Home Environment, Family Involvement, and Emirati College Student Academic Achievement

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Abstract

In educational literature set in Western contexts, student performance is linked to positive family involvement and home environment; however, literature on the educational experience of college students in non-Western contexts, including the Gulf region, is scarce. Using both student and guardian surveys, this quantitative study investigates the effect of home environment and family involvement on the educational experience of students in a federally funded college in the United Arab Emirates (UAE) as well as links between these factors and students’ academic achievement. Results indicated that academic performance was linked to specific family involvement behaviors—categorized as enablers—financial, logistical, and physical supports; influences—interaction intended to shape values, opinions, and attitudes; and engagements—direct and demonstrable interaction—and to specific home environment factors including parents’ marital statuses, gender, family size, presence of siblings in college or university, parents’ education levels, and mother’s working status.

Keywords: family involvement, home environment, education in UAE, enablers, influences, engagements
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Appendix A: Study Constructs Sorted by Percentage Indicating Frequency or Agreement  
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Introduction

In the United Arab Emirates (UAE), federally funded post-secondary institutions employ mostly Western expatriate, multi-national instructors to deliver instruction in English to Arab Muslim Emirati students. The UAE is a recently developed country whose economy has developed swiftly from an agricultural economy based on pearl diving to a knowledge-based economy subsidized by oil revenues. The rapid development over a span of about forty years and an influx of foreign labor to fuel this development have led to social changes that affect different generations and groups of Emiratis in different ways.

In the abundant literature available on Western contexts, family involvement behaviors and home environment factors are consistently linked to academic performance at all levels of education (Henderson & Mapp, 2002; Howland, Anderson, & Smiley; Klomgah, 2007). Little academic literature exists on the educational experience of students in non-Western societies in the Gulf Cooperation Council (GCC) region. Understanding the relationships among home environment, family involvement behaviors, and academic performance in the UAE represents a dimension of insight critical to establishing effective educational policies in a unique non-Western society.

The paper begins with a two-part Literature Review providing an overview of the relationships among home environment, family involvement, and student performance in a Western context as well as a description of the Emirati context, including its economic development and social transitions. The Methodology section describes the study and survey instrument. The Results and Discussion section describes the respondents then reports and discusses the results, which are grouped by research question. The Conclusion summarizes the findings and recommends actions to be taken by policy makers and educators to provide a more effective educational experience for Emirati students.

Literature Review

The literature review contains two main sections. The first addresses family involvement, home environment, and academic performance in the Western context while the second presents important aspects of Emirati society needed to establish this study’s context.

Family Involvement, Home Environment, and Academic Performance in a Western Context

In early studies (Eagle, 1989) in the Western context, academic performance was associated primarily with socioeconomic status. However, as elements of socioeconomic status were examined separately, researchers reported that specific aspects of home environment and family involvement either enhanced or impeded student achievement. The term family involvement, replacing parental involvement in the mid-1990s, signaled a transition in Western societies from original two-parent households to alternate family structures (Henderson & Berla, 1994).
Family Involvement. Researchers found that family involvement varied widely among different home environments. Clark (1983) and Walburg (1984) concluded that high performing students tended to have warm and nurturing home environments with well-defined limits and abundant encouragement from family members. Becher (1984) and Clark asserted that, across all socioeconomic levels, students with poor performance had little or no encouragement from family, low family interaction, little monitoring of activities, and poorly defined limits on behavior.

By the late 1980s, three parenting styles were commonly used to describe family-student interactions (Dornbush, Ritter, Leiderman, Roberts, and Fraleigh, 1987):

- **Authoritarian:** little interaction between parents and students, parents’ punishing students for poor grades and responding to good grades with requests to do better
- **Authoritative:** frequent discussions between families and students, parents’ frequent encouragement, praising good grades, showing disapproval for poor grades, and providing offers of assistance when needed
- **Permissive:** parents’ indifference to grades and absence of household rules and/or established routines concerning student behaviors including homework, TV watching, bedtimes, chores, time spent outside the house, time spent with friends, and time spent on the phone.

Students reporting an authoritative parenting style tended to have the highest academic performance, while students reporting a permissive parenting style tended to have the lowest academic performance (Dornbush et al., 1987; Kellaghan, Sloane, Alvarez, & Bloom, 1993; Steinberg, Mounts, Lamborn, & Dornbush, 1989). Students from single-parent households (Dornbush et al., 1987) and high school dropouts (Rumberger, Ghatak, Poulas, Ritter, & Dornbush, 1990) consistently reported low achievement and mostly permissive parenting. Similar findings were reported in Henderson and Berla (1994), Henderson and Mapp (2002), Mueller (1995), and Stage (1998).

Up to the time of this study, promoting the authoritative parenting style was an integral part of awareness programs and school policies dealing with school-family interactions and student performance in the United States (Altschul, 2011; Blondal & Adalbjarnardottir, 2009; Bryan, 2005; Deforges & Abouchaar, 2004; Engerman & Baily, 2006; Gonzalez-DeHass, 2005; Henry, Merten, Plunkett, & Sands, 2008; Jaynes, 2007; Schlechter & Milevsky, 2010; Sheldon & Epstein, 2004). However, researchers often disagreed about the inclusion and effectiveness of specific parenting behaviors. According to Fehrmann, Keith, and Reimers (1987), limiting TV time and monitoring homework completion had no significant effect on academic performance, while Kellaghan, et al. (1993) noted that parental expectations and discipline (including limiting TV time and monitoring homework) were most significant. The mixed findings about the effectiveness of specific parenting behaviors established the need to examine the home environment of different population groups in more detail.
**Home Environment.** Eagle (1989) developed a Home Environment Scale (HES) establishing a relationship between key attributes of home environment and students’ Grade Point Average (GPA) divided into quartiles. The study found five key attributes associated with high student performance: a) mother’s education, b) father’s education, c) family income, d) father’s occupation, and e) number of key possessions (cars, dishwasher, TVs). Eagle hypothesized that students with higher academic achievement tended to come from more affluent families because the financial stability enabled families to provide a rich and stimulating home environment.

Eagle (1989) reported that students from households with two original parents tended to have high academic performance, while students from single parent households, whether father only or mother only, had low performance. Milne (1989) and Eagle found that males living without fathers exhibited lower academic performance than males living with fathers, while females from single parent households tended to perform better than females from two-parent households.

Pong (1997) found students who were living with one original parent and one stepparent often exhibited lower academic performance than students living with two original parents. Pong hypothesized that stepparents may have other obligations that limit resources available to the blended family. Heard (2007) supported Pong, stating that lower student performance often accompanied changes in the family structure, such as the death of a parent, divorce, remarriage, or the cohabitation of an unmarried biological parent with another adult, especially when such changes happen early in the student’s life.

The mother’s presence in the home, according to Heard (2007), is more important for academic performance earlier in childhood while the father’s presence becomes more important later in the student’s life. Henry, Plunkett, and Sands (2008) added that, in some population subgroups, males’ high performance was linked to their mothers’ having high expectations of them.

Eagle (1989) and Milne (1995) examined the effects of maternal working patterns, consistently finding that students from families with higher socioeconomic level performed better when mothers were not working, while students from low socioeconomic level families performed better when mothers were working even when, according to Battle (1997), the families were headed by single working mothers. Muller (1995) found that students across all socioeconomic levels performed better when mothers worked part-time.

Catsambis and Garland (1997), Catsamis (1998), and Carter (2002) found high achievement associated with different supporting behaviors in different population subgroups. The behaviors associated with high achievement were paying for private schools, engaging private tutors, promoting educational extracurricular activities, communicating frequently with school administration, maintaining strict supervision at home, talking regularly about post-secondary education opportunities, maintaining high levels of communication with students, expressing concern about learning opportunities in school, and engaging in routine activities such as discussing the day’s happenings or preparing the evening meal together.
Stevenson and Baker (1987) and Schlecter and Milevsky (2010) found that students who have involved parents performed better regardless of parental education. Other findings were that highly educated parents tended to be more involved in school activities than parents with low education levels; parents of all educational levels tended to be more involved in the education of younger students than in that of older students; and parental involvement in education over time was more consistent for females than for males.

Kells (1993) found that academic performance in students is adversely affected by the breakdown of the family structure, such as parental separation, divorce, or the death of a parent. When family structure breaks down, parents may have less time to devote to their students because they have their own emotional issues to deal with or because they might need to spend more time outside the home to earn money to make up for the contribution of the absent parent. Specific issues that are linked to students’ poor academic performance include lack of family concern for student progress, little or no family contact with school representatives even when requested by the school, little or no monitoring of or encouragement of students to complete homework assignments, and lack of support at home for school rules and disciplinary procedures.

Engerman and Bailey (2006) found that students with high academic performance tended to have friends who thought that attending class, studying, making good grades, attending high school, and graduating high school were important while students with low academic performance tended to have friends who did not think that. Engerman and Bailey advised that educational institutions can help low performing students develop alternate support systems in situations in which families are not supportive of or are indifferent to student achievement. Engerman and Baily suggest creating positive peer pressure to support at-risk students by encouraging them to participate in clubs, campus-based hobbies, inspirational activities, or peer mentoring.

Family Involvement in Educational Settings. According to Fillwalk-Zygmunt (2006), six factors must be present to ensure successful family involvement programs in schools: effective two-way communication between school and family, providing families with support in knowing how to help their students, supporting family efforts that encourage students to learn at home, providing meaningful opportunities for families to volunteer at school, offering families some input in decision-making at the school, and increasing community involvement to create networks that support school and families. Graves-Smith (2006) cautioned that some parents choose not to be involved with the institution, but still genuinely support their students and encourage their success at home. Altschul (2011), Jeynes (2011), and Bower and Griffin (2011) added that home-based family involvement was more strongly associated with high student performance than institution-based family involvement.

According to Hoover-Dempsey and Sandler (1995), parents choose not to be involved in their students’ education because they perceive that they do not have a role to play (or do not have the skills to play that role), their involvement does not make a difference, or teachers or students do not want their involvement. Clark (1993) stated that uninvolved parents often feel they lack “knowledge of how to help” (p. 104) or do not want to modify their involvement even when made aware of the benefits of doing so (Oyserman, Brickman, & Rhodes, 2007).
Cripps and Zyromski (2009) examined contexts in which families were not encouraging and not supportive and found a link to negative student self-images and poor academic performance.

**Factors Affecting Student Achievement in Post-Secondary Education.** Studies, including Gifford, Briceno-Perrit, and Mizano (2006), consistently found that students in higher education who exhibit intrinsic motivation have higher academic performance and greater persistence. In a study by Moore, Armstrong, and Pearson (2008), highly motivated and high performing students reported missing classes when they were more confident about their own abilities and their mastery of material, feeling that the classes were boring or being unconvinced of the relevance of the course to their program choice or future career.

Green, Marti, and McClenny (2008) reported that, for students in some disadvantaged population groups, even positive behaviors such as high class attendance, participating in classroom discussions, and expending at least as much effort as their less disadvantaged classmates often did not assure similarly high outcomes. Green, et al. hypothesized that poor prior education experience served as a barrier to achievement. Engstrom and Tinto (2008) added that low English proficiency—which is a particular challenge in first generation, non-English speaking, immigrant families or ethnic subgroups—often serves as a barrier to academic performance. Gofen (2008) supported Engstrom and Tinto in their findings, adding that, despite their good intentions, first generation immigrant parents, who often lack both post-secondary education experience and English language proficiency, are often unable to support students effectively through their post-secondary educational experience.

In the United States, by the late 1990s, an increasing number of students over age 25, or non-traditional students, began entering post-secondary education. Non-traditional students were more frequently working, married, and/or themselves parents with full financial and social autonomy than were traditional students. For non-traditional students, family involvement centered on spousal encouragement and support as well as their sense of responsibility to provide for their families (Donahue & Wong, 1997). Older students tended to be more achievement-oriented, more collaborative, and less competitive than their traditional counterparts. Follow up studies by Chee, Pinto, and Smith (2005), Donohue and Wong (2005), and Romanowski (2004) reported similar findings.

Charton, Barrow, and Hornby-Atkinson (2006) isolated five factors that significantly contributed to the withdrawal of first year university students:

- *psychological health*—personal issues causing stress or affecting overall mental health;
- *motivation preparedness*—lack of intrinsic motivation or an erroneous expectation of time and effort commitments needed to succeed in higher education;
- *education*—poor prior academic preparation;
- *age*—non-traditional students tend to have more potential distractions, i.e. work, children, and other responsibilities, but tend to be more committed;
- *gender*—females exhibited more intrinsic motivation and males exhibited more
extrinsic motivation. Males withdrew more frequently due to financial problems, poor study skills, poor academic progress, finding studies difficult, or a lack of understanding of the relevance of required courses, while females pulled out primarily for health reasons (most commonly pregnancy), homesickness, or concern for dependents.

DeBerard, Julka, and Spielmans (2004) supported Charton, et al. (2006), adding that students with higher socioeconomic backgrounds, prior high academic achievement, highly developed social support, and adequate coping strategies tended to have higher academic achievement.

Section Summary. In literature on academic performance in Western contexts, the authoritative parenting style was linked to high academic achievement while the permissive and authoritarian parenting styles were linked to low academic performance. However, studies disagreed on which specific family involvements were represented in each parenting style. This study examines three specific family involvement groupings as constructs for this study: enablers—financial, logistical, or physical supports aiding students to persist in their studies; engagements—direct and demonstrable interactions among students, families, and educators; and influences—interactions intended to lead to change in student attitudes, opinions, or behaviors. The study examines the significance of each type of family involvement on academic performance. Key aspects of home environment identified in the literature as being associated with either high or low performance, are examined, including: number of years in post-secondary education, age, gender, location, family size, number of siblings in college, education of parents, working status of parents, marital status of parents, and marital status of students.

Background of the UAE

The society has experienced social transition related to rapid economic development and an influx of expatriate labor, including Western expatriate post-secondary instructors. This section contains an introduction highlighting differences between Arab and Western cultures that can potentially lead to a breakdown of intercultural communication followed by a description of important aspects of Emirati society, issues in education, and a section summary.

Introduction to Arab Societies. Klein and Kuperman (2008) examined Western and non-Western Arab societies, highlighting differences that often cause misunderstandings among their respective members. Arab societies tend to be collectivist, to promote interdependence, to expect discussion and consultation in decision-making, and to value maintaining relationships more than being efficient or cost effective. In Western societies, independence is encouraged, decisions are more personal, and efficiency or cost-effectiveness is valued over maintaining relationships. The concept of time in Arab societies is more relaxed than in Western societies, and the technique of saving face—diffusing, putting off, or ignoring an unfavorable idea or decision—is often preferred over direct rejection. Westerners tend to use hypothetical models to come up with speculative solutions while Arabs tend to use concrete reasoning with a past or present situation as the frame of reference. To Westerners, Arab decision-making may seem emotional. To Arabs, Western style decision-making may seem harsh.
Emirati Society in Transition. Trading mostly in pearls and dates, people in the area known as the UAE were global traders for thousands of years. However, after the decline of the natural pearl trade and through the UAE’s isolation as a British Protectorate into the late 1960s, the nation fell into intense poverty, with most areas lacking even basic health care, education, electricity, running water, and other modern necessities (Al Abed, Vine, Hellyer, & Vine, 2008; Alsayegh, 2001).

Oil exploration began in the region in the late 1930s while the region was under the British protectorate (Alsayegh, 1998). However, it was not until after nationalization, in 1971, that oil revenues were used to fund expansive public projects that developed into a basic infrastructure by the 1990s (Al Abed et al., 2008). Alsayegh (2001) reports that, after nationalization, Emiratis migrated from rural areas to cities, which caused a shift from their traditional transient lifestyle to a more stationary lifestyle. An influx of skilled and unskilled expatriate labor increased the rate of economic expansion. Technology, including computers, internet service, and mobile phones, had become an important part of the growing economy by the early 2000s (Al Abed et al., 2008).

At the time of this study’s publication, the population consisted of nearly 80% expatriate workers (United Arab Emirates National Bureau of Statistics, 2012) with English, rather than Arabic, being most commonly used in business and in government-funded post-secondary education instruction (Al Abed et al., 2008). The first post-secondary institution opened in 1977 (Al Abed et al., 2008), with additional universities and a system of technical colleges opening in the late 1980s (Wagie & Fox, 2006). By the mid-2000s, female Emiratis outnumbered males by factor of two to one in post-secondary educational persistence (Ridge, 2010), demonstrating the government’s commitment to make education and employment opportunities available to both males and females (Al Abed et al., 2008). More males than females took advantage of the employment options before they completed higher education while more females, under less pressure from their families to work than males were (Ridge, 2010), were able to continue their studies to higher levels before seeking employment.

With the UAE’s growing international exposure came the fear that traditional and cultural values were eroding. Allagui and Breslow (2011) reported that the majority (67%) of 18-year-old Emiratis surveyed spent more time on the internet chatting with friends than visiting family members. In the same study, the increased use of English language in popular social media websites was blamed for the decreasing proficiency in Arabic language that was exhibited by Emirati youth.

Emirati university students, in a study by Hussane (2011), were most concerned about road accidents (86%), the effects of smoking (85%), high divorce rates (84%), and high school dropout rates (80%). The results reflected the reality of high traffic fatalities, smoking related illnesses, increasingly high divorce rates—especially among young Emirati couples—and concerns that young Emiratis males, who continue on to college or university only half as frequently as females (Ridge, 2010), may not be prepared to take care of their future families.
At the time of the current study, marriage was an expectation for Emirati males and females, but women were marrying later and desiring fewer children than their predecessors. In a study by Crabtree (2007), female college students 22-24 years old reported that the marriage age of their mothers was 13-15 years old. In addition, students who reported having eight or nine siblings indicated that they anticipated having five or fewer children. The findings of this study reflect a general trend in the Middle East and North Africa region according to The Demography of the Arab World and the Middle East from the 1950s to the 2000s: A Survey of Changes and a Statistical Assessment (Tabutin & Shoumaker, 2005).

According to Crabtree (2007) and Schvaneveldt, et al. (2005), in the past, male family members accompanied females when they left the house, but females were gaining more social mobility by the mid-2000s. Older female relatives, such as mothers with their own cars, older married sisters, and post-menopausal female relatives accompanied younger, unmarried females. Older married women were often consulted on family matters and served as the informal support system in extended family groups.

According to Simidi and Kamali (2004), the two core factors influencing Emirati society were religion and family expectations. Males were perceived to be financially and socially responsible for their nuclear families and for females in their extended families (Crabtree, 2007; Tabutin & Shoumaker, 2005). However, Alsayegh (2001), Crabtree (2007), and Schvaneveldt, et al. (2005) reported concerns that the effects of globalization and relatively high degree of personal freedom experienced by Emirati males were counter-productive to developing the character and discipline needed to become respected heads of households and community leaders.

Issues in Education in the UAE. The Arab Knowledge Report 2010/2011: Preparing Future Generations for the Knowledge Society (United Nations Development Programme/ Regional Bureau for Arab States and Mohamed bin Rashid Al Maktoum Foundation, 2011) found that the educational issues needing attention were early education, English literacy, and the social and cultural factors needed to prepare Emirati youth for the knowledge economy. Increasing family involvement was identified as an important factor in achieving educational aims and addressing social and cultural factors. Ridge’s (2010) study supported the argument that parents must be more active in their students’ education by “demanding higher standards from their [male] students” (p. 29) because, according to Wagie and Fox (2005), “Arab societies emphasize the authority of the parents, especially the fathers” (p. 284). Schools, according to Ridge (2010), faced “a lack of support from parents, often around disciplinary matters” (p. 29) and did not engage in regular communication with parents regarding student progress and achievement. Ridge added that parents who had little or no formal education tended to expect male students to work as early as possible rather than to pursue education beyond compulsory levels.

Ahmed (2011) reported Emirati students often made program study choices based on the perceived ease of jobs and workplace conditions rather than the alignment of their skills and aptitudes: “Pupils . . . wanted government jobs so they could follow in their parents’ footsteps” (Ahmed, 2011, p. 4). Hilal and Bahri (2000) found that authoritarian practices in schools reinforced the dependent behaviors and fear of making mistakes, resulting in Emirati students’ being less independent and less able to evaluate their self-worth than were similar aged students in Western contexts.
Bright and Mahdi (2012) noted that, in collectivist societies such as the UAE, the social norms of family groups highly influence the behaviors of the individuals. Cultural differences between home environment and learning environment, according to Cutright (2008), contribute to the differing views held by students, families, and educators, which can adversely affect academic achievement. Therefore, understanding the relationships among family involvement, home environment, and academic achievement is very important in the case of the UAE.

Section Summary. The literature presented in this section describes important transitions in Emirati society. Even though the family is perceived as the core of Emirati society, social norms such as marriage age, family size, family structure, the desirable level of educational attainment, the working status of women, and the roles of men and women in society are changing, making the relationships among home environment, family involvement, and student achievement even more important to understand.

Limitations

The study consisted of only Emirati students studying at a federally funded college in the northern emirates and did not include Emiratis studying at federally funded universities in other emirates or other private higher education institutions. As a result, although the findings are not generalizable, the study serves to develop an understanding of the relationships among home environment, family involvement, and student achievement, which can be used to provide the necessary background understanding for future studies on this topic.

Methodology

Using two surveys, one for students and another for guardians, this study examined the relationships among family involvement, home environment, and Emirati college student performance based on the following research questions:

- How are Emirati families involved in their college students’ education?
- How does family involvement vary when controlling for selected factors of home environment?
- How does family involvement differ between male and female students, if at all?
- How does family involvement differ across levels of college education, if at all?
- How does family involvement and home environment vary between high performing and low performing students?
- What are guardians’ perceptions of and beliefs regarding family involvement?
Research Design

This study was framed by the literature discussed above, and family involvement was categorized into three interrelated constructs: enablers—financial, logistical, or physical supports enabling students to persist in education; engagements—direct and demonstrable interaction among students, families, and educators; and influences—interaction intended to lead to change in students’ attitudes, opinions, or beliefs. In addition, important home environment factors were examined including location, family size, family structure, parents’ education, parents’ marital status, and students’ marital status.

Student Online Survey. The 66-item bilingual student survey was developed by the research team by identifying family involvement behaviors and home environment factors associated with student achievement based on the relevant literature. The survey was organized into three sections. The first section asked students for demographic information, followed by a section asking students to rate the frequency of engaging in key family involvement behaviors, which were identified in the literature, as “never,” “seldom,” “often,” or “always” or “daily,” “weekly,” “monthly,” or “less than monthly” depending on the question. The third section asked students to rate, on a scale of one to five, their agreement with statements reflecting their attitudes and opinions on issues related to their educational experience and family involvement in their educational experience. Attitude and opinion items asked respondents to rate a strong positive statement using a 5-point Likert scale in which responses of “strongly agree (5)” and “agree (4)” or “always (5)” and “most of the time (4)” indicated high levels of family involvement and responses of “strongly disagree (1)” and “disagree (2)” or “never (1)” and “sometimes (2)” indicated low levels of involvement.

Once compiled, the survey was reviewed for cultural sensitivity by an Emirati research team member who was the Dean of Student Services at the time, translated into Arabic by the official college Arabic language translator and editor, and reviewed by an Arab member of the research team for accuracy and readability. The survey was piloted with a mixed-gender group of 37 students, modified, and administered again with 10 different students, then loaded into an online delivery system and made accessible through the college portal. Although the study sought a sample of 800 surveys from a total population of 2,800 students, 1,173 completed surveys were received.

The online delivery system exported the survey responses and other information, including the student’s section, program, credential, semester level, gender, and cumulative GPA into a spreadsheet along with a unique identification number, generated for each respondent. This information was unrelated to the college record and that was not personally identifiable.

Guardian Telephone Survey. The 29-item guardian telephone survey was designed to supplement and support the data obtained from the student survey. It was translated into Arabic by the official college translator and editor. The survey was vetted for cultural sensitivity by an Emirati research team member who was the Dean of Student Services at the time. She also verified the translated Arabic. During the pilot phase, the Arabic-speaking interviewer was
trained using the first five randomly selected potential guardians out of a pool of 100. The target of 30 completed surveys was kept intentionally low because eliciting personal information by phone was a novelty at the time of the study.

**Analysis of Student and Guardian Surveys.** Data analysis consisted of two phases. In the first phase, both student and guardian survey data were coded and run through SPSS and StatPLUS statistical software to obtain descriptive statistics and correlations (Pearson r).

In the second phase of the analysis, which was carried out on student survey data only, a series of **index tables**—also known as **composite indicators**—were created following the model recommended in the *Handbook on Constructing Composite Indicators: Methodology and User’s Guide* (Organization for Economic Co-Operation and Development [OECD], 2008) to analyze the complex and varied data gathered in the 66-question student survey. According to the OECD, there is a “growing interest in composite indicators in academic circles, [in] the media, and among policy makers” (p. 15) because composite indicators “can summarize complex, multi-dimensional realities with a view toward supporting decision-makers, are easier to interpret than a battery of many separate indicators,” and “reduce the visible size of a set of indicators without dropping the underlying information base” (p. 13).

Family involvement constructs in the index tables were assigned weights of 1 for “strongly disagree” or “never”; 2 for “disagree” or “sometimes”; 3 for “agree” or “most of the time”; and 4 for “strongly agree” or “always.” Student Grade Point Averages (GPA) were weighted by quartiles: 0.25 for first quartile (lowest scores); 0.5 for second quartile (medium-low scores); 0.75 for third quartile (medium-high scores); and 1 for fourth quartile (high scores).

An index table examining the relationships between family involvement constructs and home environment factors was created by averaging the weighted responses for each item in every family involvement construct and for each home environment factor, rounding to the thousandths decimal place. Significant values were established as the highest rating minus 0.005 and the lowest rating plus 0.005.

An index table examining relationships between family involvement constructs and academic achievement was created by multiplying the weighted family involvement construct indicator by the weighted GPA indicator. Weighted scores were averaged for each family involvement construct and sorted from least to greatest. The mean value for all averages was calculated with the significance level determined at one standard deviation above and below the mean score.

An index table examining relationships between academic achievement and home environment factors was created by multiplying the weighted GPA indicators by the number of students with each home environment factor, and dividing by the total number of students in each category. The mean score was calculated with the significance levels being determined at one standard deviation above and below the mean.
Results and Discussion

Results of the study are reported and discussed in this section. The participants are described in the first subsection followed by a presentation and discussion of findings grouped by research question.

The results reflect and support demographic trends described in the literature, including the shift from rural to urban lifestyles, students’ living in extended families and having more siblings than do typical Western families, students’ having a higher level of education than their parents, students’ marrying later than their parents, more females than males being in higher education, and the expectation that males, especially married males, should work and provide financially for their families.

The results demonstrated that Emirati families that had students in post-secondary education supported them financially and through encouragement but did not necessarily know how to support them to foster academic success. In families in which parents had little or no education, siblings, especially sisters, were increasingly providing academic guidance and support. Societal concerns over the low post-secondary persistence of males and beliefs that males should be prepared to be financially responsible for their families was reflected in that there was a higher degree of family involvement in males’ educational experiences than in females’ educational experiences. Another interpretation could be that the females’ primary and secondary education base was stronger, according to the literature, so the males who persisted to the post-secondary level needed more family involvement to achieve satisfactory performance. Males in the study had higher average GPAs than did females, which indicates that males felt pressure from their families to succeed academically. Another interpretation of these findings could be that higher levels of family involvement produced better academic results.

Finally, participants often pursued majors that their families believed were important to gain employment with a good salary, benefits, and working conditions rather than following their individual desires, aptitudes, and career preferences. Many participants believed that their families would find jobs for them after graduation.

Description of Participants

Of the 1,173 students surveyed, 90% were female and 10% were male, with 81% being from 19-22 years old. About half (54%) were from the main urban center while 46% were from outlying areas. About half (51%) had nine or more family members, with 78% having at least one sibling studying in a college or university.

Most students (74%) lived in households headed by parents; of these, 18% lived with the father only and 14% lived with the mother only. The other 26% lived with a spouse, grandparents, siblings, uncles or aunts, alone, or otherwise. Around 8% had divorced parents. Students were not asked about deceased parents.

Most students (88%) were single. Of the 138 married or previously married students, 52% had at least one child, 41% had up to three children, and 11% had between four and 10 children. Most
students (95%) were not working. Of the 60 employed students (5% of total sample), 34 were female (3% of female sample) and 26 were male (23% of the male sample). Proportionately, nearly 8 times more males were working than females, and 91% of the married males were working.

The findings support the assertions of Ridge (2010), Ridge (2009), and Kamali and Simidi (2004) that, although female post-secondary participation is higher than that of males, males shoulder the financial burden of the family. This burden, and corresponding social pressure, is even heavier when males are married.

As shown in Table 1, educational levels of mothers and fathers were similar at all levels and positively ($r = .566, p < .001$) correlated to each other. Most students with fathers who had low education had mothers with low education. Most students with fathers who had higher education had mothers with higher education. Nearly 10% of students did not know their parents’ education level.

### Table 1: Parents’ Education Level

<table>
<thead>
<tr>
<th>Responses</th>
<th>Father’s Education</th>
<th>Mother’s Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%-age</td>
</tr>
<tr>
<td>I don’t know</td>
<td>129</td>
<td>11%</td>
</tr>
<tr>
<td>No Education</td>
<td>161</td>
<td>14%</td>
</tr>
<tr>
<td>Primary School</td>
<td>287</td>
<td>25%</td>
</tr>
<tr>
<td>Secondary School</td>
<td>343</td>
<td>29%</td>
</tr>
<tr>
<td>College/University Graduate</td>
<td>212</td>
<td>18%</td>
</tr>
<tr>
<td>Master’s Qualification or higher</td>
<td>41</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>1,173</td>
<td>100%</td>
</tr>
</tbody>
</table>

Existence of the generational gap described by Crabtree (2007), and Schevaneveldt, et al. is supported by the findings in which 50% of the parents of college students had no more than a primary education. Such a generational educational gap, according to Schlechter and Milevsky (2010), can disadvantage college students because parents do not fully understand the expectations of attending post-secondary education in terms of time and effort. Families may expect students to perform family obligations that limit time available outside of class to study or might not be aware of appropriate study habits to try to instill in their students at a young age.

Most (67%) students used English only in college both in and outside the classroom to speak to teachers and staff but not to friends, while 31% spoke English outside the college to friends or family as shown in Table 2.
Table 2: Students’ English Usage

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not comfortable Speaking English at all</td>
<td>28</td>
<td>2%</td>
</tr>
<tr>
<td>Uses English at college only as required in classroom</td>
<td>50</td>
<td>4%</td>
</tr>
<tr>
<td>Uses English at college only but not only in classroom</td>
<td>733</td>
<td>63%</td>
</tr>
<tr>
<td>Uses English with friends inside and outside college</td>
<td>257</td>
<td>22%</td>
</tr>
<tr>
<td>Uses English at home with family members</td>
<td>105</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>1,173</td>
<td>100%</td>
</tr>
</tbody>
</table>

The combined factors of parental education and the use of English supports the arguments made by Engstrom and Tinto (2008) and Gofen (2008), which suggest that Emirati students may have parents who are not equipped to assist them in their studies, especially in English, when it is not spoken in the home.

Half (50%) the students’ fathers were working, 47% had fathers who were unemployed or retired, and 3% did not know their fathers’ work statuses. In addition, about 16% had working mothers. Contrary to expectations, the number of working mothers was not significantly correlated to students’ having divorced parents or non-working fathers. However, similar to the literature, students’ having working mothers was linked to their higher achievement.

Results showed that students missed college for a variety of reasons, including 71% for medical reasons (sick at hospital, sick at home, and medical appointment), 53% for family maintenance (non-medical appointment, taking family member to appointments, work-related obligation, taking care of sick child or family member), and 21% for personal reasons (did not feel like attending college or slept in). Results suggest that families were tolerant of students’ missing classes for non-medical reasons, which further supports the assertion that families whose decision makers do not have the experience of post-secondary education often do not encourage the positive behaviors needed for their students to be successful.

Research Question 1: How are Emirati families involved in their college students’ education?

Family involvement tended to be highest in the behavioral category of **enablers**, followed by **influences** and **engagements**, respectively. Family involvement results can be found in Appendix A.

The family involvement behaviors most frequently reported were enablers—financial, logistic, and physical support—which require the least amount of personal interaction. Family involvement behaviors that involve the most personal interaction were engagements—direct and demonstrable interactions among students and family members—and these were reported least frequently.
**Enablers.** Financial support, including providing money for food every day (95%) and providing computer, printer, paper, and other materials needed to study (92%), was the most frequently provided support. Only working males indicated not receiving financial support from their families. Among enabling behaviors, providing tutors to help with college work occurred least frequently (15%).

According to Wage and Fox (2005), eligible Emiratis attend federally funded post-secondary institutions without paying for tuition or books. However, students must provide their own supplies and any equipment required for specific programs such as laptop computers, iPads, drawing kits, or other specialized items, in addition to transportation. The data suggests that the presence of enablers is crucial for college student persistence, as the literature indicates (Eagle, 1987; Henderson and Berla, 1994), but is not a factor for academic achievement. As suggested by Engstrom and Tinto (2008) and Gofen (2008), parents who have less than a college education may not know how to support students so that they are academically successful despite parents’ providing the appropriate financial, logistic, and physical support.

**Influences.** Families were generally supportive of students’ attending college, as 97% responded that their families encouraged them to go to college, and 91% responded that their families were interested in their progress. However, only 29% of families supported participation in college clubs, activities, or sports, which explains why 81% of the students did not belong to clubs on campus or off campus. These findings suggested that family decision-makers did not understand the value of participating in extracurricular activities. A few (15%) were pursuing a major they didn’t like to please their families; these students were mostly from divorced parents, paralleling the findings of Kells (1993), Heard (2007), and Pong (1997), who stated that family breakdown issues often accompanied poor academic decisions and performance.

**Engagements.** Each of the 18 general engagement behaviors were moderately correlated \((r = .402 \text{ to } .475, p < .01)\) to the other engagement behaviors, and each of the five specific monitoring behaviors were moderately correlated \((r = .315 \text{ to } .475, p < .01)\) to each of the other specific monitoring behaviors. However, there were no significant correlations between engagement behaviors and monitoring behaviors, indicating that general engagement behaviors were widespread, while specific monitoring behaviors were concentrated in few families. Parents (83%), sisters (47%), and brothers (31%) most frequently encouraged students to do well in college, while students discussed problems at college most frequently with parents (49%), sisters (47%), and cousins (28%). Results show that students consult siblings, especially sisters, nearly as much as they do parents, perhaps filling the void left by parents who have little or no education.

Nearly all engagement behaviors and monitoring behaviors were negatively correlated \((r = -.326 \text{ to } -.212, p < .01)\) to students who responded that no one gives support or encouragement (6%).
Research Question 2: How does family involvement vary when controlling for home environment factors?

Specific home environment variables, including family size, parents’ education level, parents’ marital and working statuses, and students’ marital and working statuses, were linked to variations in the type and frequency of family involvement behaviors. High academic achievement is linked to parental education and whether the mother is working. Low academic achievement is linked to parents’ being divorced.

This section presents variances in family involvement by significant home environment variables and discusses the link between academic achievement and specific variables. The rating table is in Appendix B.

**Family Size.** The variable *Family Size 1-6* had the highest rating for two engagement items and the lowest rating for one engagement item. The variable *Family Size 10 or more* had the lowest rating in two engagement items, suggesting that in families with 10 or more members, parental attention is spread over a large number of children, leaving little time for individual quizzing, discussing, and transporting students to and from extracurricular activities. Larger family size is linked to high student achievement when older siblings have post-secondary experience.

**Parents’ Education.** Students with mothers or fathers with *No Education/Don’t Know* (Table 1) had the lowest index scores for 10 engagement items and four influence items while students with mothers or fathers having *At Least Post-Secondary Education* had the highest score in two engagement items, two influence items, and three enabler items. In the guardian data, higher education level was moderately correlated with:

- belief that family should be involved in students’ education \( (r = .4, \ p < .01) \);
- belief that the guardian has the skills to help the students \( (r = .56, \ p < .01) \);
- willingness to learn more about helping student succeed \( (r = .42, \ p < .01) \);
- frequency of discussing academic expectations \( (r = .44, \ p < .01) \);
- level of involvement in college experience \( (r = .35, \ p < .01) \);
- frequency of communicating with college representatives \( (r = .37 \ p < .01) \); and
- frequency of accepting invitations to college \( (r = .33 \ p < .01) \).

In summary, family involvement was concentrated in the areas of financial support and general engagements and influences rather than in specific academic support. High academic performance was linked to parents’ having at least secondary education, which supports the literature (Eagle, 1987; Milne, 1995) that links higher parental education levels to higher student academic achievement.

**Parents’ Working Status.** Students with working or retired mothers had significant index scores for two engagement items, six influence items, and five enabler items, similar to the literature’s findings (Eagle, 1987; Milne, 1995) These students also had higher academic achievement.
However, fathers’ working status was not significant. Perhaps students’ having employed or retired mothers (such students constitute only 16% of the total responses) is significantly correlated to their high academic performance because most working mothers have been educated to at least the secondary level. Another possible interpretation is that employed or retired mothers are actively involved in their students’ education or express higher expectations for their students to succeed. This idea could support the literature (Crabtree, 2007; Tabutin & Shumaker, 2005) that states that older women in Emirati society are influential in their families, so when women are better educated and have work experience, they may serve as role models and encourage younger members of their families to do the same. Perhaps employed or retired women contribute financial support to their students as well, which could promote academic success.

**Students’ Marital Status and Working Status.** Students who were married, divorced, or widowed had low scores on four engagement and four enabler items, supporting the profile of non-traditional students presented by Chee, Pinto, and Smith (2005), Donahue and Wong (1997; 2005), and Romanowski (2004), in which non-traditional students had more responsibilities and less time for socializing than traditional students. Students who are themselves working and/or parents have little leisure time to socialize with extended family members and would likely depend mostly on their spouses for emotional and academic support.

**Parents’ Marital Status.** About 8%, or 99 students, had divorced parents and had significantly low ratings in one enabler, one engagement, and four influence items. The results coincide with the literature that states that students with divorced parents have less family engagement, perceive less concern for their academic success, have less respect for teachers and institutional rules, and have more pressure to pursue a major they do not want to pursue (Blondal, 2009; Carter, 2002; Catsambis & Garland, 1997; Deforges & Abuchaar, 2003; Henderson & Mapp, 2002; Jaynes, 2007). Having divorced parents was the only home environment variable that was significantly correlated with low achievement, as suggested by the literature (Eagle, 1989; Henderson & Mapp, 2002; Jaynes, 2007).

**Research Question 3: Is there a difference between the degree and scope of family involvement for males and for females?**

In the gender category, males had the highest number of significant rating scores in engagement and involvement. The results for males were significant in 12 engagement and influences index table ratings, and twice as many males were in the high achievement category as in the low one. The results for females were not significant for any family involvement category, and only 2% more females were in the high achievement category than in the low achievement category. The results suggest a positive correlation between family involvement and academic achievement ($r = .667, p < .01$) in the case of the males, thus supporting the literature that high levels of family involvement are linked to high achievement (Henderson & Mapp, 2002).

The literature suggests that family involvement is more consistent for females than for males in that family involvement decreases for males at higher levels of education but remains constant.
for females throughout their educational experience (Stevenson & Baker, 1987). This trend was not observed in this study. Since females outnumber males nearly two to one in post-secondary education in the UAE, Emirati families may feel that young males warrant more engagement to ensure their successful completion of their degrees and entry into the workforce so they can become financially responsible for their nuclear and extended families, an expectation to which the literature attests (Simidi & Kamali, 2004). Another interpretation of this study’s findings could be that because females are not under as much family pressure as males to work after graduation (Crabtree, 2007; Ridge, 2010), many females are not motivated to earn more than satisfactory marks.

Research Question 4: Does family involvement differ among students who have attended more or fewer years of college education?

There were no significant differences noted between family involvement and the number of years students had spent in college. The researchers were expecting a negative correlation that would suggest a decrease of family involvement as students progress through the years of their post-secondary education. The lack of significance suggests that family involvement is consistent over their students’ post-secondary education experience, and, if true, this would be contrary to the literature (Stevenson & Baker, 1987).

There was a slight correlation between the number of years students had been in college and their academic achievement. This can be explained by the academic policy of the institution, which allows students with GPAs of less than 2.0 only two semesters to improve their GPAs before they are dismissed from the school. At higher year levels, students would have either improved their GPAs and acquired the skills to be successful or have been dismissed, meaning that there would be fewer students with low GPAs at the higher levels.

Research Question 5: What, if any, differences are there in degree and scope of family involvement between high achieving and low achieving students?

Relationships were found among home environment, family involvement behaviors, and student performance measured using student GPA quartile groupings of first quartile or low (0 to 0.25) and fourth quartile or high (0.75 to 1) performance. Home environment factors that were significant for high performance were non-single marital status, male gender, having a brother studying at college, parents’ post-secondary educations, and mother’s retired work status. Only parents’ divorced marital status was significantly correlated to low academic performance.

No family involvement behaviors were strongly correlated with low performance; however, family involvement behaviors associated with academic support were weakly correlated with low performance, suggesting that families may react to students’ low performance by providing academic support as needed. Family involvement behaviors most strongly correlated with academic achievement were those related developing a positive outlook toward education and personal skills related to having successful educational experience.
High academic achievement and the corresponding degree of students' family involvement was associated with the following home environment factors:

**Marital status—divorced:** More than 40% of the students with divorced parents were in the low category of academic achievement (first quartile) while only 13% were in the high category (fourth quartile). Of students living with mother only, more (28%) had low (first quartile) performance than had high (fourth quartile) performance (21%). Of the students who lived with father only, twice as many were in the high (fourth quartile) achievement category as low (first quartile) category. Most students who reported having divorced parents also reported living with mothers only while few students who reported living with father only also reported having divorced parents. Perhaps in Emirati society students of divorced parents are more likely to live with mothers. In the context of the UAE, fathers normally provide the entire financial support for the household and carry out routine family maintenance activities such as driving young children to school, driving family members to appointments, shopping for groceries and supplies, and taking care of legal issues such as renewing passports and obtaining visas for domestic workers (Crabtree, 2007). The absence of the father due to divorce or death could limit financial resources, which could in turn increase the pressure for students to enter the workforce. Students living with their mothers only would need to assume more of the family responsibilities normally undertaken by fathers, and this could create more stress for the students and leave less time to devote to studies (Ridge, 2010).

**Parents’ education level:** Higher parental education (Table 1) was linked to higher student performance, corresponding to the literature’s findings (Eagle, 1989; Milne, 1989). However, results suggest that having siblings with post-secondary experience may serve to compensate for not having parents with post-secondary educations.

**Research Question 6: What are guardians' perceptions of and beliefs regarding family involvement?**

Most of the guardians believed that they had the skills and knowledge to assist students studying at college (70%), but fewer (63%) believed that college students needed family involvement. Only about half (53%) believed that guardians should be involved in college students’ education, and even fewer (50%) indicated that students with high family involvement are more successful. Most guardians responded that they gave tips or advice on college work at least often (14 or 47%) or sometimes (13 or 43%). When asked if they would like to learn how to help students with their education, more than half (16 or 53%) responded no or not interested. The results of the study suggest that the guardians, mostly fathers, were not the family members involved in the students’ education. In the students’ survey, respondents said most frequently that they sought assistance from parents (mothers and fathers) when they had problems at college but sought assistance from siblings (more frequently sisters than brothers) when they needed assistance with college work. Perhaps the guardians rely on other family members to be involved in the students’ education so they do not feel they need to have more information on the subject.
• The guardians were also asked a series of questions about the type and extent of family involvement students receive at home. The results are shown below.

• A little more than half (57%) of the guardians reported engaging in a discussion with the student about his or her learning at least weekly.

• Less than half (43%) of the guardians reported discussing their expectations of academic achievement with the student often.

• About a third (37%) of the guardians reported influencing the students’ career choice.

• About a third (37%) of the guardians reported discussing with their student the importance of avoiding distractions during study time.

• Only 3% of the guardians reported specifying a regular study time for their student.

The results show that students reported receiving much higher levels of family involvement than guardians reported giving to the students. It is possible that family members other than guardians could be giving the additional support indicated by the students. Guardian responses were higher on the more general supports and lower as the supports became more specific, and this trend is similar to the students’ responses about family involvement. Family involvement behaviors related to demonstrating support for students’ attending college and believing that their students were performing satisfactorily received the highest responses. Family involvement demonstrating specific behaviors related to assuring high academic achievement received the lowest responses.

The items in this section indicate family involvement specifically related to the college or college activities.

• Most of the guardians (23, or 77%) responded that they believe their student enjoys college.

• Most of the guardians (23, or 77%) responded that they believed that their student is doing well enough at college and does not have to ask for help.

• Most of the guardians (20, or 67%) responded that they were involved in their student’s college education at a medium level or high level.

• About a third of the guardians (11, or 37%) responded that they have never checked their student’s progress on the college portal.

• About a third of the guardians (11, or 37%) responded that they communicate with college supervisors, administration, or counselors.

Although most guardians (67%) indicated that they believed their involvement was medium to high, most involvement was general, and reports of participation decreased as the level of involvement became more specific. For example, most guardians (77%) reported that they believed their students enjoyed college and were doing well; however, specific involvement that might confirm the beliefs, including checking the college portal and communicating with college supervisors, administration, or counselors is ranked as being of lowest importance (37%).
Conclusion

The findings from this study indicate that the students whose families demonstrated the most engagement behaviors were males and that males had proportionally higher academic performance than females. Nearly all students, except working males, received financial support from their families, and most students and guardians reported high emotional support and strong encouragement to study. However, academic support from the guardian, including providing an atmosphere conducive to studying at home and assisting with college work, was often lacking. Family involvement behaviors most associated with high achievement are enablers, influences, and engagements, respectively.

The home environment factors most associated with student achievement were marital status, male gender, mother or father with post-secondary education, and mother’s being retired. The family involvement behavior most associated with low achievement was having divorced parents.

As suggested by the literature, elements of Emirati family structure and social life may affect student academic achievement negatively or positively. Extended-family living situations puts pressure on the family’s financial resources and decreases the ability of the parents to provide academic support to the higher number of children in the household. However, students in extended families may have more college-aged siblings or aunts, uncles, or cousins of similar ages who could provide support when the parents are unable to do so. Students with divorced parents also tend to have less financial support.

Results from both the student and parent surveys indicated that families are generally supportive of their students’ education. However, academic support, including providing an atmosphere conducive to studying at home and assisting with college work, was often lacking. Family members with low education levels may not know how best to support students who are exhibiting low academic achievement although there was evidence that family members were trying to support their students, which provides evidence of a generational gap in educational experience between parents and students.

The availability of older siblings and other extended family members may help to fill the gap in support left by parents who have little educational experience. Working sisters, as indicated by the student survey and guardian survey, are increasingly advising, guiding, and serving as guardians for their younger siblings.

Recommendations

A synthesis of the findings and discussion from the preceding section have led to the recommendations presented in this section. We hope that the recommendations that follow are useful to educators and policy makers as they create policies and programs to increase the effectiveness of public post-secondary education in the UAE.
The most important general recommendation is to raise awareness among families of ways to increase student preparedness for post-secondary participation, to support low achieving students at home, and to improve student academic performance. Inviting siblings to the college for guardian evenings and having family days at the college, rather than restricting events and activities to parents, may provide an inroad for older siblings who have attended college to share their views and exert their influence on college students. Other programs targeting peer and in-college support for students who have no one willing to help them in their families would provide essential support, support that could fill gaps left by families unwilling or unable to support students.

More specific recommendations include the following:

- Shifting the focus of meetings with family members about student attendance, behavior, or low academic performance from disciplinary or punitive contact to consultative and collaborative interactions that feature students as the central players.

- Developing family awareness programs that educate families on expectations in terms of time and effort for their students to be successful in college. These would include information about the transition from school and college expectations, the shift from pass/fail marks to GPAs as measures of academic success, and the increased demands on students’ time outside of class for independent revision and project work.

- Raising awareness among students and families of the benefits of participating in clubs and activities.

- Establishing alumni and peer support including mentoring, counseling, and tutoring programs to provide opportunities for students to experience positive role models, obtain advice, and receive guidance. This may be especially needed for students whose families are unable or unwilling to provide such support.

- Inviting families to college for events including anti-smoking and safe-driving campaigns; general health awareness forums on thalassemia, breast cancer, diabetes, marriage and family difficulties, and other issues of importance to families; and any other activities and events that showcase student achievement.

- Increasing opportunities for students to learn through practical work experiences that are integrated into the curriculum while raising awareness among families of the value of doing so.
Bibliography


## Appendix A

**Study Constructs Sorted by Percentage Indicating Frequency or Agreement**

*Agree/Strongly Agree or Always/Most of the Time:*

<table>
<thead>
<tr>
<th>Q#</th>
<th>Influences</th>
<th>%-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q56</td>
<td>My family encouraged me to go to college.</td>
<td>97%</td>
</tr>
<tr>
<td>Q52</td>
<td>My family is very interested in my academic progress.</td>
<td>91%</td>
</tr>
<tr>
<td>Q48</td>
<td>My family insists that I respect my teachers and follow the college rules.</td>
<td>88%</td>
</tr>
<tr>
<td>Q40</td>
<td>My family stresses the importance of good grades.</td>
<td>84%</td>
</tr>
<tr>
<td>Q29</td>
<td>My family is complimentary when I get good grades.</td>
<td>76%</td>
</tr>
<tr>
<td>Q54</td>
<td>My family influenced my chosen field of study.</td>
<td>64%</td>
</tr>
<tr>
<td>Q47</td>
<td>My family shows disapproval if I miss college when I am not ill.</td>
<td>62%</td>
</tr>
<tr>
<td>Q30</td>
<td>My family shows disapproval if I get bad grades.</td>
<td>53%</td>
</tr>
<tr>
<td>Q44</td>
<td>My family supports my participation in college clubs, activities, or sports.</td>
<td>29%</td>
</tr>
<tr>
<td>Q57</td>
<td>I am considering or pursuing a major I don’t like in order to please my family.</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q#</th>
<th>Enablers</th>
<th>%-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q49</td>
<td>My family provides money for food every day.</td>
<td>95%</td>
</tr>
<tr>
<td>Q36</td>
<td>My family provides the computer, printer, paper, and other tools I need to study.</td>
<td>92%</td>
</tr>
<tr>
<td>Q37</td>
<td>My family ensures that I am at college in time for my classes.</td>
<td>82%</td>
</tr>
<tr>
<td>Q46</td>
<td>My family hires a tutor to help me with my college work.</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q#</th>
<th>Engagements</th>
<th>%-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q27</td>
<td>I spend leisure time with my family at least once per week.</td>
<td>75%</td>
</tr>
<tr>
<td>Q32</td>
<td>I allow my family to use the college portal to check my grades and attendance.</td>
<td>72%</td>
</tr>
<tr>
<td>Q31</td>
<td>I inform my family about my grades.</td>
<td>68%</td>
</tr>
<tr>
<td>Q65</td>
<td>I would do better if I had more support from my family.</td>
<td>68%</td>
</tr>
<tr>
<td>Q34</td>
<td>I tell my family when I have a project, paper, or test to prepare for.</td>
<td>67%</td>
</tr>
<tr>
<td>Q39</td>
<td>My family limits the amount of time I watch TV, play video games, and talk on the phone because it may interfere with my studies.</td>
<td>65%</td>
</tr>
<tr>
<td>Q50</td>
<td>My family asks me about my friends at college.</td>
<td>63%</td>
</tr>
<tr>
<td>Q45</td>
<td>My family encourages me to speak to my teacher, counselor, or supervisor when I have a problem at college.</td>
<td>62%</td>
</tr>
<tr>
<td>Q41</td>
<td>My family tries to limit the amount of time that I can visit with friends when I have college the next day.</td>
<td>52%</td>
</tr>
<tr>
<td>Q38</td>
<td>My family encourages me to get enough rest to be alert in college each day.</td>
<td>49%</td>
</tr>
<tr>
<td>Q33</td>
<td>My family checks to see that I’ve done my homework and other academic tasks.</td>
<td>33%</td>
</tr>
<tr>
<td>Q35</td>
<td>Someone in my family will quiz me to help me study before a test.</td>
<td>10%</td>
</tr>
</tbody>
</table>
### Appendix B

**Significant Rating Table Results for Student Achievement**

<table>
<thead>
<tr>
<th>Home Environment Factors Significant for Low Achievement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents Divorced</td>
<td>0.503</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>My family insists that I respect my teachers and follow the college rules.</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Marital Status (Married/Divorced/Widowed)</td>
<td>0.667</td>
</tr>
<tr>
<td>Gender—Male</td>
<td>0.675</td>
</tr>
<tr>
<td>Brother studying at HCT</td>
<td>0.681</td>
</tr>
<tr>
<td>Mother Post-Secondary Education</td>
<td>0.686</td>
</tr>
<tr>
<td>Father Post-Secondary Education</td>
<td>0.688</td>
</tr>
<tr>
<td>Mother Retired</td>
<td>0.714</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Involvement Survey Items Significant for low Achievement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q35: Someone in my family will quiz me before an exam.</td>
<td>0.222</td>
</tr>
<tr>
<td>Q46: My family hires a tutor to help me with my college work.</td>
<td>0.237</td>
</tr>
<tr>
<td>Q62: My family will not let me work when I graduate college.</td>
<td>0.239</td>
</tr>
<tr>
<td>Q57: I am pursuing a major I don’t like to please my family.</td>
<td>0.714</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Involvement Survey Items Significant for High Achievement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q55: I work hard in college to satisfy my family.</td>
<td>0.516</td>
</tr>
<tr>
<td>Q53: I am passionate about my chosen field of study.</td>
<td>0.519</td>
</tr>
<tr>
<td>Q38: My family encourages me to get enough sleep.</td>
<td>0.522</td>
</tr>
<tr>
<td>Q60: I think students with high family involvement are more successful.</td>
<td>0.527</td>
</tr>
<tr>
<td>Q29: My family is complementary when I get good grades.</td>
<td>0.530</td>
</tr>
<tr>
<td>Q37: My family ensures I am at college in time for my classes.</td>
<td>0.539</td>
</tr>
<tr>
<td>Q40: My family stresses the importance of getting good grades.</td>
<td>0.541</td>
</tr>
<tr>
<td>Q52: My family is very interested in my academic progress.</td>
<td>0.556</td>
</tr>
<tr>
<td>Q56: My family encouraged me to go to college.</td>
<td>0.567</td>
</tr>
<tr>
<td>Q48: My family insists I respect my teachers and follow the college rules.</td>
<td>0.570</td>
</tr>
<tr>
<td>Q58: I work hard in college to satisfy myself.</td>
<td>0.583</td>
</tr>
<tr>
<td>Q36: My family provides the computer, printer, and other items for college.</td>
<td>0.594</td>
</tr>
<tr>
<td>Q49: My family provides money for food every day.</td>
<td>0.612</td>
</tr>
</tbody>
</table>
Georgia Daleure, Ed. D., is an Academic Success Advisor and General Studies Faculty member at Sharjah Higher Colleges of Technology, where all of her collaborators serve. Rozz Albon, Ph. D., is the Acting Chair for the Faculty of Education. Khaleel Hinkston, Ph. D., serves as a Student Personal Counselor. Tarifa Ajaif is the Dean of Student Affairs, and John McKeown is a member of the Business Faculty. Dr. Daleure and her team can be reached at gdaleure@hct.ac.ae.

The views expressed in this working paper are those of the authors and do not necessarily reflect those of the Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research.

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