

EXPLORING THE RELATIONSHIP BETWEEN SOCIAL AND FINANCIAL SUPPORT
AND ACADEMIC SUCCESS IN ALLIED DENTAL PROGRAMS

By

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Abstract: Social support has many affects on quality of life as well as student success. Maslow's Hierarchy of needs states that lower level needs such as physiological and safety needs must be met in order for an individual to meet higher level needs, such as self-actualization. Social and financial support provide a means for students to have a variety of needs met. This research study was executed to investigate the nature of the relationship between social and financial support and student success in allied dental programs. This study surveyed people who attended and completed a CODA-accredited dental hygiene or dental assisting program in the United States, or who were in their final semester of such a program ($N = 195$). Instruments employing likert-type scales were utilized, and demographics were collected. Findings unveiled a positive relationship between academic success and general social support as well as social support from peers specifically. However, they also revealed that there is not a significant relationship between academic success and parental support or financial support. Data yielded information regarding the importance of social support in allied dental student success, which may help to direct how such programs encourage establishing of social bonds within cohorts. Finally, limitations and future directions are addressed.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Problem Statement.....	2
Purpose Statement.....	2
Definition of Terms.....	2
Study Significance.....	5
Overview.....	6
II. LITERATURE REVIEW.....	7
Foundational Theories for Support and Student Success.....	7
Types of Social Support and Student Success.....	10
Social Support from Friends and Family and Student Success.....	10
Academic Social Support and Student Success.....	12
Financial Support and Student Success.....	13
Family Financial Support and Student Success.....	14
Financial Support from Other Sources and Student Success.....	16
Summary.....	17
III. METHODS.....	18
Research Questions and Hypotheses.....	18
Procedure.....	19
Recruitment and Participants.....	19
Data Collection.....	20
Survey Measures.....	21
Social Support.....	21
Interpersonal Support Evaluation List (ISEL-12).....	21
Perceived Friend Academic Support Scale (PFASS).....	22
Perceived Parental Academic Support Scale (PPASS).....	23
Financial Support.....	23
Student Success.....	24
Perspective.....	24
Demographics.....	25
Data Analysis.....	25

Chapter	Page
IV. RESULTS	26
Data Analysis	26
Participant Demographics.....	27
Descriptive Statistics.....	28
Correlational Analyses.....	29
Social Support and Student Success	29
Financial Support and Student Success	30
V. CONCLUSION	32
Discussion.....	32
Limitations and Future Research Directions.....	35
Sample Limitations	35
Instruments.....	35
Implications.....	37
Conclusion	38
REFERENCES	40
APPENDICES	48
APPENDIX A: IRB Approval	48
APPENDIX B: Recruitment	49
APPENDIX C: Participant Information and Informed Consent.....	50
VITA.....	52

LIST OF TABLES

Table	Page
4.1 Participants' Demographics	22
4.2 Descriptives for All Subscales and Variables of Interest.....	23
4.3 Correlational Analyses.....	24
4.4 Student Loan Amount	25

CHAPTER I

INTRODUCTION

Allied dental programs are intensive and strenuous programs that impose substantial on-campus time obligations for students. First year dental hygiene students are often required to commit 14 to 18 hours on campus weekly, while second year dental hygiene students must commit 36 to 40 hours on campus per week and dental assisting students are expected to spend 32 to 36 hours on campus. In addition to the time required for formal class meetings, lab instruction, required open lab time, clinicals, and off-site rotations, students must also find time to complete various projects and study for program exams as well as state and national exams necessary for licensure/certification.

While students face many challenges in their allied dental education, each individual also faces challenges in their personal and family life. Students bring their own experiences and social and financial situations to their life as students. Fambely (2020) investigated the interaction between dental hygiene students' mental health and their roles within the family and found that without proper social support, students "risk[ed] emotional collapse" (p. 22). According to the Commission on Dental Accreditation (2021a, 2021b), more than half of dental hygiene students and more than two-thirds of dental assisting students have employment and/or family duties. When necessary support is lacking, students' responsibilities may weigh them down and decrease the likelihood of academic success

(Balzer & London, 2020; Cheng et al., 2012; Mishra, 2020; Roska & Kinsley, 2019; Tinajero et al., 2019). According to the Commission on Dental Accreditation (2020a, 2020b, 2021a, 2021b), accredited dental hygiene programs nationwide see an attrition rate of approximately 13%, while accredited dental assisting programs have an attrition rate of approximately 20%.

Problem Statement

Due to their intense nature, allied dental programs impose mental, emotional, and physical stress on their students. Without proper support, student success may be impaired; students may discontinue their enrollment in the program or may have poor academic performance (Fambely, 2020).

Purpose Statement

The purpose of this quantitative study was to identify whether a relationship exists between social and financial support and allied dental student success at two-year or four-year institutions as measured by grade point average (GPA) and graduation rate.

Definition of Terms

- Allied dental program- a program that trains students in the professions of dental assisting and/or dental hygiene and culminates with the eligibility of each student to take examinations to become licensed, certified, or permitted dental professionals through the passing of the appropriate application and examination processes. For the purpose of the proposed study, only those allied dental programs accredited by the Commission on Dental Accreditation (CODA) will be considered.
 - Dental assisting program- a formal educational program that takes place at a two- or four-year institution or vocational technology school and prepares students for the profession of dental assisting through the use of didactic and

hands-on clinical and laboratory learning settings (American Dental Association, 2021). Successful matriculation in a CODA accredited dental assisting program affords dental assisting students the eligibility to sit for the General Chairside Assisting, Radiation Health and Safety, and Infection Control examinations, which comprise the Dental Assisting National Board examination (Dental Assisting National Board, 2021b). After passing this board examination, dental assistants can use the credentials CDA, representing their status as Certified Dental Assistants. While laws vary from state to state, CDA status is not generally required for permitting to practice, but does increase potential pay and career opportunities (Dental Assisting National Board, 2021c).

- Dental hygiene program- a formal educational program that takes place at a two- or four-year institution and prepares students for the profession of dental hygiene through the use of didactic as well as hands-on laboratory and clinical learning environments. Successful matriculation in a CODA accredited dental hygiene program affords dental hygiene students the eligibility to sit for the National Board of Dental Hygiene Examination (NBDHE), regional clinical board exams, and state jurisprudence examination (American Dental Association, 2021; American Dental Hygienists' Association, 2016; Joint Commission on National Dental Examinations, 2021; Oklahoma State Dental Act, 2018; Western Regional Examination Board, 2021). While laws vary somewhat from state to state, passing these examinations is necessary for

dental hygiene licensure in nearly every state (American Dental Hygienists' Association, 2021).

- Dental assistant- a dental healthcare professional who assists the dentist during various dental procedures, exposes and processes radiographs, prepares and breaks down treatment rooms, completes sterilization procedures, relays post-operative instructions, provides oral hygiene instruction, and makes physical and/or digital impressions of the oral cavity (Dental Assisting National Board, 2021a; American Dental Association, 2021)
- Dental hygienist- a dental healthcare provider who provides interventional and preventive care to children and adults. Procedures may include removal of hard and soft deposits in the oral cavity, non-surgical periodontal therapy, dental and periodontal charting, interpretation of dental radiographic images, application of preventive treatments such as sealants and various types of fluoride, nutritional counseling and smoking cessation programs, nitrous oxide analgesia and local anesthesia administration, education of patients on their oral health and disease state, home care instructions, preventive measures, and following infection control protocols; dental hygienists are also able to perform all duties allowed for a dental assistant (American Dental Association, 2021; American Dental Hygienists' Association, n.d.).
- Student success- measured by GPA and graduation from the allied dental program.
- Social support- The actions performed by those in one's social circle that elicit a sense of psychological well-being and feelings of being supported. Five types of

social support will be considered in this study: attachment, social integration, confirmation of worth, reliable alliance, and guidance (Weiss, 1974).

- *Attachment* needs are satisfied through meaningful relationships with others in which “individuals feel comfortable and at home” (Weiss, 1974, p. 23).
- *Social integration* needs are satisfied through the establishment and nurturing of relationships in which they share “common concern” and find camaraderie (Weiss, 1974, p. 23).
- *Confirmation of worth* may come from friends, family, or colleagues; this need is satisfied when others recognize the skills and competence of an individual and validate their worth (Weiss, 1974).
- *Reliable alliance* is usually afforded by familial relations (Weiss, 1974). This type of support is achieved when an individual feels that they have someone who is on their side and will provide help, even if the parties are not on good terms, regardless of past difficulties (Weiss, 1974).
- *Guidance* is achieved when a “trustworthy and authoritative figure” gives advice and direction to a recipient as well as “emotional support” (Weiss, 1974, p. 24).
- Financial support- the provision of money directly to the student.

Study Significance

This study aids in closing the gap in literature regarding allied dental program student success and its relationship to social and financial support. There is very little existing research regarding allied dental program student success in general, and particularly in relationship to social and financial support. This study may provide a foundation for

educating prospective students on the importance of establishing support systems prior to beginning an allied dental program, thus increasing the likelihood of student success. If students or their instructors are able to identify they do not have adequate support, they can be referred to on-campus support services, which have been shown to increase student achievement and retention in other types of post-secondary educational programs (Balzer & London, 2020). Furthermore, earlier and longer lasting engagement with these on-campus services leads to better student outcomes (Huang et al., 2019).

Overview

The purpose of this study was to determine if a relationship exists between social and financial support and allied dental student success. The literature review provides background on the relationship between social support, financial support, and student success. Studies taking both social and financial support into consideration simultaneously are limited. Additionally, there is a gap in the literature regarding student success in accredited allied dental programs. Allied dental programs are more intensive than traditional undergraduate education and require substantial on-campus time commitments, often up to 36-40 hours per week for second year dental hygiene students and 32-36 hours weekly for dental assisting students, in addition to the requirements of study time and assignments at home. This study sought to provide rich understanding regarding social and financial support and student success in allied dental programs.

The following chapter provides a review of the literature on social support, financial support, and student success, providing a foundation for this study which will be described in greater detail in chapter three. Results of data analyses are presented in chapter four, with further discussion, limitations and implications in chapter five.

CHAPTER II

LITERATURE REVIEW

In the following literature review, I begin by exploring the foundational theories for various types of support and student success. Then I discuss the impact of family, friends and institutional social supports on student success. Next, I provide perspective on the effects of family and institutional financial support and student success. Finally, I summarize the literature on the topic of social and financial support and student success in allied dental programs.

Foundational Theories for Support and Student Success

The success of students in higher education is a complex topic to explore. One may begin by considering Maslow's (1943) theory of the hierarchy of needs. Maslow (1943) discusses the hierarchy of needs as a series of human necessities that most often occur in gradations: as the most basic need is increasingly satisfied, the next level of need becomes more apparent to the individual. It is more sophisticated than a step ladder upon which one climbs and addresses a single need (or rung) at a time. An individual may be working toward satisfaction of more than one level of need simultaneously.

The hierarchy Maslow (1943) developed includes physiological, safety, love, esteem, and self-actualization needs.

- *Physiological* needs are necessities for the body to maintain homeostasis and function in a normal, healthy manner. These needs comprise proper nutrition, sleep, hydration, et cetera (Maslow, 1943).
- *Safety* needs are those requirements that prevent harm from befalling an individual (Maslow, 1943). A few examples include shelter, proper clothing, financial security, and removal from exposure to harmful substances, environments, or individuals (Maslow, 1943).
- *Love* needs satisfy the desire for personal and emotional closeness, as well as the urge to belong to a social or family group (Maslow, 1943). These requirements may be filled by significant others, children, or friends (Maslow, 1943).
- *Esteem* needs command the feeling of self-worth and self-love, which both build the value one sees in themselves and their own abilities (Maslow, 1943).
- *Self-actualization* is the pinnacle of needs fulfillment; it occurs when an individual becomes the best version of the person they are and fulfill the purpose they are best suited to achieve (Maslow, 1943). In Maslow's (1943) words, "What a man *can* be, he *must* be" (p. 382).

Furthermore, when narrowing the discussion specifically to the impact of social support on student success, it is beneficial to consider the many aspects of social support as introduced by Weiss (1974), which include attachment, social integration, confirmation of worth, reliable alliance, and guidance. The forms of social support Weiss (1974) introduced align and reinforce the earlier theory put forth by Maslow (1943). Attachment support arises from "relationships from which participants gain a sense of security and place" (Weiss, 1974, p. 23). Social integration occurs when an individual shares interests and values with another

person or a group of people (Weiss, 1974). Reassurance of worth is provided by colleagues, friends, and family who act to reinforce the feeling of “an individual’s competence” (Weiss, 1974, p. 24). Support in the form of a sense of reliable alliance is usually provided by a person’s family (Weiss, 1974). Within the blood lines of families, individuals may be able to expect that there will always be someone who will be willing to provide support, regardless of past relationship difficulties or current strain (Weiss, 1974). Lastly, guidance support is the provision of advice, direction, and emotional support from a person who the individual trusts and who has some level of authority (Weiss, 1974). Guidance is particularly sought out in times of stress and uncertainty (Weiss, 1974).

The needs proposed by Maslow (1943) align with Weiss’s (1974) social support needs. For instance, proper nutrition is an example of a physiological need, and shelter is a safety need. An aunt who provides food and a place to stay for her hungry, struggling niece is offering reliable alliance social support, and helping the recipient to satisfy her physiological and safety needs. A person who congratulates their friend on a recent success is providing confirmation of worth social support as Weiss (1974) defines it and assisting in the satisfaction of esteem needs as Maslow (1943) established. Weiss (1974) has defined ways in which people can aid one another through social interaction to achieve their needs per Maslow’s (1943) hierarchy. Additionally, Maslow (1943) states that the availability of opportunities to seek out knowledge is not only a means to self-actualization, but rather is also integral in developing understanding that will assist a person in more basic needs, such as safety. Therefore, the relationship between learning, basic human needs, such as nutrition, and higher order needs, such as self-actualization, are intertwined intricately.

Institutional atmosphere is a fundamental component of the higher education experience (Bronkema & Bowman, 2019; McNaughton-Cassill, 2021). The level of social support students receive impacts their perceptions of the learning institution's environment for the better (McNaughton-Cassill et al., 2021). Therefore, one may postulate that colleges with social support systems in place or those that foster social support among peers may have higher rates of student success. Examples of practices that encourage peer support are providing community study spaces and mentoring programs in which an upperclassman takes an underclassman under their wing (Balzer & London, 2020; Huang et al., 2019; Ma et al., 2020). GPA and graduation rates have both been demonstrated to be positively impacted by social support (Mishra, 2020; Tinajero et al., 2019).

Types of Social Support and Student Success

Social Support from Friends and Family and Student Success

Family and friends who afford social support assist college students in fulfillment of a variety of needs. These needs may include any of those in Maslow's hierarchy, ranging from the most basic of physiological needs to the pinnacle of self-actualization. Social support may come from on-campus friends, off-campus friends, or family. There are benefits of on-campus social support from friends specifically, however. These benefits include an increase in students' educational persistence, graduation within six years, and student achievement in underrepresented student populations (Bronkema & Bowman, 2019; Gallop & Bastien, 2016; Mishra, 2020). The benefits of social support provided by on-campus friends also include close emotional connection, cultural solidarity, improved critical thinking, and higher academic achievement (Bronkema & Bowman, 2019; Gallop & Bastien, 2016; Mishra, 2020). This evidence points to the importance of giving students the opportunity and

scaffolding to create impactful on-campus peer friendships. Additionally, social support can help to lessen the hardships that are intrinsic to the college experiences of students that come from disadvantaged backgrounds (Mishra, 2020). Social support for these students is pertinent because undergraduate programs are set up according to middle and upper socioeconomic status (SES) class norms, which creates an inherent disadvantage for lower SES students (O'Donnell & Blankenship, 2018). Therefore, social support may help to counteract this inequity in higher education.

Just as on-campus friends can offer substantial support and positive influence on student success, family support has its own impact. Parental support elicits higher motivation to pursue understanding in post-secondary education environments (McNaughton-Cassill et al., 2021). Furthermore, students who felt their families supported them socially achieved higher GPAs (Cheng et al., 2012). College students with family social support have higher scholarly achievement and have higher persistence in their education (Mishra, 2020; Roska & Kinsley, 2019). Students who receive financial socialization, which is a type of guidance support, have increased positive financial outcomes as related to their educational costs and experiences (Sabri et al., 2020). Students' feelings of acceptance by their families, feelings of worth, and their contentment with the support they receive from their families led to an increase in student success (Tinajero et al., 2020).

On-campus friends, off-campus friends, and families can meet the social needs of students on a variety of levels, including attachment needs, social integration needs, confirmation of worth, and guidance. Friends and family who are supportive of students support the satisfaction of multiple levels of Maslow's (1943) hierarchy. Socially well-supported students are more likely to have their physiological, safety, love, and esteem needs

met, which makes it more likely they will continue down their educational path and seek self-actualization.

As discussed in previous paragraphs, support from friends and support from family may have distinct, different effects on student success. However, that is not the only reason this study considers friend support separately from parental support. Allied dental programs are strenuous and stressful, and special social bonds form among peers in cohort model programs (Leland et al., 2020). Because of this, many dental and allied dental programs have instituted either optional or mandatory/assigned big and little sibling programs, much like those seen in fraternities and sororities (Pothier, 2019). Due to the amount of time these cohorts spend with one another, the researcher wanted to investigate separately how these friend relationships may perhaps have a different impact when compared to parental support. Furthermore, most of the population enrolled in allied dental programs are in the emerging adulthood stage (Commission on Dental Accreditation 2020a; Commission on Dental Accreditation 2020b; Commission on Dental Accreditation 2021a; Commission on Dental Accreditation 2021b), during which time relationships are shifting away from parents as a secure base and more toward friends to fulfill this role (Arnett & Fowler, 2000).

Academic Social Support and Student Success

Another type of social support that will be considered in this study is academic support. Examples of academic support include having someone who can help with homework, provide advice about school matters, encourage good school work ethic, and hold the student accountable for their schooling (Chen, 2005; Li et al., 2022). Some programs have been developed specifically to establish mentor/mentee relationships among students for the aforementioned types of academic support as well as proofreading papers and even

tutoring (Garcia et al., 2021). Academic support has been previously shown to have a positive impact on student success (Li et al., 2022). This is especially true when students face other types of adversity (Collie et al., 2017). In fact, academic support can increase more concrete metrics such as GPA and test scores, as well as softer skills such as critical thinking, confidence, and self-directed learning skills (Hawkins et al., 2022). These types of skills could prove advantageous in successfully completing the strenuous requirements of an allied dental program, not solely for the possibility they may result in increased GPA, but also because of the development of critical soft skills that may increase resilience and skill performance in a variety of settings.

Financial Support and Student Success

Some social support frameworks include financial support as part of tangible support. However, some researchers argue that financial support is perceived differently than other types of support (Wong et al., 2010). Furthermore, some populations may have ample social support in some areas, such as confirmation of worth, without having adequate funds to provide higher education opportunities and maintain physiological needs, such as proper nutrition (Viseu et al., 2018). Likewise, some individuals may have ample financial support with little to no social support of other types, such as guidance or confirmation of worth (Matthews et al., 2019).

Financial support serves not only as a means to satisfy the costs of education itself, but also can address basic human needs in Maslow's (1943) hierarchy. Although tangible support, such as provision of food, necessary supplies, or childcare, may assist in meeting students' physiological and safety needs, it requires an individual, organization, or institution poised and willing to provide food or housing directly to students. In other cases,

physiological and safety needs may be met indirectly by the provision of financial resources. When a student has adequate monetary resources, they may purchase food, housing, and other necessities, as well as pay for the costly investment of higher education. Between adequate financial support and tangible support, such as provision of goods or assistance, physiological and safety needs should be adequately met.

Family Financial Support and Student Success

Family financial support has a complex relationship with student success. O'Donnell and Blankenship (2018) found that upper- and middle-SES students have more positive college experiences, partially due to their ability to be more involved in organizations and internships than their lower SES peers. Students with low SES must, at times, seek out employment to fund their educational endeavors and living expenses. Students with family financial support are more likely to focus on their education and undergraduate experience and are less likely to have to work (Cheng et al., 2012; O'Donnell & Blankenship, 2018). As a result, students with family financial support are less distracted, have more stable GPAs, and exhibit a higher likelihood of academic success (Cheng et al., 2012; Liu & Lu, 2008). However, first-generation college students (i.e., students who do not have a parent who completed a four-year college degree) do not exhibit as great a benefit in GPA from financial support as do their peers who are not first-generation college students (Roska & Kinsley, 2019).

Conversely to others' research, Roska and Kinsley (2019) asserted that students who receive family financial support do not achieve higher GPAs; though they pointed out students with family financial support are more likely to complete 24 credit hours in their initial year in college than students with less financial support (Roska & Kinsley, 2019). This

fact is pertinent, as 24 hours per academic year is the minimum for a student to be considered a full-time student. When a student takes the minimum number of credit hours per year to be considered a full-time student, it will typically take 10 semesters (or five academic years providing they do not take summer or intercession courses) to finish a bachelor's degree. Students who complete less than 24 credit hours per academic year will take even more time to complete their degrees. Increased time may lead to increased total cost of education for the student. Furthermore, additional time spent in acquiring an education equates to a delay in individuals entering the workforce, and subsequently lost income. Additionally, students who do not have full-time enrollment status may not qualify for certain types of financial aid.

Students who do not struggle to achieve funding for their education tend to take a more holistic and engaged approach to their college experiences, whereas students who must scrape together funding from various sources approach their college experiences pragmatically, looking toward their future careers (Glass et al., 2021). Students who have a more holistic approach take advantage of many aspects of the college experience and do not limit their experiences solely to the formal learning environment. Students who have funding challenges and have a more pragmatic approach may miss out on opportunities such as study abroad programs, internships, extracurriculars, and student organizations. Each of these activities provides the possibility for networking, leadership skill development, personal development, and professional development, all of which have the potential to increase career opportunities in the future (Batistic & Tymon, 2017; Yoo et al., 2021). However, if the student is so focused on making ends meet and views education solely as traditional classroom experiences, they do not have the benefit of the opportunities for growth and connections that these 'extras' provide. Furthermore, students with a utilitarian, pragmatic

view of their college experience may choose not to take electives that do not contribute to their degree or inform their view of their field. This limitation may prevent development of a more well-rounded student and professional.

Students' perceptions of their social background also play a role in student success. Students who come from low SES families are less likely to have prestigious academic and career goals (O'Donnell & Blankenship, 2018). Moreover, students who perceive that they have many disadvantages earn lower GPAs than their peers who do not share such a perception (O'Donnell & Blankenship, 2018).

Financial Support from Other Sources and Student Success

Higher education is a costly investment. Students who are fortunate enough to have tuition waivers must still cover the costs of living expenses and supplies for their education, such as books (Huang et al., 2019). Students who do not have financial support from their families, whether related to low socioeconomic status (SES) or other factors, experience more difficulties than their peers who do not have funding challenges (Huang et al., 2019; Maslow, 1943; Sabri et al., 2020). If students are unable to afford food or housing and similarly do not have their basic needs met through tangible or financial support, the deficit will have a negative effect on their ability to learn and achieve academic success (Huang et al., 2019; Maslow, 1943; Weiss, 1974). These negative effects may cause the student to take fewer credit hours and/or increase work hours to support themselves, hinder their concentration, decrease the amount of rest they are able to get, and potentially lead to a discontinuation of their educational pursuits (Sabri et al., 2020).

Students who hold jobs to combat financial instability face challenges in academics posed by the time commitment required by employment (Huang et al., 2019). However, the

nature of the relationship between student employment and academic success is nuanced. O'Donnell and Blankenship (2018) found that there was no significant relationship between student employment status and GPA, which suggests that the relationship between SES and student success is complex. Nonetheless, students who receive financial support from institutions, whether in the form of tuition waivers, book vouchers, or stipends for living expenses, experience more positive academic outcomes than students who must work to make ends meet (Huang et al., 2019; Sabri et al., 2020). Additionally, Claridge and Ussher (2019) found financial support increased students' ability to study instead of needing to work during the school year. Some students state that they have diminished stress due to financial assistance, which impacted them in a positive manner (Claridge & Ussher, 2019).

Summary

Education plays a key role in satisfying many levels of the hierarchy of needs, including the foundational level of physiological needs spanning up to self-actualization (Maslow, 1943). Students who have adequate social and financial support have been shown to have better academic achievement than their unsupported counterparts (Cheng et al., 2012; Glass et al., 2021; McNaughton-Cassill et al., 2021). Furthermore, students with higher levels of financial support are less likely to have to work, and are more likely to persist in their academic endeavors (Balzer & London, 2020; Huang et al., 2019; Sabri et al., 2020). Support provided from friends, family, and academic institutions has the potential to have substantial positive impact on students' outcomes (Bronkema & Bowman, 2019; Cheng et al., 2012; Huang et al., 2019; Sabri et al., 2020).

CHAPTER III

METHODS

The purpose of this quantitative study was to determine if a relationship exists between social support, financial support, and student success (as measured by GPA and graduation rate) in CODA accredited allied dental programs. The study was grounded in the foundations of Maslow's (1943) theory of the hierarchy of needs and Weiss's (1974) tenets of social support. Upon these theoretical foundations, I surveyed individuals who either completed an allied dental program at a two-year or four-year institution in the United States or began such a program and did not complete it.

Research Questions and Hypotheses

This study was designed to answer the following research questions:

RQ1: Is there a relationship between social support and allied dental program student success in the United States?

H1: There will be a positive relationship between social support and GPA among allied dental program students.

H2: There will be a positive relationship between social support and graduation rate among allied dental program students.

Rationale: The reviewed literature revealed that social support in its many forms, such as attachment, social integration, confirmation of worth, reliable alliance, and guidance,

increases academic success (Balzer & London, 2020; Bronkema & Bowman, 2019; Gallop & Bastien, 2016; Huang et al., 2019; Ma et al., 2020; Maslow, 1943; Mishra, 2020; Roska & Kinsley, 2019; Weiss, 1974). Cheng et al. (2012) assert that students who receive social support reach higher levels of academic achievement. Additionally, McNaughton-Cassill et al., (2020) found that students who felt socially supported were more likely to aspire to mastery in college settings.

RQ2: Is there a relationship between financial support and allied dental program student success at two-year institutions in the United States?

H3: There will be a positive relationship between financial support and GPA among allied dental program students.

H4: There will be a positive relationship between financial support and graduation rate among allied dental program students.

Rationale: The reviewed literature asserts food and housing security, as well as the ability to approach education with a more holistic and worldly approach, yielded more positive academic outcomes (Cheng et al., 2012; Claridge & Ussher, 2019; Glass et al., 2021; Huang et al., 2019; Liu & Lu, 2008; Maslow, 1943; O'Donnell & Blankenship, 2018; Sabri et al., 2020).

Procedure

Prior to the execution of this study, Institutional Review Board approval was attained (see Appendix A).

Recruitment and Participants

The population for this study consisted of individuals who graduated from dental hygiene or dental assisting programs at two-year or four-year institutions within the United

States, or those individuals who began such a program and discontinued their enrollment for any reason. Convenience sampling and snowball sampling were utilized. Participants were recruited through email and social media invitations, as well as by verbal invitation through networking contacts (see Appendix B). The researcher requested the state dental hygiene professional organization send the study invitation to its constituents. Social media posts were made in dental professional community groups on Facebook, which have members across many states. An individual post (i.e., non-group post) was also made on LinkedIn. Participation was incentivized with the chance for participants to win one of 10 Amazon gift cards worth \$15 each. Participant selection was made based on the receipt of informed consent and willingness to participate (see Appendix C). There was no cap on the number of participants during the time data was collected.

Data Collection

A selected set of survey scales was employed to collect data from participants via an online, electronic questionnaire. Online data gathering allowed for ease of dissemination, with the ability to be distributed widely to numerous study participants. Participants were able to complete the questionnaire at any time of day or night during the data collection period. Informed consent was obtained electronically prior to beginning the survey. If a potential participant did not give informed consent, they were not able to continue their questionnaire. Participants were able to discontinue the questionnaire at any point with no ill-consequence.

The questionnaire contained items from the Interpersonal Support Evaluation List 12 item instrument (ISEL-12), the Perceived Friend/Peer Academic Support Scale (PFASS), and the Perceived Parental Academic Support Scale (PPASS) to evaluate social support.

Additionally, participants answered items regarding the financial support they received, how much they had to work during their allied dental education, and how much they took out in student loans in order to provide data regarding financial support. Lastly, they indicated their gender, age, and race, and provided information regarding their GPA and graduation status from an allied dental program, as well as the type of program in which they were enrolled: dental assisting, dental hygiene, or both.

After participants completed the questionnaire, they were provided with a link directing them to a separate online form in which they could enter their email address if they chose to be entered into a drawing for a \$15 gift card. When data collection ended, the gift card recipients were selected at random using a random number generator from those who provided their email addresses. The data collected on the questionnaires was kept separately from the emails of those who entered to win a gift card in order to preserve participants' privacy. Gift cards were distributed to the recipients electronically, and the list of participants' email addresses was deleted after the gift cards were awarded. One of the email addresses randomly selected to receive a gift card returned the message as undeliverable.

Survey Measures

Social Support

The Interpersonal Support Evaluation List 12 item instrument (ISEL-12) (Cohen et al., 1985), the Perceived Friend/Peer Academic Support Scale (PFASS) and the Perceived Parental Academic Support Scale (PPASS) (Chen, 2005) were used to measure social support among study participants.

Interpersonal Support Evaluation List (ISEL-12). The ISEL-12 was adapted from the Interpersonal Support Evaluation List (Cohen & Hoberman, 1983). The ISEL-12 has

been used across many studies and has been established as a valid instrument through review and testing (Rhee et al., 2021). The measure consists of 12 items and is measured by a four-point Likert scale (1= definitely false; 4= definitely true). Respondents answer items pertaining to a variety of types of social support, such as social acceptance (e.g. *If I wanted to go on a trip for a day... I would have a hard time finding someone to go with me*) and guidance support (e.g. *When I need suggestions on how to deal with a personal problem, I know someone I can turn to*). It has good reliability; the ISEL-12 has a Cronbach's alpha of 0.81-0.90 (Brookings & Bolton, 1988; Cohen et al., 1985). Negative scale items are reverse-coded to provide consistency within the scoring scheme. Mean scores on this scale can range from one to four, with higher scores indicating higher levels of social support from their friends and family and lower scores indicating lower levels of social support.

Perceived Friend Academic Support Scale (PFASS). The PFASS consists of 25 items and is used to measure the perceived support students receive from their friends and peers as related to academics. For each item, participants respond using a five-point Likert scale (*1=strongly disagree, 5=strongly agree*). Items measure a variety of needs, such as direct assistance (e.g., *My friends want to help me to do my best in school*) and confirmation of worth (e.g., *If I do well in school, my friends praise me*). The PFASS has high internal consistency ($\alpha = .88$) demonstrating its reliability (Chen, 2005). Negative items were reverse-coded in keeping with consistency for the scoring scheme. Mean scores on this scale can range from one to five, with higher scores indicating high levels of perceived academic support from friends and peers, and low scores indicating low levels of perceived academic support from friends and peers. Three items were excluded from the survey due to their irrelevance to the population being studied. One such item was "*My friends and I have*

discussed how to prepare for the Hong Kong Certificate of Education Examination (HKCEE)” (Chen 2005, p. 126).

Perceived Parental Academic Support Scale (PPASS). The PPASS consists of 31 items and is used to measure the perceived support students receive from their parents as related to academics. Just as with the PFASS, participants respond using a five-point Likert scale. Likewise, this scale measures support meeting a variety of needs, such as direct assistance (e.g., *My parents help me find ways to resolve school problems*) and confirmation of worth (e.g., *When I do well on a test, my parents praise me*). The PPASS has high internal consistency ($\alpha = .89$) demonstrating its reliability (Chen, 2005). Negative items were reverse-coded in keeping with consistency for the scoring scheme. Mean scores on this scale can range from one to five, with higher scores indicating high levels of perceived academic support from friends and peers, and low scores indicating low levels of perceived academic support from friends and peers. Seven items were excluded from the survey due to their irrelevance to the population being studied (e.g., *My parents have never discussed with my teachers about my school performance*).

Financial Support

The three prompts below henceforth known as the RSKA instrument ($\alpha = 0.87$), as developed by Roska and Kinsley (2019), were used to measure financial support. Participants responded on a five-point Likert scale with options “ranging from ‘not at all’ [1] to ‘a great deal’ [5]... for the amount of financial support they received for” the following (Roska & Kinsley, 2019, p. 421):

- College tuition and fees
- Housing costs

- Textbooks, a computer, or other educational supplies

A mean score was calculated, with possible scores ranging from one to five. Higher scores indicate higher amounts of financial support received, and lower scores indicate lower amounts of financial support received.

As working to support self or family could serve as an indicator of greater financial need, participants were asked to provide how many hours per week on average, if any, they worked during their allied dental education. They were instructed to count only those hours they worked specifically for the purpose of supporting themselves or their family.

Student Success

In order to determine whether students successfully matriculated through their program of study, participants were asked to provide the following:

- Allied dental education GPA (final cumulative). Participants were asked to self-report their GPA during their allied dental education in a short-answer free response box. The researcher relied upon this self-reporting and did not verify this data with institutions.
- Graduation status: graduated from allied dental program, in the final semester and on track to graduate, or discontinued allied dental education. This data was also self-reported by participants.

Perspective

Participants were instructed to answer all of the above prompts from a retrospective perspective, looking back on their allied dental education.

Demographics

Study participants were prompted to provide demographic information including age, race/ethnicity, gender, whether they attended a two-year or four-year institution, and the type of program they attended (dental assisting, dental hygiene, or both).

Data Analysis

After data was collected, a mean score was tabulated for the three social support scales (ISEL-12, PFASS, PPASS). Pearson's r was used to determine if there was a correlation between the ISEL-12 and GPA, between the PFASS and GPA, and between the PPASS and GPA. Due to the fact that the sample captured for the study contained only individuals who had graduated or who were in their final semester of the program and on-track to graduate, analysis was not performed to correlate graduation status and support. Next, a mean was calculated for the RSKA scale, and Pearson's r was used to determine if there was a correlation between financial support and GPA. Furthermore, Pearson's r was used to correlate average number of hours worked per week during the participants' allied dental education and GPA. Finally, frequencies for race/ethnicity, gender, program of study, and type of institution (i.e., two-year or four-year), along with means for participant age and total loan amount acquired during their studies in the allied dental program were calculated for descriptive purposes.

CHAPTER IV

RESULTS

The purpose of this study was to identify whether a relationship exists between social and financial support and allied dental student success at two-year or four-year institutions as measured by GPA and graduation rate. Participants answered survey items that pertained to their social and financial support and their academic success in their allied dental education.

Data Analysis

An online anonymous survey was distributed to dental hygienists and dental assistants across the United States. Data collection for the study began on March 10, 2022. Two integrity check questions were included in the survey, and if a response did not include correct answers to both integrity check questions, it was excluded. Surveys completed in less than three minutes were also excluded, as there were 70 items on the survey and it would not have been possible to read and respond to each item in earnest in less time. Additionally, if there were more than 50% of the items with no response, the submission was excluded. Finally, if the GPA listed was non-sensical (e.g. 80, 95, etc.), the response was excluded. This was, in part, due to those responses being clustered together around a similar time of submission as well as their accompaniment of other suspicious data. For instance, one response included a 19-year-old who worked 50 hours per week and had listed a GPA of 80.00. After the data was cleaned, 195 responses remained.

Participant Demographics

Of the 195 participants, the vast majority identified as White (82.6%) and female (94.8%), which is roughly consistent with the population of dental hygienists and assistants (Commission on Dental Accreditation, 2020a; Commission on Dental Accreditation, 2020b). Due to sampling methods that targeted professional groups on social media which are more likely to include individuals who practice dental hygiene, 96.4% of respondents were dental hygienists. Also, 69% of respondents attended a two-year institution. This is similar to the percentage of students reported by CODA (2020b) who attended associate-level programs (79.8%). The mean age was 41. It is important to note that the item on the survey for age requested the participants' current age, not the age at which they finished the program, which may have implications for interpreting these results, something that will be explored in the next chapter.

Table 4.1*Participants' Demographics*

	Frequency	%
Age		
21-30	56	28.7
31-40	45	23.1
41-50	34	17.4
51-60	36	18.5
61+	16	8.2
Missing	8	4.1
Gender		
Female	185	94.8
Male	5	2.6
Nonbinary	0	0
Missing	5	2.6
Race/Ethnicity		
Asian/Pacific Islander	4	2.1
Black/African American	3	1.5
White	161	82.6
Hispanic/LatinX	9	4.6
Native American	3	1.5
Multiracial	5	2.6
Prefer not to answer	10	5.1
Type of program attended		
Dental Hygiene	166	85.1
Dental Assisting	2	1.0
Both	22	11.3
Missing	5	2.6
Type of institution attended		
Two-year	135	69.2
Four-year	55	28.2
Missing	5	2.6

Note: N=195

Descriptive Statistics

The goal of this study was to determine if there is a statistically significant correlation between the social and financial support received by allied dental program students at accredited dental hygiene and dental assisting programs and their academic success. The study survey included four subscales relating to general social support (12 items), academic social support from friends (22 items), academic social support from parents (24 items), and

financial support (3 items). All analyses were run in SPSS 24.0. Descriptives for all variables are summarized in Table 4.2.

Table 4.2

Descriptives for All Subscales and Variables of Interest

Variable	Mean	Standard Deviation	Alpha	Range
ISEL-12	3.202	0.600	.898	1-4
PFASS	4.063	0.683	.936	1-5
PPASS	3.517	0.740	.902	1-5
RSKA	2.842	1.427	.868	1-3
GPA	3.576	0.323		0-4.00
Hours Worked	10.799	13.459		0-60

Correlational Analyses

Social Support and Student Success

To address the first research question concerning whether a relationship exists between social support and student success, Pearson’s *r* correlations were run between the mean of each of the social support subscales (ISEL-12, PFASS, PPASS) and GPA. Due to limitations of my sample, I was unable to run analyses regarding graduation status.

Based on adjacent literature, I hypothesized that there would be a positive relationship between social support (as measured by the ISEL-12, PFASS, and PPASS) and student success (as measured by GPA and graduation rate) among allied dental program students. Analysis uncovered that there was a significant positive relationship between general social support as measured by the ISEL-12 ($r = .188$) and GPA. This supported the retention of H1. Secondly, analysis showed there was a significant positive relationship between social support given by friends as measured by the PFASS and GPA ($r = .182$). This also supported the retention of H1. Thirdly, analysis showed that there was not a significant relationship between parental academic social support as measured by the PPASS. This did not support the retention of H1. Therefore, my initial hypothesis was partially retained

because certain measures of social support were positively related to GPA at a statistically significant level of $p < .05$. Table 4.3 shows the full results of these analyses.

Table 4.3

Correlational Analyses

	1	2	3	4	5	6
1. ISEL-12						
2. PFASS	.565**					
3. PPASS	.280**	.356**				
4. RSKA	-.029	.168*	.287**			
5. GPA	.188*	.182*	-.039	-.135		
6. Hours Worked	-.369**	-.394**	-.203**	-.114	-.085	

Note: * $p < .05$; ** $p < .01$

Financial Support and Student Success

To address the second research question, whether a relationship exists between financial support and student success in allied dental programs, Pearson’s r was run between financial support (as measured by the RSKA scale) and GPA, and between number of hours worked specifically due to the need to support one’s family or oneself and GPA. Analyses revealed that there was no significant relationship between financial support as measured by RSKA and GPA. These findings do not support H3. Furthermore, analyses revealed that there was no correlation between hours worked to support self or family and GPA. This finding similarly did not support H3. Therefore, my initial hypothesis regarding financial support and student success was rejected. Table 4.3 shows the results of these analyses.

The survey also collected data regarding student loans incurred during allied dental education. This data can be found in Table 4.4. More than half of participants reported they acquired \$10,000 or less in student loans during their education. This points to the affordability of allied dental education, and could potentially be related to the fact that nearly 70% of participants attended a two-year institution. Generally speaking, two-year

institutions are less costly than four-year institutions (National Center for Education Statistics, 2022).

Table 4.4

Student Loan Amounts Collapsed into Categories

Student Loans in US Dollars	Frequency	%
0-5,000	80	41.0
6,000-10,000	22	11.3
11,000-20,000	30	15.4
21,000-30,000	18	9.2
31,000-40,000	16	8.2
41,000-50,000	11	5.6
51,000-60,000	4	2.1
61,000-70,000	1	0.5
71,000-80,000	2	1.0
81,000-90,000	1	0.5
91,000-100,000	3	1.5
Missing	7	3.7

Note: N=195

CHAPTER V

CONCLUSION

The purpose of this study was to determine whether a relationship exists between social and financial support and student success in accredited allied dental programs. Quantitative data analysis was conducted to investigate this relationship. In this final chapter, study findings and implications will be discussed. Additionally, limitations and future research directions will be delineated.

Discussion

Results showed that social support was positively correlated to student success, specifically as measured by ISEL-12 and PFASS. However, I was unable to identify any significant relationship between academic parental support as measured by the PPASS or financial support as measured by RSKA and allied dental student success. Although I am unable to state that social support directly causes allied dental student success based on these correlational analyses, study results seem to suggest that a greater level of academic social support from peers may lead to greater student success. Furthermore, general social support also had a significant positive relationship with student success. These findings are consistent with prior research (Bronkema & Bowman, 2019; McNaughton-Cassill et al., 2021; Tinajero et al., 2019).

Additionally, the developmental stage of emerging adulthood brings its own unique challenges and characteristics. Emerging adulthood is a distinct developmental stage that occurs as a young adult moves away from home and enters a stage of limbo. This developmental stage is characterized by five key aspects: exploration of identity, instability in relationships, occupations, and living situations, a focus on one-self, a feeling of transition, and a sense of optimism and future possibilities (Arnett & Fowler, 2000). During emerging adulthood, individuals are learning to function on their own and becoming less dependent on their parents as they explore who they are and who they want to become (Arnett & Fowler, 2000). Traditional college students are included in the emerging adulthood stage, including many allied dental students (Arnett & Fowler, 2000; Commission on Dental Accreditation, 2021b). As Arnett and Fowler (2000) discuss, individuals who are in the emerging adulthood stage are shifting from the reliance on parents as a secure base to a position of relative independence and reliance on peer friendships. Because of this new emphasis on peer relationships, it is to be expected that parental support or the lack thereof has less of an impact on student success than it would in an earlier stage of life.

One possible explanation of the lack of correlation between academic parental support and GPA is that due to the population's status as members of the emerging adulthood stage, academic parental support is not as influential as academic peer support for student success. An additional possible explanation lies in the retrospective nature of the study. Since participants were asked to look back on their time in their allied dental education, it is likely that multiple years had elapsed for many of the participants. This passage of time may have led to underestimation of the amount or importance of academic parental support they received during their education. Furthermore, this study did not explore every type of social

support from parents, but rather focused on parental academic social support. Since the ISEL-12 measured general social support but did not investigate the source of the support, it is possible that other types of parental social support impacted student success. However, due to the study design, this cannot be ascertained.

While the lack of relationship between financial support and student success was unexpected, there is a possible explanation. Since most study participants attended two-year institutions, perhaps the less costly nature of two-year institutions compared to four-year institutions allowed students more financial comfort. Also, there was no relationship between hours worked during education and student success. This finding could potentially be related to the same root cause. Furthermore, Roska and Kinsley (2019), assert that first-generation college students who receive financial support do not experience as great a positive impact in GPA as non-first-generation students. While I did not collect data regarding first-generation college student status, I do wonder how many of the participants fall into that category, and if that could have potentially impacted the study findings.

Three items from the PFASS and seven items from the PPASS were not included in the survey for this study due to their perceived lack of relevance to the study or to the population. Whether due to this factor or perhaps because the sample was quite homogeneous, the alpha for some scales was .01 to .05 higher than previously reported in other studies. The alpha for RSKA in this study was 0.868, while previous research reported a 0.87, indicating that the present alpha was consistent with the previous study. Although not a focus of this study, I did note that both the PFASS and PPASS measures had a greater degree of internal reliability ($\alpha = .94$ and $.90$ respectively) than has been reported in previous studies (α ranged from .88-89). Such internal consistency could be due to the fact that some

items from each of these scales were omitted from the survey due to their perceived lack of relevance to this population.

Limitations and Future Research Directions

Sample Limitations

Due to sampling techniques, the sample lacked certain portions of the overall population. The sample only captured those who had already completed an allied dental program as well as a few individuals who were in their final semester of a program and on-track to graduate. The study did not capture participants who discontinued an allied dental program likely due to recruitment methods focusing on communities that practicing dental professionals participate in. Electronic invitations to participants included dental hygiene professional associations as well as social media groups designed for use by people in dental hygiene and dental assisting careers. People who had to discontinue their allied dental education are not likely to be included in these social media groups or professional organizations. Future researchers could potentially avoid this limitation by initiating contact while allied dental students are still early in their schooling. Then, they would be better able to access the portion of the population that does not complete their education by following up on those previously established contacts.

Instruments

The PFASS and PPASS instruments were originally developed for use in adolescent populations. While the hypothesis regarding social support from friends and academic success was supported, the null hypothesis regarding the relationship between academic parental social support and academic success was retained. Although this was unexpected, there are a couple of possible explanations for these surprising results. One possible reason

the effect of academic parental support was not significantly positively correlated with academic success is because the population of allied dental students is primarily in the emerging adulthood stage during their allied dental education (Commission on Dental Accreditation, 2020a; Commission on Dental Accreditation, 2020b; Commission on Dental Accreditation, 2021b; Commission on Dental Accreditation, 2021b).

The PPASS scale included questions with phrasing that may not have been as applicable to students in the emerging adulthood population. For instance, one item asks whether parents have the time to help the participant with homework. This may not be applicable for allied dental students since the field is quite specialized, and the parent likely does not work in the field. Another scale item inquired as to whether parents encouraged the participant to attend school on a daily basis, which is a conversation that seems more likely to be had between an adolescent and parent than an emerging adult and parent. Therefore, perhaps a different instrument should be developed specifically for this population. The instrument might reflect the changing relationship with parents in the emerging adulthood phase, such as an item that inquires about parental support but is tempered by the shift away from parents as the primary safe base.

Future researchers looking to investigate the role of social support as it relates to student success may look to the alpha scores of this study when considering the exclusion of certain measure items. Given the slightly improved alpha scores associated with the PFASS and PPASS in this study, researchers who use these instruments may consider making similar exclusions of items to increase the reliability of these instruments.

Implications

Allied dental programs are particularly labor-intensive and require a large commitment of hours on campus and at home for success. Balancing life and allied dental education can be difficult (Fambely, 2020). The results of this study reveal the importance of friend/peer academic support. Many allied dental programs pair new students with a more senior student in a fraternity/sorority type of big-little relationship. This may help new students to receive mentorship and support through the program. Given the findings of this study, perhaps allied dental programs can use further measures to encourage bonding within allied dental cohorts.

Some higher learning institutions offer formal types of social support including cultural and spiritual support, basic study skills and time management training, tutoring services, academic guidance, as well as other programs (Balzer & London, 2020; Gallop & Bastien, 2016; Huang et al., 2019; Kwan et al., 2021; Ma et al., 2020; Mishra, 2020). Moreover, increased on-campus involvement could potentially result in more peer friendships, which according to the results of this study may also lead to greater student success. When institutions provide a space for students to develop meaningful peer relationships, they are also laying the groundwork for students to receive beneficial social support from their peers. Examples of this include establishing small class sizes and providing common or student community spaces (Gallop & Bastien, 2016; Huang et al, 2019; Mishra, 2020). In this instance, social support from institutions helps to spur on social support from peers/on-campus friends as well.

Allied dental program leaders could consider partnering with other health sciences programs such as nursing or respiratory therapy to foster student friendships, which may be

beneficial to all involved students. Various health science programs require similar pre-requisite courses. Therefore, it may be logical for interdisciplinary clubs to spring out of these health science pre-requisite course student groups. These interdisciplinary clubs could provide a safe space for student to discuss difficulties in their respective programs, as well as increase general peer support in academics and social aspects. During the time students are taking pre-requisites, interdisciplinary clubs may help to facilitate peer academic support and inspire good study habits for future education. Also, friendships made in these clubs could increase academic peer support, even after students have entered their own separate programs. While the coursework is different, peer academic support, particularly in the form of accountability, may be long lasting.

Since there is a positive correlation between general social support and academic success, students should be provided a list of resources either during the application process to the program, or at the very least during the first week of classes. This resource list could include a comprehensive list of on-campus clubs, contact and location information for student counseling services, information for on-campus food assistance programs, as well as information about handling stress and relying on your support network. Additionally, the aforementioned mentorship of incoming students by more advanced students lends itself to both academic support as well as general social support.

Conclusion

This study provides insight into the role of social and financial support in allied dental student success. It investigated the role of support in an uncommon way, by separating it into categories including peer academic social support, parental academic social support, general social support, and financial support. This is a novel, valuable perspective, because it

accounts for the potential differences in the availability of the various types of support each individual may have or may lack access to. Although the importance of academic parental support in relation to allied dental student success was not established in this study, it is logical to consider that the role of peers and friends weighs more heavily on students in the emerging adulthood stage as well as the close cohort relationships that may form within allied dental programs. Also, and conversely, this result could have been due to the selection of scale by the researcher; perhaps a scale designed specifically for emerging adults could have been more appropriate. Moreover, the overarching role of other types of social support provided by parents cannot be determined based on the results of this study.

As hypothesized, general social support and academic social support from friends did have a positive relationship with student success. However, financial support did not have a relationship with student success. This could be the result of most participants attending two-year institutions, which are less costly than four-year institutions. It could also be related to the possibility that many participants may have been first-generation college students, though this data was not collected in this study, so it is impossible to determine. While this study does have limitations, it is one of few that investigates allied dental student success in any aspect. The results of this study suggest that general and academic peer social support have a positive relationship with allied dental student success, although academic parental social support and financial support do not.

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APPENDICES

APPENDIX A



Oklahoma State University Institutional Review Board

Date: 03/04/2022
Application Number: IRB-22-104
Proposal Title: The relationship between social and financial support and student success in allied dental programs

Principal Investigator: Rachel Stroble
Co-Investigator(s):
Faculty Adviser: Jane S Vogler, Ph.D.
Project Coordinator:
Research Assistant(s):

Processed as: Exempt
Exempt Category:

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

APPENDIX B

The following was posted on Facebook and LinkedIn to recruit participants:

You're invited to complete a survey for a chance to win one of ten \$15 Amazon gift cards! I am conducting a research study through Oklahoma State University for my thesis, as I work toward my MS in Educational Psychology. I am looking for participants who attended a CODA accredited dental hygiene or dental assisting program in the United States, or who are currently enrolled in the final semester of such a program. By completing this study, you can help me to explore the connection between social and financial support and student success in allied dental programs. Surveys are anonymous and will take approximately 20-30 minutes to complete. If you know someone who meets the above criteria, please pass this survey invitation along to them as well. Follow this link to complete the survey: https://okstateches.az1.qualtrics.com/jfe/form/SV_5i2RqlRqxo8dRJK

The following was sent by Oklahoma Dental Hygienists' Association to its members via email:

Rachel Stroble, RDH is conducting a research study as part of her graduate program in Educational Psychology at Oklahoma State University. She requests your participation for a chance to win one of ten \$15 Amazon gift cards. To be eligible to participate, you must have attended a CODA accredited dental hygiene or dental assisting program in the United States, or are currently enrolled in the final semester of such a program. By completing this study, you can help her to explore the connection between social and financial support and student success in allied dental programs. Surveys are anonymous and will take approximately 20-30 minutes to complete. If you know someone who meets the above criteria, please pass this survey invitation along to them as well.

APPENDIX C

PARTICIPANT INFORMATION FORM

The Relationship Between Social and Financial Support and Student Success in Allied Dental Programs

Background Information

You are invited to participate in a research study of the potential relationship between social and financial support and student success in allied dental programs. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time. You can skip any questions that make you uncomfortable and can stop the survey at any time.

This study is being conducted by: Rachel Stroble, School of Educational Foundations, Leadership, and Aviation, Oklahoma State University, under the direction of Jane Vogler, Ph.D., School of Educational Foundations, Leadership, and Aviation, Oklahoma State University.

Procedures

If you agree to be in this study, we would ask you to do the following things: Complete an anonymous online survey regarding the social and financial support you received throughout your time in your dental hygiene or dental assisting education.

Participation in the study involves the following time commitment: Approximately 20-30 minutes.

Compensation

You will receive entry into a drawing for one of ten \$15 Amazon gift cards as compensation for your participation. You will receive your gift card electronically via email if you are selected as a winner. To be eligible to receive the compensation, you will follow a link at the conclusion of your survey to a separate single-question survey where you will provide your email address. Provision of your email address is optional. Email addresses will not be connected in any way to your responses to the study survey. You will receive no correspondence to your email other than the delivery of your gift card, if you are selected. At the conclusion of the study, after the Amazon gift card recipients have been selected, the separate file containing email addresses will be deleted.

Confidentiality

The information you give in the study will be anonymous. This means that your name will not be collected or linked to the data in any way. The researchers will not be able to remove your data from the dataset once your participation is complete.

We will collect your information through an online survey. Your survey answers will be stored initially with Qualtrics as a password protected electronic format. Data will later be

downloaded and stored as a password protected file, without any identifying information, as well as in an encrypted, cloud-based storage system. If you choose to participate in the drawing for one of ten \$15 Amazon gift cards, you will follow a link to a separate single-question survey in which you will provide your email address. Email addresses will not be connected in any way to your responses to the study survey. You will receive no correspondence to your email other than the delivery of your gift card, if you are selected. At the conclusion of the study, after the Amazon gift card recipients have been selected, the separate file containing email addresses will be deleted, no more than 30 days after the conclusion of the study.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. However, your participation in this online survey involves risks similar to a person's everyday use of the internet. If you have concerns, you should consult the survey provider privacy policy at <https://www.qualtrics.com/privacy-statement/>

Contacts and Questions

The Institutional Review Board (IRB) for the protection of human research participants at Oklahoma State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 405.757.4078, rachel.stroble@okstate.edu. If you have questions about your rights as a research volunteer or would simply like to speak with someone other than the research team about concerns regarding this study, please contact the IRB at (405) 744-3377 or irb@okstate.edu. All reports or correspondence will be kept confidential.

Eligibility to Participate

To be eligible to participate in this study, you must have attended a CODA accredited dental hygiene or dental assisting program in the United States, or must be enrolled in your final semester of such a program, or must have begun such a program and withdrew for any reason. Furthermore, you must be 18 years of age or older.

Statement of Consent

I have read the above information. I have had the opportunity to ask questions and have my questions answered. I consent to participate in the study.

If you agree to participate in this research, please click "Next."

VITA

Rachel Christine Stroble

Candidate for the Degree of

Master of Science

Thesis: EXPLORING THE RELATIONSHIP BETWEEN SOCIAL AND FINANCIAL
SUPPORT AND ACADEMIC SUCCESS IN ALLIED DENTAL PROGRAMS

Major Field: Educational Psychology

Biographical:

Education:

Completed the requirements for the Master of Science in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in December, 2022.

Completed the requirements for the Bachelor of Arts in Journalism at the University of Central Oklahoma, Edmond, Oklahoma in 2009.

Completed the requirements for the Associate of Applied Science in Dental Hygiene at Rose State College in Midwest City, Oklahoma in 2013.

Experience:

Instructor of Dental Hygiene and Dental Assisting, Rose State College 2019-Current

Adjunct Clinical Dental Hygiene Instructor, Rose State College 2018-19

Registered Dental Hygienist- Clinical Practice, Edmond Dental Center 2013-19