

Chapter 3

Tied Together Wirelessly: How Maintaining Communication with Parents Affects College Adjustment and Integration



Dayna Staci Weintraub

Most college impact models limit the role of parents and families to demographic characteristics, namely education, occupation, and income, affecting student experiences and behaviors prior to matriculation (Sax & Wartman, 2010). Weidman's (1989) model of undergraduate socialization accounts for these traits but also asserts that parents continue to have a role during college. The updated model published in Weidman (2006) broadens the language to families, which reflects the engagement of members beyond parents (Kiyama & Harper, 2018). Specifically, the model recognizes that normative contexts and socialization processes influence students through both formal and informal interactions, including among those influences peers, faculty, community organizations, and parents and family members, though it is agnostic as to which of these influences has the larger effect on student development (Weidman, DeAngelo, & Bethea, 2014). To be more inclusive of the ways parents and families engage in their children's postsecondary education, this chapter will acknowledge the current movement to broaden the language to parents and families (Kiyama & Harper, 2018); however, most of the literature cited only includes parents, as did the study performed.

Given that Weidman's original research on undergraduate socialization arose in the 1970s at the demise of *in loco parentis* when students rebelled against universities' supervision and demanded increased autonomy and greater authority over their education and academic records, it was prescient to include parental socialization even though it may seem obvious given what we know of parents today. The current behavior of parents has a larger role in both the experience of administrators on college campuses, and in the cultural perception and media description of college life (Sax & Wartman, 2010). The most visible forms of increased parental involvement

D. S. Weintraub (✉)
Department of Higher Education in the Graduate School of Education,
Rutgers University-New Brunswick, New Brunswick, NJ, USA
e-mail: dayna.weintraub@rutgers.edu

are higher levels of parental intervention with college administrators on behalf of their children and excessive parental pressure on their children to achieve (Hofer, 2008). In many respects, this echoes the widespread pejorative image of helicopter parents or tiger moms. Viewed from a different perspective, parents are genuinely interested in their college student's development and are seeking knowledge on the appropriate ways to encourage and guide their child when navigating the college experience (Wartman & Savage, 2008).

Additionally, parents have the ability to participate in the college community, attending events such as orientation and sporting events, joining alumni or parent associations or volunteering in campus organizations. This sort of participation gives parents a greater investment in the community, and may increase their ownership of the college experience (Wartman & Savage, 2008). Research has not documented parent participation in these ways as having a direct influence on students' adjustment and integration (Sax & Wartman, 2010), though the potential for such an indirect effect is, of course, always possible. Thus, it is imperative to empirically study the reality of the parental influence and better understand its place within the hierarchy of socialization processes as to its effect on the undergraduate student.

Incessant in the media are stories of the overly-involved helicopter parent who smothers one's child, and of the combative "tiger mom" riding her child hard to supposed success (Lythcott-Haims, 2015; Poon, 2011). The mass media exaggerates "extreme behaviors" on the part of some parents as reported by student affairs administrators (e.g., "contacting the college late at night to report a mouse discovered in a daughter's room, expressing anger over a grade on a paper 'my son worked so hard on', or complaining about a roommate who snores") (Coburn, 2006, p. 9; Sax & Wartman, 2010, p. 219). Mullendore (2014) faults the emergence of the cell phone, which he refers to as "the world's longest umbilical cord," for the flare of helicopter parenting (web log comment para. 1). Others disagree and name the increase in college tuition as the culprit, suggesting that parents have a financial investment to protect and they are simply behaving like responsible consumers (Johnstone, 2005).

Parent involvement has further been heightened for Asian American students with recent critiques of the "Tiger Mom" phenomenon (Chang, 2011a). In January 2011, the *Wall Street Journal* published an essay entitled, "Why Chinese Mothers Are Superior" by Amy Chua (2011). This essay and the ensuing media attention thrust Asian American parents and their presumed parenting style, labeled "tiger parenting," into the spotlight (Poon, 2011). Tiger parents were characterized as controlling and authoritarian, dictating their children's activities and schedules in order to achieve academic success (Juang, Qin, & Park, 2013). And yet, many Asian cultures are dictated by Confucian ethics (Tu, 1976), emphasizing collectivism and intergenerational ties (Juang et al., 2013), meaning a complete breaking away from parents may in fact be detrimental to some Asian American students' adjustment. Indeed, a study of Chinese American students and their parents found that children wanted more independence but also felt sad when parental pressure was absent (Qin, Chang, Han, & Chee, 2012). This media narrative is also flawed in how it authenticates the model minority myth, which paints Asian American students as a

monolithic group achieving academic success (Chang, 2011b; Museus, 2013; Poon, 2011).

This unverified media narrative claiming that students' frequent contact with parents ultimately leads to the development of overly dependent and less self-reliant young adults is neither consistent with Weidman's model nor empirically proven. For starters, these sensationalized stories too often represent the type of practices and the social position of certain families, namely, college-educated White and Asian families from middle to upper class backgrounds or from monolithic groups (Chang, 2011a, 2011b; Museus, 2013; Poon, 2011; Sax & Wartman, 2010). In reality, however, parent engagement is far more complicated. Furthermore, these tales take aim at mothers, exaggerating certain maternal qualities, and ignore the contribution of fathers to the parental influence (Sax & Weintraub, 2014).

The reality is quite different from these narratives, with students, particularly daughters, looking for more communication with their fathers (Hofer & Moore, 2010; Sarigiani, Trumbell, & Camarena, 2013; Sax & Weintraub, 2014), and finding satisfaction with the role their parents play in their college lives (Sax & Weintraub, 2016). Different gender, racial, and socioeconomic groups may not communicate with their parents in the same ways and thus may experience dissimilar familial bonds and effects (Harper, Sax, & Wolf, 2012). Students, particularly those from marginalized groups, may need their parents to support them in today's fraught world of cultural conflict and interpersonal violence, and parents of children in such groups may be legitimately worried about who would seek to harm their children, physically or psychologically, when they are unable to be physically present.

For example, there are a number of situations that arise on campus where parents' concerns for their students' safety and emotional well-being is justified. In fact, the rise in critical incidents on college campuses (e.g., sexual victimization and racial hostility) implies a variety of catalysts for parental involvement and may influence enrollment decisions as parents and students watch closely at how administrators respond to such situations (Anderson, 2017). For instance, parents of women may have greater contact after an incident of sexual assault occurs on campus. Likewise, parents of African American students may be asking similar questions related to their student's emotional safety and inclusiveness on campus. These examples bring to light how some of the motivation for parents to remain connected with their college-going children will naturally vary by gender, race, and class, and that college adjustment and integration may also vary by demographic background (Harper et al., 2012; Sax & Weintraub, 2014; Sy & Brittan, 2008; Witkow, Huynh, & Fuligni, 2015).

Because students come from a variety of backgrounds, there cannot be a single model of parental engagement. For instance, higher-income parents may have certain tangible privileges and resources that free their time to be involved in their children's education. Working-class families may not have the same sort of discretionary time, but this does not negate the love, support, care, and interest they show towards their children's education performance and aspirations (Lareau, 2011). Among immigrant families, especially true for middle- and upper-income Asian families, fathers may return to their home country to work while mothers and

children remain in the United States, termed “astronaut families” (Tsong & Liu, 2009, p. 365). Parents may also interact differently with their children on the basis of gender (Sax, 2008; Sax & Wartman, 2010). The extent to which parent-child relationships during college may depend on factors such as race, class, and gender is a major focus of this research.

Weidman’s (1989) model acknowledges parent engagement as a socializing influence on students’ cognitive and affective outcomes. The socialization process involves the imparting of values and is likely to manifest itself in communication between students and parents, as opposed to indirect involvement parents may have with the university. While there are many forms of parental influence, examining communication provides insight into the level of contact students maintain with their parents during college. As such, this chapter demonstrates explicit linkages between students’ interaction with their parental figure(s) and their social and academic experiences during college. The research questions examined include:

1. How are student-parent interactions associated with key indicators of first-year adjustment? How does the association between student-parent interactions and first-year adjustment vary by gender, race and ethnicity, and class?
2. How are student-parent interactions associated with key indicators of fourth-year integration? How does the association between student-parent interactions and fourth-year success vary by gender, race and ethnicity, and class?

The discussion will explore how what we learn from the association between student-parent interactions on first-year integration and fourth-year success aligns with the depiction of the parent and familial role in undergraduate socialization in Weidman’s model.

Importance of Student-Parent Interactions

Technological advancements have transformed how students maintain ties with their parents during college. Students seek modes of interaction that allow for immediate feedback and can be performed ubiquitously (e.g., cell phone, text messaging, or email) (Chen & Katz, 2009; Sarigiani et al., 2013; Sax & Weintraub, 2014). However, as Sarigiani et al. (2013) point out, electronic forms of communication are rapidly expanding; therefore, it is imperative to reexamine this topic on a regular basis as the potential avenues for communication expand and evolve (Sarigiani et al., 2013). Despite the use of technology in their communication choices, a majority of students did not report frequent use of social media as a means of communicating with their parents (e.g., Skype and Facebook) (Sax & Weintraub, 2014).

Students' preference towards electronic methods over more antiquated modes such as face-to-face interaction or postal mail may not look the same across racial and ethnic groups (Sax & Weintraub, 2014). For instance, Latinx American students may maintain greater face-to-face interaction with parents compared to White, Black, and Asian students given the value they place on living at or close to home during college (Ovink & Kalogrides, 2015; Tornatzky, Lee, Mejia, & Tarant, 2003). Note that the "x" in Latinx is used as an inclusive term and indicates male, female, or non-binary gender preferences. By living closer to home, Latinx students maintain familial closeness and prioritize family responsibilities (Desmond & Turley, 2009), which has been shown to increase the likelihood of bachelor degree attainment in comparison to White students (Cerna, Pérez, & Sáenz, 2009) and provide students with emotional support, connection, and high expectations for achieving success (Guiffrida, Kiyama, Waterman, & Musues, 2012; Kiyama et al., 2015; Museus & Maramba, 2011). Most research on student-parent interactions has generally been descriptive in nature with a narrow focus on the frequency of communication and its differential impact on college outcomes (Harper et al., 2012; Sax & Wartman, 2010; Wolf, Sax, & Harper, 2009).

Impact of Student-Parent Interactions on College Outcomes

While researchers have focused on cataloguing the frequency, mode, and nature of students' interactions with their parents during college, there is a limited body of scholarship which explores the effects of student-parent interactions on college outcomes. Much of the scholarship that does exist focuses on the psychological relationship between students and parents. Each outcome will be summarized, with attention to general correlates, as well as the ways in which parental engagement impacts adjustment and integration, and how such engagement varies by gender, race and ethnicity, and class. With respect to these variables, most studies of gender in the college context apply a biologically or socially constructed binary definition (Johnson & Repta, 2012). Race and ethnicity can be taken in both broad, aggregated racial and ethnic categories, such as Asian and White, or broken into finer ethnic groups, such as Filipinx and Japanese; the studies considered below draw from both of these options. Disaggregated racial and ethnic data raises consciousness about the specific educational and social outcomes among subpopulations and prevents confounding errors in research by neglecting to consider the unique needs of subgroups (Teranishi, Behringer, Grey, & Parker, 2009). Class is even more complicated to represent, with most studies in sociology conceptualizing it as an income variable, while others in psychology consider parental education as the primary indicator of socioeconomic standing (Diemer, Mistry, Wadsworth, López, & Reimers, 2013; Duncan & Magnuson, 2003). Again, both options are useful in understanding the effect of class on college outcomes and are treated equally in this section.

First-Year Adjustment

College adjustment during the first year is critical to longer-term persistence, academic achievement, and personal development (Pascarella & Terenzini, 2005; Tinto, 1993). Socialization factors such as leadership in academic and social clubs and organizations, positive peer interactions, and relationships with faculty and administrators facilitate first-year adjustment (Astin, 1993; Bean & Eaton, 2001; Braxton, Milem, & Sullivan, 2000; Kuh, Kinzie, Schuh, & Whitt, 2010; Pascarella & Blimling, 1996; Pascarella & Terenzini, 2005; Tinto, 1993; Upcraft, Gardner, & Associates, 1989). Rayle and Chung (2007) also found that receiving social support from friends and family contributed to first-year adjustment. Students adjusted to the academic rigors of college when they maintained open communication with their parents (Wintre & Yaffe, 2000) and perceived a quality relationship (Sarigiani et al., 2013).

Existing research in first-year adjustment accounts for variations in family dynamics that are based on gender, racial and ethnic, and class differences. For women, having an attached relationship with parents was associated with higher psychological well-being and positive adjustment (Melendez & Melendez, 2010). Women's relationship with their parents became closer over time; however, men's relationships did not change (Hiester, Nordstrom, & Swenson, 2009). Maintaining ties with family and family support eased the transition for students of color attending predominantly White institutions (Barnett, 2004; Carter, Locks, & Winkle-Wagner, 2013; Hinderlie & Kenny, 2002).

With respect to socioeconomic status, familial support can be both helpful and hindering to students' adjustment. For example, while on the one hand, first-generation college students are grateful for the opportunities presented by obtaining a college education and are thus driven to excel academically, their obligation to work and help support their family financially can be a burden (Elkins, Braxton, & James, 2000; Wolf, 2011). As a result, frequent contact with family may place inordinate amount of pressure on these students to provide financial and emotional support, potentially negatively affecting their college experience. After all, frequent contact home may give families more opportunity to express to the student the challenges facing the family. When children grow up with more exposure to these challenges, they are inherently privy to the details of such challenges. Receiving this information while away at college may further exacerbate the tension between familial obligation and college responsibilities.

Fourth-Year Integration

Maintaining a strong social connection and affinity to one's institution by feeling a sense of belonging and exercising autonomy and confidence in academic decision-making are important measures of college success (Nora, Barlow, & Crisp, 2005; Pizzolato, 2005). At the core of students' success is integration, which historically occurred when students fully immersed themselves into the formal and informal

college academic and social environments (Tinto, 1975). Tinto's theory of integration involved the act of separating from family and hometown friends, and this has come under great scrutiny by many critics, especially by scholars concerned that his theory is not culturally appropriate for most students of color (e.g., Guiffrida, 2006; Rendón, Jalomo, & Nora, 2000; Tierney, 1992). Given that this theory was developed based on a Eurocentric paradigm, critics contend the act of separation would require students of color to assimilate away from their cultural values in order to acculturate into a campus dominated by a predominantly White perspective (Guiffrida, 2006; Kuh & Love, 2000; Rendón et al., 2000; Tierney, 1992). Aspects of attachment theory combined with separation deem it possible for students of color to identify with and remain enmeshed in their cultural heritage while also acclimating to the college campus.

For some students, separating from one's family is not a viable option. In a study of Filipina American women, students described their family and college experience as "inextricably linked" and constant challenges and negotiations surrounding the balance of family obligations, expectations and college responsibilities played a pivotal role in college decisions. Additionally, constant gender double standards posed real stressors for these students (Maramba, 2008a). Students constantly faced challenges and were forced to negotiate ways to preserve their Filipina American identity while simultaneously trying to integrate on campus. They experienced "biculturalism, generally defined as a process by which individuals learn to live in two different environments, the dominant culture and their ethnic minority culture" (Maramba, 2008b, p. 345).

In addition, scholars recommend a greater emphasis on how different racial and ethnic groups relate to attachment and separation-individuation theories, especially given tendencies of Asian/Asian American, African/African American, and Latinx American families to place greater value on the well-being of the family and the community over individual achievement (Mattanah, Brand, & Hancock, 2004; Triandis, 1995). Likewise, emphasis is placed on children's responsibility to fulfill family obligations (Sy & Brittan, 2008). That said, most studies do not consider race and ethnicity as a sole predictor of student-parent relationships; rather, they combine race and ethnicity with other variables such as parent education level, socioeconomic status, and gender.

Institutions of higher education have become more culturally responsive and engaging; therefore, while integration is key, it must not be at the expense of removing the responsibility from the institution to be culturally engaging and culturally responsive environments for all students. More recent studies on integration outcomes during college include a few that focus on the role of parents in academic matters, such as decision-making, career exploration, and performance.

In a qualitative study, Simmons (2008) found that students seek parental guidance on academic and career decisions. Similarly, students in Pizzolato and Hicklen's (2011) study described their parents as guiding their decision-making process, rather than meddling or intervening, thereby suggesting an interdependent relationship dynamic as opposed to overreliance. When students shared their academic interests and concerns with parents coupled with parents' encouragement

and expressions of their belief in their children's academic potential, students were more likely to excel academically (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994). Students who rated their parents as being supportive and granting appropriate levels of autonomy reported higher levels of integration. The supportive ratings diminished in salience somewhat from the first to fourth year, as students established new academic and social support communities (Strage & Brandt, 1999).

Parental involvement and contact with students' academic development varied by students' background characteristics (Wolf et al., 2009). Harper et al. (2012) extended this earlier study and identified student background differences in strength and directions between measures of parental involvement and frequency of parent contact on students' academic development, social satisfaction and sociopolitical awareness. These studies are particularly revealing given that most research fails to acknowledge the mutual reciprocity that students gain from being a receiver and provider of financial and emotional support from families (Wolf, 2011). For instance, students from Asian and Latin American families rely heavily on resources accumulated within and by the family (Fulgini, 2007). Furthermore, the act of students as providers for families during college (e.g., childcare assistance, financial support) can either be seen as diverting students' attention away from academic and social integration (Tinto, 1993), or can be seen as equipping students with the tools to understand independent living (Sy & Brittian, 2008; Wolf, 2011). These perspectives demonstrate the importance of instrumentation that considers the diverse experiences of students from all racial, ethnic, cultural, and economic backgrounds.

Method

Site

This investigation took place at a large, public, research university and among one of the most diverse with respect to socioeconomic, racial and ethnic diversity (website and news media sources) and enrollment from all 50 states and more than 100 countries. The institution also represents parents in local and distant locations providing a breadth of student-parent interaction patterns. Specifically, their annual Parent & Family Coffee Social day includes at least 55 locations representing 26 within the state, 21 out-of-state, and 8 countries.

Survey Instruments and Sampling History

This study merged data from two original surveys and a national instrument that served as a pretest assessment for the outcome measures. First, the study pulls baseline data capturing student characteristics upon matriculation to college from a single institution's participation in The Freshman Survey (TFS) administered by the

Cooperative Institutional Research Program (CIRP) at the Higher Education Research Institute (HERI) in 2011. Second, responses to the TFS were linked with this institution's annual Residential Life (RL survey) in spring 2012. A parent engagement module consisting of 40 questions which inquire about students' communication behaviors with their parental figure(s) was added to the RL survey in spring 2012. The parent engagement module had students self-identify up to two parental figures they interacted with the most. Answer options spanned a diverse range of parental and familial structures including mother, father, same-sex parents, adopted parents, and legal guardian/other (e.g., grandmother, foster parent, the State). Insufficient sample sizes prevented multivariate analysis beyond mother (combined with stepmother) and father (combined with stepfather).

These measures were pilot tested among 15 students in a student affairs graduate program in order to assess the reliability and comprehensibility of the instrument. Third, participants in both of these surveys were invited to participate in a follow up instrument, the Student-Parent Interactions (SPI) survey, to ascertain whether there was change in communication patterns with parental figure(s) 3 years later.

Final Longitudinal Sample

The population of the first wave consisted of 1155 first-year students who completed both the TFS and RL surveys and provided a student identifier to link their responses. Then, 574 students completed the follow-up survey. Of those, 368 students provided information on their communication with their mother (or stepmother) and father (or stepfather).

Parent 1 was identified as the mother (85.1%), followed by the father (14.9%), stepmother (0%), or stepfather (0%). Parent 2 was typically described as the father (83.7%), followed by mother (14.7%), stepfather (1.4%), or stepmother (0.3%). The gender breakdown of this sample was 67% female and 33% male. Among the sample, most students were domestic (97%) and 15.4% were first-generation college students. The overrepresentation of women and underrepresentation of international students in the sample increased somewhat from the first- to the fourth-year samples. The median income of the sample was \$100,600. The higher median income in the final sample (relative to the first-year only sample) is a result of attrition among students from lower-income families in the 3 years between surveys.

Conceptual Framework

Guided by Weidman (1989), the model for the current study considers parents as an internal force that is directly integrated into students' experience alongside students' interactions with other sources of influence (e.g., peers, professors, and advisors). The multi-stage model of undergraduate socialization accounts for the

impact of student background characteristics, as well as students' social interaction with groups outside the college context, including, but not limited to, non-college pressures or external commitments that may divert students' attention away from campus. Weidman's (1989) model indicates that socialization processes occur in normative contexts and these environments are defined as value laden formal and informal structures where students discover ideas and perspectives. Peers and professors are important socializing agents that can influence students' values, aspirations, and preferences (Weidman, 1989). By directly acknowledging parents as a socializing force while in college this model speaks to the notion that higher education institutions are not insular environments. Students have continued contact with outside influences, and in particular parents, during college. Relationships with parents before and during college affect students' acclimation and socialization process (Weidman, 1989).

The primary block of interest included measures of student-parent interactions, a proxy for parental socialization as named in the Weidman (1989) model. Weidman's (1989) model acknowledges parent engagement as a socializing influence on students' cognitive and affective outcomes. The socialization process involves the imparting of values and is likely to manifest itself in communication between students and parents, as opposed to indirect involvement parents may have with the university. While there are many forms of parental influence, examining communication provides insight into the level of contact students maintain with their parents during college. Notably, this model demonstrates the way students' interactions with their parents during the first and fourth years of college predict their adjustment and success within a college impact model. In this context, student-parent interactions are considered a form of involvement and socialization.

Furthermore, the current investigation acknowledged that the relationship between student-parent interactions and the outcomes may operate differently by gender, race and ethnicity, and class. Weidman's (1989) undergirding philosophy was applicable as the model speaks to students who are negotiating competing familial, cultural, and academic expectations. Additionally, because variables such as gender, race and ethnicity, and class can affect the outcome of student-parent interactions differently, this study also incorporated Sax's (2008) model of conditional effects, which factors in these variables. Finally, the models frames how college experiences, and student-parent interaction in particular, influenced students' college adjustment and integration.

Dependent Measures

This study examined three dependent outcomes pertaining to first-year adjustment and fourth-year integration in college. First-year adjustment involved how well students' transition to both the social, emotional, and academic spheres of the college experience. Fourth-year integration involves students' sense of connection and affinity to one's institution and the extent to which they are making academic deci-

sions. As supported by prior literature, the adjustment and integration measures included: sense of belonging (e.g., students' level of connectedness to their institution) (first and fourth year), emotional well-being (e.g., the degree to which students felt depressed, isolated from campus, lonely, and overwhelmed by all that they had to do) (first and fourth year), ease of academic adjustment to college (e.g., the extent to which students adjust to the academic demands of college) (first year), and academic integration (fourth year). The selection of variables that constitute each construct were either directly replicated or closely derived from factors that have been tested as reliable and valid constructs used in previous studies (Hurtado et al., 2007; Sax, Bryant, & Gilmartin, 2004).

Control Measures and Key Independent Variables

All independent variables were selected in accordance with Weidman's (1989) model of undergraduate socialization and blocked in the following temporal sequence: (0) pretest (when applicable), (1) student background characteristics/pre-college traits, (2) non-college pressures, (3) college experiences and behaviors, (4) interactions with agents of socialization, and (5) student-parent interactions.

Block 1: Student background characteristics examined in this study included gender, race and ethnicity, status as a first-generation college student, parent income, parent educated outside of the United States, parent born outside of the United States, and average high school grade (first-year models only) as both student and parent traits can have a strong influence on socialization processes (Weidman, 1989).

Block 2: Measures of non-college pressures are described as hours/week working for pay, hours/week spent volunteering, hours/week spent using online social networks for personal reasons, hours/week spent visiting home, and hours/week spent contributing to the needs of family.

Block 3: College experiences and behaviors that likely occurred in such formal and informal settings within the residence halls, dining halls, and in student clubs and organizations included: hours/week spent studying, hours/week spent exercising, and hours/week spent participating in student clubs and organizations.

Block 4: The study included two measures representing students contact with peers and professors: hours/week spent socializing with friends and students' ease getting to know faculty.

Block 5: The primary block of interest included measures of student-parent interactions, described the frequency, mode, and perceptions of students' communication behaviors with parents. Frequency of student-parent communication by mode is described as phone, text message, email, etc. Students' perceptions of their parents during their interactions equaled the difference between the sum of positive descriptors (respectful, helpful, interested, and supportive) and the sum of negative descriptors (overly involved, intrusive, uninterested, and overly critical). To understand students perceived level of satisfaction with the amount of communication that they have with their parents, this was a five-point Likert-type scale ranging

from a lot more than the student likes to a lot less than the student likes, with a middle option for students to indicate the communication is just the right amount.

Data Analysis

Factor Analyses

Exploratory factor analysis was used to reduce the number of dependent and independent variables. First, principal axis factoring using promax rotation to maximize the strength of each unique factor was performed on a sample of greater than 100 cases (Russell, 2002). Next, the default method of extracting factors with eigenvalues greater than 1 was applied. Within a factor, variables loaded at 0.35 or greater in order to be included (Agresti & Finlay, 1997). Then, to determine the factor's internal consistency, interrelatedness and reliability, the Cronbach's Alpha were analyzed and deemed acceptable at 0.65 or greater (Cortina, 1993; DeVellis, 2011). Finally, after creating the factors with the total sample, separate confirmatory analysis was performed by gender, race and ethnicity, and class to conform the reliability of the factors. After identifying the factors, confirmatory factor analysis verified that the measures of the construct were consistent with the hypothesized model and that one underlying construct explained the variables (Sharkness & DeAngelo, 2011).

Regression Analysis

Stepwise multiple regression analyses examined the unique effects of student-parent interactions on first-year adjustment and fourth-year integration outcomes. All variables were blocked in a temporal sequence as discussed previously. Parent variables entered after controlling for students' pre-college characteristics, institutional characteristics, and college experiences.

Multivariate Results

First-Year Adjustment

The first research question examined the association between student-parent interactions and key indicators of first-year adjustment, and assessed how gender, race and ethnicity, and class moderated the association. Table 3.1 displays the final regression results for each outcome of the three outcome measures used to define first-year adjustment. Included in Table 3.1 are variables that entered any of the

Table 3.1 Regression predicting first-year adjustment (N = 368)

	Emotional well-being		Academic adjustment		Sense of belonging	
	r final beta		r final beta		r final beta	
Block 0: Pretest						
Emotional well-being	0.46***	0.44***	N/A		N/A	
	(R ² = 0.21)					
Block 2: Student background characteristics/pre-college traits						
First-generation status	-0.10*	-0.09				
White/Caucasian			0.14**	0.07		
	(R ² = 0.22)		(R ² = 0.02)			
Block 3: Non-college pressures						
Hours/week: Using online social networking sites for personal reasons			-0.23***	-0.25***		
			(R ² = 0.07)			
Block 4: College experiences and behaviors						
No variables entered						
Block 5: Interactions with agents of socialization						
Socialize with friends	0.24	0.23***	0.09	0.15**	0.25	0.25***
Ease: Get to know faculty			0.28***	0.26***	0.11	0.08
	(R ² = 0.27)		(R ² = 0.16)		(R ² = 0.08)	
Block 6: Student-parent interactions						
Quality of interaction with father	0.19**	0.12**	0.17**	0.13**	0.17**	0.19***
Frequency of interaction with mother (all modes)					0.07	0.12*
Frequency of interaction with father (all modes)	-0.05	-0.11*			-0.08	-0.17**
Desiring more communication with mother			-0.09	-0.11*		
<i>Final R²</i>	(R ² = 0.29)		(R ² = 0.19)		(R ² = 0.13)	

Coefficients shown only for variables that entered the model. Significance indicated by *p < 0.05, **p < 0.01, ***p < 0.001

three regressions; blank cells indicate that a variable did not enter that particular model. This format enables visualization of the relevant variables across all models and to provide an overview of how student-parent variables are associated with the three dimensions of first-year adjustment.

The total proportion of variance accounted for by variables in each model included 29% (for emotional well-being), 19% (for academic adjustment), and 13% (for sense of belonging). Interestingly, interactions with agents of socialization accounted for a majority of the explained variance in all outcomes save for the emotional well-being model. In this case, the emotional well-being pretest, which was the only pretest included in any of the first-year models, accounted for the greatest proportion of variance in its associated outcome measure, followed by the interac-

tions with agents of socialization. Of particular note, although interactions with faculty and peers accounted for the greatest proportion of the variance in all measures of students' first-year adjustment, parent variables still explained a modest but statistically significant proportion of variance: emotional well-being (2%), academic adjustment (3%), and sense of belonging (5%).

Although the primary focus of this study is the effect of the student-parent interaction variables on measures of first-year adjustment, it is important to first review the role played by variables in prior blocks. Among background characteristics, those who identified as first-generation college students tended to report lower emotional well-being, and women indicated greater ease at adjusting to the academic demands of college (block 2). However, once socializing with friends was entered into the regression in block 5, both measures lost significance in their respective models, suggesting the effects of these variables are mediated by time spent socializing. With respect to forces that divert students' attention away from campus (block 3), the number of hours per week spent using online social networking sites for personal reasons negatively predicted first-year students' academic adjustment. No measures of college behaviors and experiences entered any of the models (block 4).

Among interactions with agents of socialization (block 5), spending time socializing with friends was a moderately strong positive predictor across all three outcomes. In addition, ease getting to know faculty entered as a positive predictor for academic adjustment and sense of belonging, though it lost significance by the final step. Taken together, these results speak to the important role that peers and professors play in students' first-year adjustment. Above all, the impact of socializing with friends on first-year adjustment underscores the value that contemporaries have on students' institutional affinity, wellness, and academic development.

Effects of the Parent Variables

Of the six parental communication measures included in block 5, at least two, and as many as three, were significant in any given model. In fact, perceived quality of interaction with fathers is positively associated with all three dependent variables, and perceived quality of interaction with mothers maintained a strong relationship with all three outcome variables until paternal quality entered the model. Furthermore, these findings suggest that the more secure that students feel towards their interactions with their parents, the more likely it is that they will acclimate to the college environment. The one exception to this is that higher frequency of interaction with fathers was a negative predictor of emotional well-being and sense of belonging. In addition to the general trends, desiring more communication with mothers negatively predicted academic adjustment among first-year students. In other words, either greater levels of interaction with mothers or desiring more interaction with mothers was associated with lower security (e.g., emotional well-being and sense of belonging) or levels of academic adjustment. Of course, the direction of effect cannot be known from these data: It is possible that students who feel less

secure or are having a difficult time adjusting are communicating more often with mothers and/or desire even greater interaction with mothers.

Comparing the regression coefficients across each outcome uncovers interesting interrelationships among parent variables. Across all three outcomes, the quality of interaction measures revealed a positive association with first-year adjustment, yet frequency of parental interaction and dissatisfaction with parental interaction showed negative relationships with the outcomes. Consider emotional well-being as an example. In this case, more frequent communication with fathers correlated with lower emotional well-being. It is not known whether students with a lower sense of their emotional well-being are subsequently communicating more frequently with fathers, or if frequency of communication results in lower emotional well-being. Though it is difficult to discern the relationship among the parent measures, broadly speaking a pattern emerges corresponding to the value of quantity versus quality of interaction in relationships with mothers and fathers during the first year of college. As noted earlier, perceived quality of interaction is associated with positive indicators of adjustment, whereas dissatisfaction with communication amount or frequency of communication showed a negative association. Thus, these findings accentuate a role for parents in first-year students' adjustment to college, bearing in mind the vast majority of the variance in these outcomes is explained by interactions with peers and faculty.

Fourth-Year Integration

Research Question 2 parsed out the relationship between student-parent interactions and key indicators of fourth-year integration, and explored how relationship differed by gender, race and ethnicity, and class. Fourth-year integration was defined using three constructs similar to the three factors that defined first-year adjustment. When available, the constructs were exact or near-exact replicas of the first-year measures. In a similar format, Table 3.2 summarizes the final regression results for each outcome measure used to define fourth-year integration.

The total proportion of variance accounted for by variables in each model included 30% (for emotional well-being), 38% (for academic integration), and 32% (for sense of belonging). For emotional well-being and sense of belonging, the first-year counterpart measure explained 20% of the variance in emotional well-being and sense of belonging. For academic integration, the pretest of first-year adjustment explained only 8% of the variance. Instead, the strongest predictor of fourth-year academic integration was ease getting to know faculty, which explained 19% of the variance in the outcome measure. In fact, consistent with the first-year results, interactions with agents of socialization explained the largest proportion of the variance across all measures of fourth-year integration. Parent measures played a much smaller role, only explaining 1% of the variance in academic integration; parent measures did not enter the equation at all for emotional well-being or sense of

Table 3.2 Regression predicting fourth-year integration (N = 368)

	Emotional well-being		Academic integration		Sense of belonging	
	r final beta		r final beta		r final beta	
Block 1: Pretest						
First-year emotional well-being	0.45***	0.42***		N/A	N/A	
First-year academic adjustment		N/A	0.29***	0.23***		N/A
First-year sense of belonging		N/A		N/A	0.44***	0.41***
	(R ² = 0.20)		(R ² = 0.08)		(R ² = 0.20)	
Block 2: Student background characteristics/pre-college traits						
Parent educated outside the US	-0.19**	-0.11*			-0.13**	-0.05
Parent born outside the US			-0.22	-0.10*		
Gender: Female			0.15**	0.14***		
	(R ² = 0.23)		(R ² = 0.14)		(R ² = 0.21)	
Block 3: Non-co liege pressures						
Visit home	-0.12**	-0.08			-0.11*	-0.12**
Hours week: Doing volunteer work	0.12**	0.08				
Hours week: Using online social networking sites for personal reasons			0.06	0.09*	0.08	0.07
	(R ² = 0.24)		(R ² = 0.15)		(R ² = 0.24)	
Block 4: College experiences and behaviors						
Hours week: Student clubs	0.15**	0.08			0.29***	0.21***
Hours/week: Studying			-0.11*	-0.11*		
Hours/week: Exercise/sports					0.19	0.10*
	(R ² = 0.25)		(R ² = 0.17)		(R ² = 0.30)	
Block 5: Interactions with agents of socialization						
Ease: Get to know faculty	0.23***	0.14**	0.50***	0.44***	0.21***	0.14**
Socialize with friends	0.22***	0.12**				
	(R ² = 0.30)		(R ² = 0.36)		(R ² = 0.32)	
Block 6: Student-parent interactions						
Quality of interaction with m other						
Quality of interaction with father			0.24***	0.12**		
Final R²	(R ² = 0.30)		(R ² = 0.38)		(R ² = 0.32)	

Coefficients shown only for variables that entered the model. Significance indicated by *p < 0.05, **p < 0.01, ***p < 0.001

belonging. Thus, it seems that the parental role has diminished to a negligible level by the fourth year of college.

As students progress to their fourth year in college, results indicated that certain college experiences and behaviors played the greatest role in students’ integration, while parents played a less pronounced role. For instance, the frequency with which students visit home was a negative predictor of both sense of belonging and emotional well-being. It is unclear whether students who are less attached to campus are

visiting home more often, or if frequent visits home lead to lower sense of belonging on campus. On the other hand, socializing with friends and time spent engaged in activities such as exercise/sports and clubs, use of online social networking sites that often involve a lot of peer contact, had positive and strong associations with emotional, academic, and social integration. Interestingly, the results pointed towards an evolution in which the use of online social networking sites for personal reasons may have changed over the 4 years. There are two possibilities to the positive association between students' use of online social networks and academic integration. First, students may be increasingly communicating with students on campus. Second, networking may be a part of courses (e.g., group discussion boards as a course requirement). With respect to the change in sign from the first year compared to the fourth year, this change could be the result of an increased independence from parents, increased comfort with online options, on the part of the student and/or parents, or some other explanation, but it is not necessarily related to development. The role of parental quality remains evident, but the overall strength is less than the effect of peers and professors. Finally, these data suggested that the relationship between students and their parents with fourth-year integration operated similarly across gender, race and ethnicity, and class.

Variations by Gender, Race and Ethnicity, and Class

The results revealed, to some extent, the relationship between student-parent interactions and key indicators of adjustment were moderated by students' gender, race and ethnicity, and status as a first-generation college student. These patterns did not remain in the fourth year; rather, the relationship between parental communication patterns and integration functioned similarly across gender, race, and class. Furthermore, interesting patterns were revealed in terms of the intersections of race and class, which aligns with previous research that identified SES differences among AAPI students' transition to college. Within this study, the patterns for high-income students were very similar to those of the White/Caucasian and the East and South Asian group and, similarly, low-income family communication effects on integration were echoed in the other racial groups. This may be due to similar dynamics in low-income and non-White/Caucasian households, or it may be that most of the high-income households are White/Caucasian, and therefore reflect many of the same students. This aligns with research that found an intersection between Asian American Pacific Islander students and income status (Museus & Vu, 2013). Specifically, AAPI students from higher-income families received greater parental expectations and matriculated in college at higher rates than their peers from lower-income families, and the higher SES students sought out parental guidance at higher rates than the lower SES students who turned to peers more so than parents (Museus & Vu, 2013).

The presence of differences in the role of parents across students' background characteristics was less than expected, which may be a product of the limited

sample. Given the unique racial and ethnic demographics with respect to certain racial groups, future research needs to collect more data from a larger and more diverse sample of institutions. Furthermore, by controlling for student background characteristics separately, interactions within categories and the intersectionality of multiple identities were not captured.

Discussion

This study adapted Weidman's (1989) model of undergraduate socialization, and later updated in Weidman (2006). While this study applied the 1989 model, the recommendations suggested by the findings consider both versions. It is important to acknowledge that this model was the first to consider the role of parents during college; and therefore, ahead of research on college impact models in this respect.

Students' interactions with parents do contribute favorably to adjustment and integration during the college years, but they do not appear to be interfering with their development. This might be interesting to consider in future iterations or adaptations of the model. More importantly, peers and faculty were shown to be much stronger influences in students' adjustment and integration. In alignment with these findings, Weidman's model explicitly considers parental socialization and the role parents play in career orientation and aspirations (Weidman et al., 2014); however, even the updated version does not specifically address how and where familial influence on students' college experiences belongs. Thus, rigorous studies with diverse samples and multiple time points that incorporate family traits and behaviors both upon matriculation and during the college years are recommended.

Kiyama and Harper (2018) push the field forward by proposing a Model of Parent and Family Characteristics, Engagement, & Support. This model centers the various ways family influence students during the college experience through self-efficacy, educational aspirations, family characteristics, social networks, dimensions of support, and involvement & engagement. Such a comprehensive approach to the various dimensions in which family intermingle with students' characteristics upon entering college, the outside family and community, college characteristics and institutional context demonstrate and support what the findings of this study suggest. Kiyama and Harper's (2018) model serves to elaborate on the work of Weidman and studies in the future should examine how to incorporate the nuance of Kiyama and Harper's (2018) work within Weidman's model. In other words, can Kiyama and Harper's (2018) model be extended to demonstrate the familial role within college characteristics on student outcomes and socialization process? While parental influence was not as strong of a predictor as interaction with peers and faculty, the role of parents is not independent of these other socializing influences. For instance, parents may influence who their children choose as peers, how much interaction the student initiates with faculty, and how much a student engages with the local community. Weidman's (1989) model does not posit nor account for the extent to which agents of socialization (e.g., parents, peers, and faculty) influence

each other. While Weidman's model suggests that personal and professional communities often provide strong normative contexts for human social behavior, the model shows them as external to the higher education institutions, though they are acknowledged to "spill over" (Weidman, 2006, p. 258). To this end, these "normative contexts" are central to the organizational structure of colleges and universities, and play a key role in the socialization of students (Weidman, 2006). Greater specificity and acknowledgement of the type and degree of this role would be helpful to explain.

Exploring the multi-faceted ways in which parents maintain influence during the college years also requires consideration of the substantial ways technology transforms the nature of student-parent communication. Advancements in technology provide a greater variety of communication modes for students to choose from and allow for more frequent communication. Understanding how accessibility of communication influences parents continued influence on student socialization is important.

Finally, it is important to expand the notion of parental involvement to familial engagement, largely to better meet the needs of an increasingly diverse college student body (Kiyama et al., 2015). Familial encouragement and support is very important for students' entry into college and persistence to graduation; however, knowing how to encourage and support one's college student may be uniquely challenging for families who are unfamiliar with college processes, costs, and, time commitments. While Weidman's (2006) model expands the language from parents to families, in this new iteration, family is grouped with friends and employers in a category of personal communities. In this version, even the role of families is less distinct. Though the survey provided students with the option of indicating a non-maternal or non-paternal parental figure (e.g., adopted parents, legal guardians, same-sex parent), an insufficient number of responses to these categories prevented them from being included in the analysis. Furthermore, this study combined biological and step-parents though they do not exert the identical influence. Future research should disaggregate parent types. Thus, familial ties should be considered throughout the college experience and remain at the center of the model, not only situated as a precollege factor nor grouped with other external factors such as employers and friends.

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