a college degree, about half reported their mothers (51%) and fathers (50%) had a high school diploma, and the remaining youth reported their mothers (22%) and fathers (21%) had less than a high school diploma.
In Chongqing, there were 782 youths (352 boys; \( M \text{ age} = 12.96 \) years in the fall of seventh grade) residing in a district originally including rural villages and urbanized for fewer than 30 years. Youth were recruited from two middle schools serving primarily working- and middle-class families. One school was below-average and the other was above-average in terms of achievement, with some variability within each. In this area, almost all of the population (93%) is of Han descent (Chongqing Municipal Bureau of Statistics, 2018). In regards to parents’ highest level of educational attainment, about a quarter of Chongqing youth reported their mothers (24%) and fathers (27%) had at least a college degree, approximately another quarter reported their mothers (25%) and fathers (26%) had a high school diploma, and the remaining half reported their mothers (51%) and fathers (47%) had less than a high school diploma. The lower educational attainment of parents in the Chongqing (vs. Hong Kong) sample reflects the differences in educational attainment in the two regions more widely. For example, in Hong Kong, 47% of adult women and 48% of adult men have a high school diploma, and 31% of adult women and 35% of adult men have more than a high school education (Hong Kong Census & Statistics Department, 2016); in Mainland China, however, only 28% of adult women and 23% of adult men have a high school diploma, and 15% of adult women and men have more than a high school education (National Bureau of Statistics of China, 2016).

Procedure

In the fall (Wave 1) and spring (Wave 2) of seventh grade, youth completed surveys in their classrooms at school. The surveys were administered by trained research assistants in Hong Kong and trained homeroom teachers in Chongqing. In both cities, the instructions for each measure were read and guidance was provided on how to use the scales with examples. Youth then completed the individual items on their own. Among all youth invited to participate in the study through their schools, 63% in Hong Kong and 71% in Chongqing received consent from parents and assented to participate themselves. Attrition from Wave 1 to 2 was 3% (4% in Hong Kong and 2% in Chongqing). Comparison of youth completing both waves to those completing only the first revealed no significant differences at Wave 1 on any of the variables examined in this report, \( t(1267)s < 1.80, p > .07 \). This research was part of the Adolescent Adjustment Study; the procedures were approved by the Chinese University of Hong Kong Institutional Review Board (protocol number: 451809).

Measures

The measures used in this study were initially created in English. Standard translation and back-translation procedures (Brislin, 1980) were followed to generate the Chinese versions with repeated discussion among Chinese and American members of the research team to modify the wording of the items to retain the original meaning (Erkut, 2010). Linguistic factors were considered so that the questions were easily understandable to Chinese youth (e.g., unfamiliar and awkward terms and phrases were avoided). Attention was also given to the relevance of the content of the items comprising the measures to youth in both Hong Kong and Chongqing. The Hong Kong measures were in traditional Chinese, and the Chongqing measures were in simplified Chinese. Chinese versions of the measures, or variations of them, have been used in prior research with youth in Mainland China (Qu et al., 2016, 2020).

Teen stereotypes. Youth’s stereotypes of teens were assessed with Qu and colleagues’ (Qu et al., 2016, 2020) measure in the fall and spring of seventh grade. Youth rated the extent to which a variety of behaviors and attitudes are true during versus before the teen years, on a scale from 1 (more true before teen years) to 9 (more true during teen years), for four attributes at each wave: (a) individuation (e.g., “Want to be independent from parents” and “Demand to make decisions without parents’ input”; \( \alpha = .82 \) at Wave 1 and .84 at Wave 2 in Hong Kong and .77 at Wave 1 and .82 at Wave 2 in Chongqing); (b) family obligation (e.g., “Be a responsible member of the family” and “Be concerned with meeting obligations to parents”; \( \alpha = .82 \) at Wave 1 and .82 at Wave 2 in Hong Kong and .76 at Wave 1 and .81 at Wave 2 in Chongqing); (c) school disengagement (e.g., “Do not care very much about school” and “Pay little attention in class”; \( \alpha = .74 \) at Wave 1 and .76 at Wave 2 in Hong Kong and .71 at Wave 1 and .72 at Wave 2 in Chongqing); and (d) peer orientation (e.g., “See friends as an important part of their lives” and “Want to fit in with other kids”; \( \alpha = .84 \) at Wave 1 and .89 at Wave 2 in Hong Kong and .81 at Wave 1 and .85 at Wave 2 in Chongqing). There were six items for each attribute, except family obligation which included 12 items. The mean of the items comprising each attribute was taken, with lower numbers indicating the attribute is viewed as more characteristic before the teen years and higher numbers indicating it is more characteristic during the teen years.

Problem behavior. As in Qu et al. (2020), eight items adopted from prior measures (Barber, Stolz, & Olsen, 2005; Stattin & Kerr, 2000) were used to assess youth’s problem behavior. During the fall and spring of seventh grade, youth indicated how often (1 = never, 5 = very often) they engaged in behaviors considered deviant (e.g., “I lie or cheat” and “I steal things from places other than home”). The mean of the items was taken, with higher numbers reflecting greater problem behavior (\( \alpha = .75 \) at Wave 1 and .80 at Wave 2 in Hong Kong and .80 at Wave 1 and .82 at Wave 2 in Chongqing).

Pubertal development. Youth completed Petersen, Crockett, Richards, and Boxer’s (1988) 5-item Pubertal Development Scale (PDS) at both waves. Both boys and girls reported (1 = no development, 4 = development is complete) on growth spurt, hair growth, and skin changes; boys also reported on voice change and facial hair and girls on breast development and menarche status (1 = no, 4 = yes). The mean was taken with higher numbers indicating more advanced pubertal development (\( \alpha = .80 \) at Wave 1 and .79 at Wave 2 in Hong Kong and .70 at Wave 1 and .68 at Wave 2 in Chongqing).

Results

We conducted three sets of analyses. First, we compared youth’s stereotypes of teens in Hong Kong and Chongqing over the fall (Wave 1) and spring (Wave 2) of the first year of middle school (i.e., seventh grade in both cities). Second, we examined the reciprocal relations between youth’s stereotypes of teens and their problem behavior over time, with attention to whether the strength of such relations differs in the two regions. Third, we investigated
if youth’s stereotypes undergird differences in Hong Kong and Chongqing in youth’s problem behavior and if youth’s problem behavior contributes to differences in the stereotypes in the two regions.

**Region Differences in Teen Stereotypes**

To identify if there are differences in Hong Kong and Chongqing in youth’s stereotypes about teens, youth’s stereotypes were submitted to a repeated-measures multivariate analysis of covariance (MANCOVA), with stereotype attribute (individuation, family obligation, school disengagement, and peer orientation) and time (Wave 1 and Wave 2) as within-participants factors and region (Hong Kong and Chongqing) as a between-participants factor. Covariates included youth’s gender, their pubertal development, the achievement level of their school, and parents’ educational attainment (i.e., the mean of youth’s reports for mothers and fathers). The significance of all the main effects (i.e., region, attribute, and time) as well as the two-way (i.e., Region × Attribute, Region × Time, and Attribute × Time) and three-way (i.e., Region × Attribute × Time) interactions was examined. To permit interpretation of the stereotype attribute in the repeated-measures MANCOVA, we reverse-scored the family obligation stereotype so that higher numbers on all four attributes reflect stereotypes more in line with those in the West (i.e., heightened individuation, and peer orientation, with individuation being second, followed by family obligation, school disengagement, and peer orientation, along with dampened family obligation).

Although there was no main effect of time, $F(1, 1200) = .02$, $p = .89$, there was a main effect of stereotype attribute, $F(3, 3600) = 17.11, p < .001$: Across the two regions, teens were viewed as most in line with Western stereotypes when it came to peer orientation, with individuation being second, followed by family obligation, and finally school disengagement. As shown in Table 1, consistent with expectations, there was also a main effect of region, $F(1, 1200) = 140.23, p < .001$, such that youth in Hong Kong held views of teens more in line with Western stereotypes than did their counterparts in Chongqing.

Despite a Region × Stereotype Attribute interaction, $F(3, 3600) = 3.90, p < .01$, the region effect was evident for all four stereotype attributes. The largest difference was in terms of family obligation (see Table 1): Youth in both Hong Kong and Chongqing viewed teens as feeling more obligated to the family than their younger counterparts as indicated by one sample $t$ tests within each region, $t(246) > 2.46, p < .05$, but a follow-up univariate test indicated that this was less common among youth in Hong Kong (vs. Chongqing), $F(1, 1204) = 147.76, p < .001$. Youth in Hong Kong saw disengagement from school as similarly characteristic of the earlier and teen years, $t(487) = 1.48, p = .14$, whereas youth in Chongqing saw it as less characteristic of the teen (vs. earlier) years, $t(784) = 16.49, p < .001$, and did so more than youth in Hong Kong, $F(1, 1202) = 77.43, p < .001$. Youth in both Hong Kong and Chongqing saw the teen (vs. earlier) years as more of a time of individuation from parents and orientation toward peers, $t(8.2) > 2.99, p < .001$, but this was more common in Hong Kong than Chongqing, $F(1203)s > 29.73, p < .001$. These two differences were smaller than for the other stereotypes, with the difference for the peer orientation stereotype being the smallest.

There was also a Region × Time interaction, $F(1, 1200) = 6.39, p < .05$. Analyses within each region revealed that youth’s stereotypes did not change from the fall to spring of seventh grade in Hong Kong, $F(1, 435) = .41, p = .53$, but did change in Chongqing, $F(1, 761) = 5.66, p < .05$, such that they became more similar to those of youth in Hong Kong. Despite such a change, Chongqing youth’s stereotypes continued to differ from those of their Hong Kong counterparts in the spring of seventh grade (see Table 1). Neither the Attribute × Time interaction, $F(3, 3600) = 1.31, p = .27$, nor Region × Attribute × Time interaction, $F(3, 3600) = 1.49, p = .22$, reached significance.

**Reciprocal Relations Over Time Between Teen Stereotypes and Problem Behavior**

To investigate whether there are reciprocal relations between youth’s teen stereotypes and their problem behavior over time, we conducted a set of two-group cross-lagged models in the context of structural equation modeling with MPlus 8.2 (Muthén & Muthén, 2017), which allowed us to evaluate whether the strength of such relations differ in Hong Kong and Chongqing. The model for each

---

**Table 1: Youth’s Stereotypes About Teens and Problem Behavior in Hong Kong and Chongqing**

<table>
<thead>
<tr>
<th>Stereotype</th>
<th>Wave 1</th>
<th>Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hong Kong M (SD)</td>
<td>Chongqing M (SD)</td>
</tr>
<tr>
<td>Teen stereotype</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuation</td>
<td>5.98 (1.53)</td>
<td>5.33 (1.73)</td>
</tr>
<tr>
<td>Family obligation</td>
<td>5.12 (1.18)</td>
<td>5.95 (1.21)</td>
</tr>
<tr>
<td>School disengagement</td>
<td>4.85 (1.42)</td>
<td>4.18 (1.51)</td>
</tr>
<tr>
<td>Peer orientation</td>
<td>6.64 (1.44)</td>
<td>5.90 (1.65)</td>
</tr>
<tr>
<td>Problem behavior</td>
<td>1.53 (0.45)</td>
<td>1.50 (0.49)</td>
</tr>
</tbody>
</table>

*Note.* The stereotypes of teens measure used a 9-point scale, ranging from 1 (more true before teen years) to 9 (more true during teen years). The problem behavior measure used a 5-point scale, ranging from 1 (never) to 5 (very often). The letter subscripts indicate a significant ($p < .05$) difference from the mid-point of the scale (i.e., equally true before and during teen years), with an $a$ reflecting that the characteristic is more true of the teen (vs. earlier) years and a $b$ reflecting that the characteristic is less true of the teen (vs. earlier) years.

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

---

This document is copyrighted by the American Psychological Association or one of its allied publishers. This article is intended solely for the personal use of individual users and is not to be disseminated broadly.
teen stereotype attribute (i.e., individuation, family obligation, school disengagement, and peer orientation) included the path from the stereotype during the fall of seventh grade (Wave 1) to problem behavior during the spring of seventh grade (Wave 2). In addition to this “stereotype path”, the model included a “behavior path” from problem behavior at Wave 1 to the teen stereotype six months later at Wave 2. Notably, the models adjusted for the stability of teen stereotypes and problem behavior over time (i.e., from Wave 1 to 2). Given that teen stereotypes and problem behavior were sometimes concurrently associated (see Table 2), teen stereotypes and problem behavior (Wave 1) or their errors (Wave 2) were allowed to correlate within each wave. The covariates included in the MANCOVA (see above) were included in the model and allowed to correlate with one another; they were also allowed to correlate with youth’s teen stereotypes and problem behavior at Wave 1 and predict the two at Wave 2.

The baseline models in which the paths were freely estimated without any between-region constraints included all possible links making them saturated with perfect fit. These models were compared to two more parsimonious constrained models. The “equal stereotype path” model was identical to the baseline model except that the path from stereotype to problem behavior was constrained to be equal between Hong Kong and Chongqing. The “equal behavior path” model was identical to the baseline model except that the path from problem behavior to stereotype was constrained to be equal between the two regions. Nonsignificant change in the chi-square between a baseline and constrained model indicates that the two models fit the data equally well and thus that the constrained path does not differ between the two regions. Given that the stereotype and behavior paths never differed between the two regions, \( \Delta \chi^2 < 2.36, p > .12 \), the final models constrained the two (i.e., Wave 1 stereotypes to Wave 2 problem behavior and Wave 1 problem behavior to Wave 2 stereotypes) to be equal between Hong Kong and Chongqing, \( \chi^2 < 2.52 \), CFI > .99, TLI > .98, RMSEAs < .02.

As shown in Table 3, there were reciprocal relations between the family obligation stereotype and problem behavior behavior, such that in both societies, seeing the teen (vs. younger) years as more of a time of fulfilling family obligations predicted lower problem behavior over time, adjusting for youth’s initial problem behavior. In the reverse direction, youth who engaged in greater problem behavior were less likely to see the teen years as a time of family obligation six months later and above their earlier family obligation stereotypes. The model constraining the stereotype and behavior paths to be the equal to one another, \( \chi^2 = 12.57 \), comparative fit index (CFI) = .99, Tucker-Lewis index (TLI) = .87, root mean square error of approximation (RMSEA) = .07, fit significantly worse than the baseline model, \( \Delta \chi^2 = 12.57, p < .01 \), revealing that the path from problem behavior to family obligation stereotypes was stronger than that from family obligation stereotypes to problem behavior.

Similar reciprocal relations were evident for youth’s school disengagement stereotypes. In both Hong Kong and Chongqing, seeing the teen (vs. younger) years as a time of school disengagement predicted greater problem behavior over time, and youth who engaged in greater problem behavior were more likely to see the teen years as a time of school disengagement over time (see Table 3). The model constraining the stereotype and behavior paths to be equal to one another, \( \chi^2 = 38.04, CFI = .98, TLI = .98, \Delta \chi^2 = 38.04, p < .001 \), indicating that the path from problem behavior to school disengagement stereotypes was stronger than that from school disengagement stereotypes to problem behavior.

The more youth in both regions viewed teens (vs. younger children) as individuating from parents at Wave 1, the more they engaged in problem behavior at this time, with such an association also evident at Wave 2 (see Table 2). Similar concurrent associations were evident for the peer orientation stereotype and problem behavior, but they were not always significant. Notably, there were no cross-lagged paths in either direction between these two teen stereotypes and problem behavior once the stability paths and concurrent associations were taken into account (see Table 3).

The Mediating Role of Teen Stereotypes and Problem Behavior in Region Differences

The next set of analyses examined whether the stereotype and behavior paths identified above serve as mechanisms through which region differences in stereotypes and problem behavior may develop or be maintained. Specifically, we evaluated (a) whether youth’s teen stereotypes underlie a region difference in their problem behavior over time and (b) whether youth’s problem behavior underlies a region difference in their stereotypes over time. To test these mediation pathways, we added region to the cross-lagged models described above for the family obligation and school disengagement stereotypes. As shown in Figure 1, region (\( -1 = \) Hong Kong, 1 = Chongqing) was included as a predictor of all the constructs in the model. To examine if youth’s teen stereotypes underlie a region difference in their problem behavior over time, we tested the indirect path from region to Wave 1 teen stereotypes to Wave 2 problem behavior. Conversely, to examine if youth’s problem behavior underlies region differences in their teen stereotypes over time, we tested the indirect path from region to Wave 1 problem behavior to Wave 2 teen stereotypes. Covariates were included as in the two-group cross-lagged models described above. Given that all possible links were included in these single-group models, they were saturated with perfect fit.

Using 1000 bootstrap resamples, the total effect from region to Wave 2 problem behavior, adjusting for Wave 1 problem behavior, was significant, \( \beta = -.07, p < .05, 95\% CI [.01, .12], \) such that youth in Hong Kong engaged in greater problem behavior than youth in Chongqing in the spring of seventh grade (for the means, see Table 1), with the increase in problem behavior from the fall (Wave 1) to spring (Wave 2) of seventh grade being significant in Hong Kong, \( F(1, 466) = 10.74, p = .001, \) but not Chongqing, \( F(1, 763) = 2.60, p = .11 \). Notably, the indirect path from region to Wave 2 problem behavior via Wave 1 family obligation stereotypes was significant (see Figure 1), \( \beta = .02, p < .01, 95\% CI [.01, .04], \) with a reduction in the region difference in problem behavior in the spring of seventh grade (Wave 2) of 33% such that the direct effect was not significant. In the reverse direction, the total effect from region to Wave 2 family obligation stereotypes adjusting for Wave 1 stereotypes was significant, \( \beta = .25, p < .001, 95\% CI [.20, .30]. \) However, Hong Kong and Chongqing youth did not differ in their problem behavior in the fall of seventh grade (for the means, see Table 1). Thus, the indirect path from region to family obligation stereotypes at Wave 2 via problem
Table 2  
Correlations Between the Variables in Hong Kong and Chongqing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wave 1</th>
<th>Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stereotypes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Individuation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Family obligation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. School disengagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Peer orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wave 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Individuation</td>
<td>.45***</td>
<td></td>
</tr>
<tr>
<td>6. Family obligation</td>
<td>-24**</td>
<td>.16***</td>
</tr>
<tr>
<td>7. School disengagement</td>
<td>.24**</td>
<td>.16***</td>
</tr>
<tr>
<td>8. Peer orientation</td>
<td>.27***</td>
<td>-20**</td>
</tr>
<tr>
<td>Wave 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Wave 1</td>
<td>.11*</td>
<td>.14***</td>
</tr>
<tr>
<td>10. Wave 2</td>
<td>.06</td>
<td>.16***</td>
</tr>
<tr>
<td>Pubertal status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Wave 1</td>
<td>.04</td>
<td>.02</td>
</tr>
<tr>
<td>12. Wave 2</td>
<td>.05</td>
<td>.10</td>
</tr>
<tr>
<td>Problem behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Gender</td>
<td>-0.04</td>
<td>.01</td>
</tr>
<tr>
<td>14. School</td>
<td>-1.1</td>
<td>.07</td>
</tr>
<tr>
<td>15. Parental education</td>
<td>-0.01</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. Correlations for the Hong Kong sample are in the lower triangle; correlations for the Chongqing sample are in the upper triangle. For gender, -1 = girls and 1 = boys; for parental education, -1 = less than a college degree and 1 = college degree or higher.

*p < .05. **p < .01. ***p < .001.
Estimates of Reciprocal Over-Time Paths Between Youth’s Teen Stereotypes and Problem Behavior in Hong Kong and Chongqing

Table 3

<table>
<thead>
<tr>
<th>Model and path</th>
<th>Hong Kong Unstandardized (SE)</th>
<th>Standardized</th>
<th>Chongqing Unstandardized (SE)</th>
<th>Standardized</th>
<th>Region difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuation stereotypes and problem behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wave 1 stereotypes → Wave 2 problem behavior</td>
<td>.01 (.01)</td>
<td>.02</td>
<td>.01 (.01)</td>
<td>.02</td>
<td>.79</td>
</tr>
<tr>
<td>Wave 1 problem behavior → Wave 2 stereotypes</td>
<td>.08 (.11)</td>
<td>.02</td>
<td>.08 (.11)</td>
<td>.02</td>
<td>.41</td>
</tr>
<tr>
<td>Family obligation stereotypes and problem behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wave 1 stereotypes → Wave 2 problem behavior</td>
<td>-.03 (.01)</td>
<td>-.07**</td>
<td>-.03 (.01)</td>
<td>-.07**</td>
<td>.00</td>
</tr>
<tr>
<td>Wave 1 problem behavior → Wave 2 stereotypes</td>
<td>-.28 (.06)</td>
<td>-.11***</td>
<td>-.28 (.06)</td>
<td>-.11***</td>
<td>.26</td>
</tr>
<tr>
<td>School disengagement stereotypes and problem behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wave 1 stereotypes → Wave 2 problem behavior</td>
<td>.03 (.01)</td>
<td>.11***</td>
<td>.03 (.01)</td>
<td>.11***</td>
<td>2.36</td>
</tr>
<tr>
<td>Wave 1 problem behavior → Wave 2 stereotypes</td>
<td>.55 (.09)</td>
<td>.17***</td>
<td>.55 (.09)</td>
<td>.17***</td>
<td>.00</td>
</tr>
<tr>
<td>Peer orientation stereotypes and problem behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wave 1 stereotypes → Wave 2 problem behavior</td>
<td>.00 (.01)</td>
<td>.01</td>
<td>.00 (.01)</td>
<td>.01</td>
<td>1.16</td>
</tr>
<tr>
<td>Wave 1 problem behavior → Wave 2 stereotypes</td>
<td>-.01 (.09)</td>
<td>.00</td>
<td>-.01 (.09)</td>
<td>.00</td>
<td>2.35</td>
</tr>
</tbody>
</table>

Note. The cross-lagged paths were evaluated in the context of SEM; Δχ² is the chi-square difference value between the baseline model and the model that constrained the path to be equal in the two regions. ** p < .01, *** p < .001.

behavior at Wave 1 was not significant (see Figure 1), β = .00, p = .25, 95% CI [−.01, .01], indicating that differences in Hong Kong and Chongqing youth’s family obligation stereotypes were not driven by differences in their problem behavior.

Youth’s school disengagement stereotypes also mediated the region difference in problem behavior in the spring of seventh grade adjusting for such behavior in the fall of seventh grade, β = .02, p < .001, 95% CI [.01, .04], reducing the total effect by 34% such that the direct effect was not significant (see Figure 2). Again, the indirect path from region to Wave 2 school disengagement stereotypes via Wave 1 problem behavior was not significant, β = .01, p > .25, 95% CI [−.01, .02], given that there was not a region difference at Wave 1 problem behavior (see above). When both family obligation and school disengagement stereotypes were included in the model simultaneously, the indirect path from region to Wave 2 problem behavior via Wave 1 school disengagement stereotypes (β = .02, p < .01, 95% CI [.01, .03]), but not via Wave 1 family obligation stereotypes (β = .01, p > .49, 95% CI [−.01, .03]), was significant.

Supplemental Analyses

Given that youth in both Hong Kong and Chongqing showed relatively little problem behavior (see Table 1), it is possible that the over-time relations of such behavior with stereotypes were driven by the few youth who exhibited extreme problem behavior. We took two approaches to ensuring that our results were not due to outliers. First, we winsorized the extreme values. Based on Liao, Li, and Brooks’ (2016) simulation study, the problem behavior data above the 95th percentile in each region were converted to the

Figure 1. Youth’s family obligation teen stereotypes mediate the differences in Hong Kong and Chongqing youth’s problem behavior over the 7th grade. Mediation was evaluated in the context of SEM; the standardized coefficients are presented. Covariates (i.e., youth’s gender, their pubertal development, the achievement level of their school, and their parents’ educational attainment) were also included in the model but are not included for ease of presentation. The concurrent associations between family obligation stereotypes and problem behavior at Wave 1 (β = −.16, p < .001) and Wave 2 (β = −.11, p < .001) are also not shown here for ease of presentation. ** p < .01, *** p < .001.
value at the 95th percentile. Second, we removed the problem behavior data above the 95th percentile in each region (see Pek, Wong, & Wong, 2018; Ruppert, 2006). We then conducted all of the analyses involving problem behavior with the new data. The results were practically identical to those from the original analyses. Hong Kong (vs. Chongqing) youth reported more problem behavior in both Hong Kong and Chongqing, but not at Wave 1, t(1233) = 2.59, p < .05, for the winsorized data, and t(1163) = 3.88, p < .01, for the data below the 95th percentile, but not at Wave 1, t = 1.42, p > .16. The difference in problem behavior at Wave 2 also remained significant after controlling for problem behavior at Wave 1, t(1228) = 2.25, p < .05, for the winsorized data, and t(1128) = 2.39, p < .05, for the data below the 95th percentile.

For the cross-lagged models between stereotypes and problem behavior over time, all the cross-lagged paths remained significant. For the model examining family obligation stereotypes and problem behavior, the path from Wave 1 stereotypes to Wave 2 problem behavior was evident in both Hong Kong and Chongqing, βs = −.06, ps < .01, for the winsorized data, and βs = −.05, ps < .05, for the data below the 95th percentile. The path from Wave 1 problem behavior to Wave 2 stereotypes was also evident in the two regions, βs = −.11, ps < .001, for the winsorized data, and βs = −.10, ps < .001, for the data below the 95th percentile. For the model examining school disengagement stereotypes and problem behavior, the path from Wave 1 stereotypes to Wave 2 problem behavior was evident in both Hong Kong and Chongqing, βs = .10, ps < .001, for the winsorized data, and βs = .08, ps < .001, for the data below the 95th percentile. The path from Wave 1 problem behavior to Wave 2 stereotypes was also evident in the two regions, βs = .17, ps < .001 for the winsorized data, and βs = .13, ps < .001, for the data below the 95th percentile.

For the mediation models, as in the original analyses, family obligation and school disengagement stereotypes mediated the region difference in Wave 2 problem behavior adjusting for Wave 1 problem behavior. Specifically, the indirect path from region to Wave 2 problem behavior via Wave 1 family obligation stereotypes was significant, β = .02, p < .01, 95% CI [.01, .04] for the winsorized data, and β = .02, p < .05, 95% CI [.01, .03] for the data below the 95th percentile. The indirect path from region to Wave 2 problem behavior via Wave 1 school disengagement stereotypes was also significant, β = .02, p < .001, 95% CI [.01, .04] for the winsorized data, and β = .02, p < .01, 95% CI [.01, .03] for the data below the 95th percentile.

Boys reported more problem behavior than did girls in both Hong Kong, F(1, 465) = 6.04, p = .01, and Chongqing, F(1, 760) = 44.76, p < .001. This, along with the relatively low problem behavior in general, made it possible that our effects were limited to boys. To examine this possibility, we conducted nested multigroup analyses for the cross-lagged models grouping the sample into (a) boys and girls and (b) Hong Kong boys, Hong Kong girls, Chongqing boys, and Chongqing girls. In both cases, the constrained model requiring the cross-lagged paths to be the same across groups did not differ from the baseline model, Δχ² < 1.73, ps > .18, with significant cross-lagged paths between family obligation stereotypes and problem behavior, βs > −.07, ps < .01, and between school disengagement stereotypes and problem behavior, βs > .09, ps < .001. For the mediation models, we conducted the analyses grouping the sample into boys and girls only given that the models included region. Again, the constrained model requiring the indirect paths to be the same across the two groups did not differ from the baseline model, Δχ² < 3.03, ps > .19, with significant indirect path from region to Wave 2 problem behavior via Wave 1 family obligation stereotypes, βs = .02, ps < .01, 95% CI [.01, .04], and Wave 1 school disengagement stereotypes, βs = .02, ps < .001, 95% CI [.01, .04]. Thus, the findings were not modulated by youth’s gender.
Discussion

Children’s navigation of the adolescent years is driven in part by social constructions of this phase of development (e.g., Buchanan & Hughes, 2009; Madon et al., 2003). The current research drew from evidence that youth’s stereotypes of teens (i.e., widely held, oversimplified beliefs about what the typical teen is like) not only play a role in their behavior during early adolescence (e.g., Qu et al., 2018, 2020), but also differ in the United States and China (Qu et al., 2016). Focusing on variation within China, we examined teen stereotypes in the cities of Hong Kong and Chongqing, a relatively less developed city in Mainland China. Both cities are rooted in Chinese culture, but there is more exposure to Western culture in Hong Kong. Youth in Hong Kong held more Western teen stereotypes compared to their counterparts in Chongqing in that they saw adolescence (vs. the earlier years) more as a time of dampened family obligation as well as heightened individuation from parents, disengagement from school, and orientation toward peers. Notably, youth’s views of adolescence as a time of dampened family obligation and heightened school disengagement predicted greater problem behavior over time, thereby accounting for the greater problem behavior among youth in Hong Kong (vs. Chongqing) over the seventh grade. Youth’s problem behavior also predicted the two stereotypes over time, suggesting that the behavior fostered by teen stereotypes may contribute to maintaining the stereotypes over time.

Teen Stereotypes in Hong Kong and Mainland China

Although Hong Kong shares much culturally with Mainland China (e.g., Hofstede & Bond, 1988; Hofstede Insights, n.d.), its residents have more exposure to Western culture than in most areas of Mainland China. Indeed, Hong Kong’s educational, political, economic, and legal systems are built in part on Western ideas and practices, with substantial access to Western culture. When compared to youth in Mainland China residing in the city of Chongqing, which is less developed than many other major cities in Mainland China due to its location and delayed economic development, youth in Hong Kong had more Westernized views of teens. Region differences in teen stereotypes were evident for all four attributes examined in the current research, with youth in Hong Kong (vs. Chongqing) viewing the teen (vs. earlier) years as a time of dampened feelings of family obligation as well as heightened individuation from parents, disengagement from school, and orientation toward peers.

Youth’s teen stereotypes in Hong Kong, however, do not appear to be so Westernized as to fully overlap with those held by American youth. For example, Qu and colleagues (2016) found that American youth view teens as feeling less obligated to their family and more disengaged in school than younger children; however, youth in Hong Kong in the current study saw teens (vs. younger children) as feeling more obligated to their family and similarly disengaged in school. Such differences suggest that youth in Hong Kong may hold views of teens somewhere in between those of youth who do not reside in the most developed cities in China and youth in the United States.

Teen stereotypes among youth in Chongqing, but not Hong Kong, changed over seventh grade so that they were more similar to those held by youth in Hong Kong, albeit still differing significantly. On the one hand, these changes are surprising given that youth in Mainland China maintain the quality of their relationships with their parents and feelings of obligation to their family over the middle school years, also continuing to see their parents as self-defining at this time (Pomerantz, Qin, Wang, & Chen, 2009, 2011). Moreover, youth in Mainland China maintain their engagement in school over the middle school years, even becoming more engaged sometimes as they move through middle school (e.g., Qu et al., 2016; Wang & Pomerantz, 2009). On the other hand, youth in Mainland China may gain greater access to Western culture over the seventh grade as their parents may allow them more freedom to conduit of such culture (e.g., movies and the Internet), which although limited, may still provide information they integrate into their teen stereotypes. In addition, although youth in Mainland China may act responsibly, they may desire to act irresponsibly, but refrain from doing so given the societal and familial pressure for responsible behavior. It is possible that youth in Mainland China integrate their desire to act irresponsibly, which may be affirmed by the desires of their peers, into their teen stereotypes over time. Research is needed to elucidate the unfolding of youth’s teen stereotypes into later adolescence.

The differences in youth’s views of teens in Hong Kong and Chongqing were accompanied by similarity in regards to which attributes youth saw as being the most typical of teens (vs. young children). Both Hong Kong and Chongqing youth viewed peer orientation as the most typical of teens (vs. younger children), followed closely by individuation from parents. Notably, in their study of youth in the United States and Mainland China, Qu and colleagues (2016) also found that these attributes were seen as the most typical of teens in both countries. Western youth spend more time with peers as they move into adolescence (Larson & Verma, 1999), which may be the case in Hong Kong and Mainland China as well. In addition, peers appear to be similarly influential in shaping youth in the United States and China during early adolescence (e.g., Zhang et al., 2019).

Reciprocal Relations Between Teen Stereotypes and Problem Behavior

Although prior research suggests that stereotypes of teens as irresponsible undermine youth’s neural processes related to cognitive control and constructive behavior during adolescence (e.g., Qu et al., 2016, 2018, 2020), there has not been attention to the reciprocal pathways between youth’s stereotypes and behavior. To address this issue, the current research examined whether youth’s teen stereotypes and their problem behavior foreshadow one another over time. In both Hong Kong and Chongqing, seeing the teen (vs. younger) years as a time of increased family obligation and increased school disengagement predicted greater problem behavior among youth six months later, over and above youth’s initial problem behavior. This may reflect youth using teen stereotypes to set standards for their behavior (Buchanan & Hughes, 2009) or make predictions about the consequences of their behavior (Qu et al., 2020). Youth also appear to use their own behavior in deciding what the typical teen is like as evidenced in the pathway over time from youth’s behavior to their teen stereotypes. This pathway may reflect youth’s motivation to see their behavior as meeting the norms of their peer system so as to attain peer acceptance (e.g., Chang, 2004; Galván et al., 2011). Interestingly, the behavior to stereotype pathway was stronger than the stereotype to behavior pathway.
type to behavior pathway, whether this is limited to the thin slice of early adolescence studied in the current research needs attention.

Youth’s teen stereotypes in regard to individuation from parents and peer orientation were often concurrently associated with heightened problem behavior among youth. However, they did not predict problem behavior over time nor were they predicted by such behavior over time. This is not surprising when it comes to the peer orientation stereotype given that peers may exert both a constructive and unconstructive influence on youth, depending on peers’ characteristics (e.g., Brown, Bakken, Ameringer, & Mahon, 2008). For example, youth who associate with deviant peers during adolescence are more likely to engage in problem behavior, such as substance use, risky sexual behavior, and violence (e.g., Dishion, Bullock, & Granic, 2002; Vitaro, Brendgen, & Tremblay, 2000), but youth who associate with peers who engage in more constructive behavior (e.g., working hard in school) adopt such behavior over time (e.g., Shin & Ryan, 2014). The effects of stereotypes about teens’ individuation from parents may depend on whether youth are constructively individuating—for example, by taking more responsibility for themselves. Focusing on youth’s engagement in school, Qu and colleagues (2016) also found that only the lack of family obligation and school disengagement stereotypes were predictive.

Although adolescence may in part be socially constructed with teen stereotypes being a major mechanism of influence in how youth navigate this phase of development, biological influences are also important (for reviews, see Casey et al., 2008; Luciana & Collins, 2012). For example, advances in developmental neuroscience suggest that the development of the prefrontal cortex, which is key to the control system, and the ventral striatum, which is key to the reward system, during adolescence may contribute to problem behavior as well as other types of adjustment (e.g., Casey et al., 2008; Lee et al., 2014; Steinberg, 2007). A key question is whether these kinds of neural developments have an influence over and above youth’s teen stereotypes or whether they can be overridden by such stereotypes. Recent research suggests that social and biological influences may not be orthogonal (e.g., Chein, Albert, O’Brien, Uckert, & Steinberg, 2011; Guyer et al., 2015; Qu, Fuligni, Galván, & Telzer, 2015). In the case of teen stereotypes, as noted earlier, youth who see teens as irresponsible in the family context (e.g., ignoring family obligations) in middle school show increases in their bilateral ventrolateral prefrontal cortex activation during cognitive control over the transition to high school, which are associated with an increase in risk taking over this phase of development (Qu et al., 2018). It will be important to identify how teen stereotypes and biological influences work both separately and together to shape youth’s navigation of adolescence.

The Role of Teen Stereotypes in Region Differences in Problem Behavior

The reciprocal pathways between youth’s teen stereotypes and problem behavior shed light on the mechanisms underlying the tendency for youth in Hong Kong (vs. Chongqing) to engage in more problem behavior over the seventh grade. In line with prior research finding higher problem behavior among youth in Hong Kong (vs. Mainland China) as well as an increase over middle school in this region (e.g., Cheung et al., 2007; Shek & Lin, 2014, 2017; Shek & Zhu, 2018; Zhang, 2008), youth’s problem behavior in Hong Kong increased from the fall to spring of seventh grade: By the spring of seventh grade, problem behavior was higher among youth in Hong Kong than Chongqing. Mediation analyses suggest that the difference in problem behavior is undergirded by the tendency for youth in Hong Kong (vs. Chongqing) to view the teen years as less of a time of fulfilling family obligations and engaging in school, with the latter accounting for unique variance. Interestingly, the region differences in teen stereotypes were not explained by prior problem behavior given that problem behavior in the fall of seventh grade did not differ in the two regions. It is possible that as differences in youth’s problem behavior in the two regions develop, they may contribute to maintaining differences in later teen stereotypes that further feed into differences in youth’s problem behavior.

The difference we documented in youth’s problem behavior in Hong Kong and Chongqing falls into the small range (Cohen, 1988; Funder & Ozer, 2019). This may be due in part to problem behavior in Hong Kong just beginning to increase over the first year of middle school when many youth may just be beginning to see themselves as teens. For youth’s teen stereotypes, the region differences fall into what Cohen (1988) characterized as small to medium, but what Funder and Ozer (2019) more recently argued should be considered medium to large. These effects may not be larger because although Hong Kong is more Westernized than Chongqing, the two regions also share key cultural similarities. Moreover, variability among youth within each region may lead to variability in their teen stereotypes. The differences between Hong Kong and Chongqing in youth’s stereotypes may translate into smaller differences in their problem behavior given that the paths over time between youth’s stereotypes and their behavior are small in size. As children start middle school in seventh grade in both Hong Kong and Chongqing, they may only just be beginning to apply teen stereotypes and thus such stereotypes may not be reflected in youth’s problem behavior until later that year. It may also be that youth’s stereotypes exert small effects that accumulate over time; for example, given the reciprocal relations between teen stereotypes and problem behavior identified in this study, differences in youth’s problem behavior in Hong Kong and Chongqing may be larger by the high school years. It is also possible that the pathways between youth’s stereotypes and behavior are moderated by a variety of forces. For example, when youth do not see themselves as a typical teen or are not concerned with being a typical teen, they may be aware of their culture’s teen stereotypes, but may not use them to guide their behavior.

Limitations and Future Directions

The current research has several limitations that point to directions for future research. First, we examined teen stereotypes as youth navigate only a small slice of the early adolescent years—seventh grade. As a consequence, it is unclear as to whether the pattern identified here in terms of differences in youth’s teen stereotypes in Hong Kong and Chongqing and the relations over time of such stereotypes with youth’s problem behavior is evident as youth move through middle school and into high school. Future research taking a longitudinal approach with more time points to elucidate the developmental trajectories of teen stereotypes over a
larger slice of adolescence will be important. For example, youth's teen stereotypes became more negative from the fall to spring of seventh grade in Chongqing, but not Hong Kong, but it is unclear how such stereotypes continue to change as youth move into late adolescence in the two regions. Given the differences in exposure to Western culture and youth's adjustment during late adolescence in Hong Kong and Mainland China (e.g., Ng, Chan, & Ho, 2008), differences in youth's teen stereotypes in the two regions may persist over time. Indeed, Nelson and Chen (2007) suggest that youth in Mainland China have different conceptions of the transition to adulthood than do their Western counterparts. It is possible that the differences documented in the current research in youth's teen stereotypes in Hong Kong and Chongqing foreshadow the differences in conceptions of the transition to adulthood in the two regions. It is also possible that the role of teen stereotypes in youth's behavior is stronger during early (vs. later) adolescence, because youth are taking on a new role of which they are uncertain at this time and may thus be in active search of guiding information (Ruble, 1994).

Second, it is unclear where and how youth obtain their teen stereotypes. Even among youth in our Hong Kong and Chongqing samples, there was substantial variability in stereotypes (see Table 1). Although youth in each region are likely exposed to the mainstream views of teens endorsed by their culture via media depiction, institutional rules, and other conduits, their views are also likely shaped by other forces. As decades of developmental research suggests, parents and peers serve as important sources in conveying cultural values to youth in the socialization process (e.g., Bornstein, 2006; Chen, 2012). Thus, a key direction for future research is to examine the role of parents and peers in transmitting teen stereotypes to youth. It is possible that when parents hold views of teens as responsible (e.g., seeing adolescence as a time of school engagement), they may convey these views to youth through, for example, their expectations and conversations, thereby tempering the messages about teens youth are exposed to outside the home. When youth adopt views from parents that counter the irresponsible stereotypes, they may take more constructive pathways through adolescence.

Third, the differences documented between youth in Hong Kong and Chongqing should be taken with caution. For one, the substantial variation within each of the two regions suggests that the differences may not be evident among all youth residing in the two. It is also of note that although youth's teen stereotypes differed in Hong Kong and Chongqing, their reciprocal over-time relations with youth's problem behavior were similar in strength in the two regions. In addition, our samples do not represent the whole of each region. Caution is particularly warranted in generalizing from Chongqing to Mainland China where there may be substantial variation from province to province in terms of exposure to traditional Chinese culture as well as Western culture. Also of note is that although we speculated that the influence of Western culture may lead youth in Hong Kong to hold more Westernized teen stereotypes, other forces may be responsible. For example, there is less academic pressure in Hong Kong than Mainland China due to differences in the school system, as well as pathways to career and financial success.

Fourth, the current research relied solely on youth's self-reports. Such reports are often characterized by social desirability, response biases, and halo effects (e.g., Baumeister, Vohs, & Funder, 2007; Chen, Lee, & Stevenson, 1995; Holtgraves, 2004). Thus, it is possible that the associations between youth's teen stereotypes and problem behavior documented in the current research simply reflect shared method variance—due, for example, to social desirability. Our analyses addressed this to some extent in taking into account the concurrent associations between youth's stereotypes and behavior and the temporal stability of each when examining the reciprocal relations between the two, which we examined simultaneously, adding even more stringency. Moreover, research using experimental methods indicates that teen stereotypes influence problem behavior among youth (Qu et al., 2020). However, it will be important for future research to use additional assessment approaches. Most notably, youth's problem behavior can be assessed with peer, parent, and teacher reports as well as record data (e.g., from schools) to obtain a more accurate picture of such behavior. In addition, despite taking into account a variety of potential confounds (e.g., youth's pubertal development) in our analyses, we could not rule out all possible potential confounds. For example, affiliation with deviant peers is a strong predictor of youth's problem behavior (e.g., Ary, Duncan, Duncan, & Hops, 1999; Fergusson, Swain-Campbell, & Horwood, 2002), it may also influence youth's teen stereotypes and underlie the reciprocal relations evident in the current research.

Conclusions

Despite these limitations, the current research provides empirical evidence against the "one-size-fits-all" assumption for Chinese youth's teen stereotypes, highlighting important region heterogeneity in Hong Kong and Chongqing, a relatively less developed city in Mainland China. Youth in Hong Kong hold more Western views of adolescence, seeing the teen (vs. earlier) years as a time of dampened feelings of obligation to the family, as well as heightened individuation from parents, disengagement from school, and orientation toward peers than do their counterparts in Chongqing. Notably, in both Hong Kong and Chongqing, youth's teen stereotypes about family obligation and school disengagement predicted their subsequent problem behavior over time, which also predicted these stereotypes over time. Differences in youth's teen stereotypes in the two regions accounted for the heightened increase in problem behavior among youth in Hong Kong (vs. Chongqing). Taken together, the findings provide evidence for reciprocal relations between youth's teen stereotypes and their problem behavior, which shed light on stability as well as change in how youth navigate early adolescence.

References


Gretevant, H. D., & Cooper, C. R. (1986). Individualization in family relationships: A perspective on individual differences in the development of


Received May 9, 2019

Revision received January 31, 2020

Accepted February 5, 2020