SOCIAL SUPPORT, SENSE OF COMMUNITY, AND PSYCHOLOGICAL DISTRESS

AMONG COLLEGE STUDENTS: EXAMINING THE IMPACT OF

UNIVERSITY HOUSING UNITS

BY

©2013
Daniel Troy Suitor

University of Kansas

Submitted to the Department of Psychology and Research in Education and the Faculty of the
Graduate School of the University of Kansas
In partial fulfillment of the requirement for the degree of
Doctor of Philosophy.

Chairperson _____
Karen Multon, Ph.D.

Committee Members _____
Bruce Frey, Ph.D.

_____
Thomas Krieshok, Ph.D.

_____
Tamara Coder Mikinski, Ph.D.

_____
Suzanne Rice, Ph.D.

Date Defended: __March 8, 2013___

The Dissertation Committee for Daniel Troy Suitor certifies

that this is the approved version of the following dissertation:

SOCIAL SUPPORT, SENSE OF COMMUNITY, AND PSYCHOLOGICAL DISTRESS

AMONG COLLEGE STUDENTS: EXAMINING THE IMPACT OF

UNIVERSITY HOUSING UNITS

Chairperson _____
Karen Multon, Ph.D.

Committee Members _____
Bruce Frey, Ph.D.

_____
Thomas Krieshok, Ph.D.

_____
Tamara Coder Mikinski, Ph.D.

_____
Suzanne Rice, Ph.D.

Date approved: _March 8, 2013_

ABSTRACT

Attending college can be a rewarding but stressful time for students. Colleges and universities across the nation are becoming more and more concerned with the mental health of their students. Although past research has explored how social support and sense of community help students make a better transition to college life, less is known about how these factors interact with where students choose to live. This study examines the relationship between social support, psychological sense of community, residence hall capacity, and psychological distress. Participants from three college campuses in the Midwest were administered surveys to assess perceived social support, psychological sense of community, psychological distress, and various identifying variables. Results showed that social support did not vary across differing hall capacities while sense of community did. Furthermore, when social support, sense of community, residence hall capacity, and psychological distress were analyzed together, only social support and sense of community scores showed significant predictive value of psychological distress. Residence hall capacity did not show predictive value related to psychological distress levels.

ACKNOWLEDGEMENTS

First, I would like to thank my advisor and committee chair, Karen Multon. Without

your unending support and guidance, I never would have arrived at this point. You taught me

that it is possible to balance work and family life with my academic goals. I am grateful to have

had you on board for my journey.

Second, I would like to thank all of my committee members: Bruce Frey, Tom Krieshok,

Tammy Mikinski, and Suzanne Rice. Bruce, throughout my time in the program, you have

always shared with me your sense of humor and a discerning eye for details I might not have

noticed before. I appreciate your candor and your help. Tom, you were at the hospital right after

my son was born prematurely, and you gave me permission to put everything on the back burner

in order to be there for my family. You will never completely know how much I appreciate your

guidance, counsel, and mentorship through these years. Tammy, you have always been my

cheerleader, inspiring me to do my best and not let the grind of the program get me down. I am a

better person for having known you. Suzanne, you have helped me to see things from an

educational, but non-psychological perspective and I thank you for your wisdom and

suggestions.

Third, to the friends that have influenced and helped me throughout my studies. Chuck

Nassar, you are one of my best friends and it was you who encouraged me to pursue my

doctorate. I wasn't sure at times whether to curse you or thank you, but in hindsight, you were

right…It *was* worth it. Tom Grady, you helped me to clarify my ideas about life, particularly

from the viewpoint of psychology. I will fondly remember our long discussions and I thank you

for helping me to expand my mind. Maggie Syme, you were my first "school friend" at KU.

You have always been there to talk about school, life, or anything with which I might have

needed counsel. You helped me get through comps when everything was happening with

Caleb's birth, and you were there for me through the internship and dissertation process. You've

been a great colleague, a trusted friend and I want to thank you for believing in me to see this

thing through to the end.

Next, I would like to thank my family. To my parents, Herb and Sherry Suitor, I want to

thank you for bringing me into this world and instilling in me the desire to follow my dreams, no

matter how long it may take. To my brother, Mark Suitor, you have been my best friend and you

will always be the person I look up to the most in this world. Thank you for showing me how to

be a fighter, and how to win! To my in-laws, Pat and Jerry Schinkel, you have been there for me

more than you will ever know and I am humbled by your love and generosity.

To my wife, Megan, I want to thank you for loving me, standing by me, and being my

rock when everything else in this world seemed so uncertain. We have been on a long and

difficult trip together, but I would not change anything and I cannot imagine experiencing it

without you by my side.

Finally, I dedicate this to my son. Caleb, you came into this world frighteningly too

soon. Every possible thing that could have gone wrong with your birth did. Yet here you are

today, a healthy, vibrant, happy, and smart little boy that I love more than I did the day before.

You are the best thing that I have ever accomplished in this world. You are my life, you are my

hero…and I love you so very much.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Introduction

Past research on the mental wellness of college students has indicated a significant

relationship between an individual and the interaction with his or her environment (Moos, 1979;

Riker, 1965). Over the past 20 years, there have been many consistencies and changes in the

lives of students attending institutions of higher education. These changes include an increasing

number of students working part-time or full-time (Mowbray et al., 2006), increased reliance on

computers and smartphones for communication, and new opportunities for interaction via social

media and other virtual platforms. The factors that have remained constant include various

advantages and disadvantages that accompany living on a college campus. Some of the

advantages are making new friends, establishing a greater sense of independence/autonomy

(Chickering, 1974), improved time-management skills, and fun. In contrast, some of the

common disadvantages are loss of sleep, increased stress, shared living quarters, weight

loss/gain, and substance abuse (Dyson & Renk, 2006; Ham & Hope, 2003). One noticeable and

troubling change is the increase in mental health concerns for many incoming and current college

students (Mowbray et al., 2006).

Most lifetime mental disorders have first onset during or shortly before the typical

college age (Kessler, Berglund, Demler, Merikangas, & Walters, 2005), and these problems may

be precipitated or exacerbated by the variety of stressors in college life, including irregular sleep

patterns, flux in personal relationships, and academic pressures (Kadison, 2004). Universities

are well positioned to promote mental health among young people because they encompass

several important aspects of students' lives: academics, health services, residences, social

networks, and extracurricular activities (Mowbray et al., 2006). While students with mental

health concerns are certainly not a new phenomenon, the increased prevalence and type of preventive or protective measures available is certainly of interest to university educators, counselors, and administrators alike.

Students may struggle with finding their niche at a university while slowly making the transition into adulthood, and this can be a difficult road at best. The college experience also causes anxiety and stress for some, which can often lead to depression, ranging from mild to severe. One area that may affect psychological well-being is the student's living environment. Consistent with person-environment theory (Holland, 1992)—the theory that a person of a given personality will choose and feel most satisfied in the environment that corresponds best to his/her personality – it is possible that certain residence hall populations are more psychologically healthy than others due to various factors in their physical/living environment. Thus, the environmental attributes of the residence hall can influence certain aspects of the students' social support systems within the residence hall, which also may affect their mental health and wellness. Notably, while students living in residence halls also experience problems; it appears that various subgroups of these students have higher functioning levels of mental health than others. Examining the protective and risk factors for mental health outcomes that are inherent in residence halls is warranted.

College Students and Mental Health

An increasing amount of evidence has shown that the prevalence of mental health problems is numerous and increasing among students in institutions of higher education (U.S. Department of Education, National Center for Education Statistics, 2005a). In addition, many college counseling center directors have reported an increase in severe psychological problems among the students they serve (Gallagher, Zhang, & Taylor, 2004). Following this trend is the

increase in students attending school while taking some type of psychotropic medications. Schwartz (2006) found that over a ten-year period, students' use of medications increased fivefold.

These and other trends continue to be observed by resident assistants, graduate assistants, and hall directors who live on campus and have round-the-clock interactions with these students (Rawls, Johnson, & Bartels, 2004). They are in positions to identify, at a very early stage, students who are dealing with issues such as homesickness, depression, substance abuse, eating disorders, suicide, or other indicators of mental or emotional dysfunction.   As a result, student service personnel can be instrumental in addressing the well-being of students (Mathis & Lecci, 1999; Murray, Snider, & Midkiff, 1999).

Person-Environment Theory

John Holland's person-environment model (1966) was originally developed in the area of vocational psychology. His theory describes how individuals interact with their environment and how environmental and individual characteristics influence vocational pathways and choices (Holland, 1997). This concept involving the interaction between a person and his/her environment has been extended into the field of college student development by various investigators (Beekhoven, De Jong, & Van Hout, 2004; Chickering, 1972; Jordyn & Byrd, 2003; Moos, 1979; Reidel & Howell, 1996; Riker, 1965; Rubio & Lubin, 1986; Sloan-Devlin, Donovan, Nicolov, Nold, & Zandan,2008 ; Wilcox & Holahan, 1976). Research on the psychological well-being of college students has often noted the importance of the individual versus environment interaction (Moos, 1979, Riker, 1965, Wampold, Ankarlo, Mondin, Trinidad-Carrillo, Baumler, & Prater, 1995). Seamon (1984) notes that emotional experience is linked with the world in which it resides. He contends that a phenomenological perspective

3

speaks to an individual's inescapable connection to one's environment and that emotional ties one has with his/her surroundings influences his/her understanding and future experience of those surroundings.

Residence Hall Size and Effects

Research has shown that college and university residence halls provide students with opportunities to interact with their peers and be part of a community that they might not have living off-campus (Thompson, Samiratedu, & Rafter, 1993). As Astin has found (1977), a lack of integration with the college environment is associated with lower commitment to the university and an increased risk of dropping out. Furthermore, students living in residence halls perform better academically than those living off-campus (Blimling & Schuh, 1981). Also, as an integral factor on a college campus, residence halls help students in attaining self-confidence, self-knowledge, increased interpersonal skills, clarification of goals and a more positive regard for the community (Erwin & Love, 1989).

The interrelationship between human behavior and physical design in educational psychology can be traced back to several studies by Wilcox and Holahan (1976, Holahan & Wilcox, 1978) in which they investigated the influence of high- and low-rise buildings on the "psychosocial climate of university residence hall environments…" (1976, p. 453). They purport the trend toward large, multi-level residential halls on college campuses seems to be driven by financial pragmatism as well as limited land. This is a disturbing one given the important role university residence environments play in the development and growth of college students (Chickering, 1972; Feldman & Newcomb, 1969; Newcomb, 1962, 1966). Wilcox and Holahan (1976) further posited that immediate living environment impacts students in the areas of college life satisfaction, intellectual productivity, emotional development, and the development of

interpersonal relationship skills. They specifically found that the size (i.e., number of floors /student capacity) as well as the layout of a building can influence overall college satisfaction as well as friendship formation (Holahan & Wilcox, 1978).

Although a number of studies examining college residence halls nearly 40 years ago (Baum, Harper & Valins, 1975; Corbett, 1973; Heilweil, 1973b; Moos, 1976; Sommer, 1968), much of it focuses on the issues of suite versus corridor, or low-rise versus high-rise on student satisfaction and perceptions of crowding (Sloan-Devlin et al., 2008). In their study, however, Wilcox and Holahan (1978) investigated residential satisfaction and friendship formation in both high- and low-rise student housing with an analysis of the interaction between social competence and type of environment affecting both of the aforementioned factors. Their results indicated that low-rise residence hall occupants were significantly more satisfied and established more hall-based friendships than residents living in much larger high-rise settings.

Furthermore, Sloan-Devlin et al. (2008) found significant differences in students' sense of community as it related to dormitory design. Specifically a lower sense of community was found in halls that are organized in suites versus traditional two-person rooms, regardless of the higher ratings of comfort and amenities the suite designs offered residents.

There are many choices students can make regarding where they wish to live on campus. Across the housing continuum are buildings ranging in capacity of less than 150 students (low-capacity buildings), 150-350 students (middle-capacity buildings), and on the upper end of the continuum occupancies of 350 and higher (high-capacity buildings). Students also have choices of living in traditional two-person rooms versus more modern "suite-style" rooms with four or more roommates sharing two bedrooms, a bathroom, and a common living area. Research shows that where a student chooses to live has an effect on their college experience and psychosocial

well-being (Cook, 1987; Shaikh & Deschamps, 2006; Sloan-Devlin et. al., 2008). Russell (1982) found that lonely people interacted less with friends and family than did non-lonely people and that, for some, the less social support one has, or the less socially connected one is to others, the greater their feelings of loneliness. Tinto (1993) found that students who live in close proximity were more likely to develop friendships. He also found that students who develop satisfying relationships with peers tend to earn better grades and are more inclined to remain in college than are students who fail to develop these significant ties.

Social Support, Sense of Community, and Adjustment

An important factor in addressing the increased level of student psychological distress is to understand students' social context in the university setting and its relationship to mental health. Friends, family, and significant others can provide instrumental, informational, or emotional assistance (House, Umberson, & Landis, 1988). This assistance is commonly referred to as social support and includes social resources that individuals perceive to be available or that are actually offered to them by helping relationships (Cronkite & Moos, 1995). Social support is considered a psychosocial coping resource that positively affects individuals' personal resources such as self-esteem and self-efficacy and buffers the negative effects of stress (Rubio & Lubin, 1986; Thoits, 1995). Through these mechanisms, social support can influence emotional health and well-being (Kawachi & Berkman, 2001). A lack of social support has been found to be prevalent among psychologically distressed people and thus they are more likely to feel socially isolated (Kawachi & Berkman, 2001; Seeman, 1996). Consequently, less contact with friends, lack of a partner or someone to confide in, and feeling alone are also correlated with higher levels of psychological distress (Coyne & Downey, 1991; Durden, Hill, & Angel, 2007; Stravynski & Boyer , 2001)

Perceived social support is a person's perception of the availability of support from others (i.e., friends and family), and encapsulates the complex nature of social support including both the history of the relationship with the individual who provided the supportive behavior and the environmental context (Hobfoll & Vaux, 1993).

An equally important facet of the college student social context is the way in which students perceive their community, defined as psychological sense of community (McCarthy, Pretty, & Catano, 1990). Sarason (1974), defines psychological sense of community as "the perception of similarity to others, and acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them…and the feeling that one is part of a larger dependable and stable structure…" (p. 157). McMillan & Chavis (1986) define sense of community as "a feeling of belonging, a feeling that one matters to one another and to the group, and shared faith that needs will be met through a commitment to be together." (p.9). Plas & Lewis (1996) define sense of community as an environmental context in which the quality of human relationships within certain territorial boundaries induces a shared sense of emotional connection and belonging. Sense of community has been shown to mediate stressful life events, and it is strongly related to social support and social networks (Hill, 1996).

Past research has shown that factors such as sense of community and social support can aid in helping students deal with the stressors of college adjustment (Sloan-Devlin et. al., 2008; Hefner & Eisenberg, 2009). Halamandaris and Power (1999) found that perceived global social support predicted psychosocial adjustment (i.e., absence of loneliness and overall satisfaction with the social and academic components of college life). Articles about college housing design by Biliczky (2005), and McKee (2005) note the importance of community and the need to

provide space to students so they may socialize and interact rather than spend too much time in their rooms utilizing the various levels of technology at their disposal.

Purpose and Rationale

It has been suggested that college housing can serve the function of helping students learn and grow as human beings (Riker, 1965). The physical and social design of these buildings can be designed with the social needs of residents in mind (Blimling & Schuh, 1981). Many residence hall facilities were designed without an understanding of the importance of environmental influence on student development.

Although previous research has examined various attributes of the residence hall environment as they relate to student development, (Blimling & Schuh, 1981), personality development (Chickering, 1974), and academic success (Pascarella & Terenzini, 1980), less attention been focused specifically on the relationship between living environment and student mental health. This study is significant in that it furthers research into the relationship between living environment and how it affects student mental health.

Research Question

This research proposal is designed to examine the effect that residence hall capacity has on the relationship(s) between social support, sense of community, and psychological distress in college students. This study will address this question by examining the relationship between respondents' levels of perceived social support (SS), and psychological sense of community (SOC) with their levels of psychological distress (PD) across differing residence hall capacities.

Hypotheses

In this study, the following hypotheses will be tested:

H1) Subjects' measures of perceived social support (SS) will significantly differ across varying residence hall capacities.

H2) Subjects' measures of psychological sense of community (SOC) will significantly differ across varying residence hall capacities.

H3) Residence hall capacity will show additional predictive ability to that of perceived social support (SS) and psychological sense of community (SOC) on subjects' measures of psychological distress (PD).

CHAPTER 2

Literature Review

This chapter is a summary of the theoretical foundations for this study. Past research on person-environment theory will be discussed in terms of its application to the college student population. The importance of college environments on student development and transition will also be explored. A summary of the current state of college student mental health will be reviewed along with research into the influence of student housing on psychological distress and student well-being. An overview of the constructs of perceived social support and psychological sense of community will also be discussed, including implications for college students.

Person-Environment Theory

Theoretical underpinnings.

John Holland, a pioneer in the field of vocational psychology, is most famous for his person-environment theory of vocational interests. Holland's theory (1966, 1997) describes how individuals interact with their environments and how individual and environmental characteristics result in vocational choices and adjustment. The essence of his theory is that an individual's personality interacts with his/her work environment to determine what occupation he/she is best suited. Also, he proposed that an individual's personality is a composite of several types which reliably show characteristic behavioral repertoires, patterns of likes and dislikes, specific values, and unique self-descriptions (Holland, 1997). Holland also theorized that the work environments themselves were influenced by the personalities of the people working in them as well as the types of work performed in each setting. This notion allows the study of the interaction of an individual or group of individuals with a specific work environment.

10

Other researchers have also explored mechanisms of person-environment theory and how individuals choose and interact with physical and social environments. Buss (1987) discussed three examples of "person-environment correspondence." In *selection*, he states that individuals select situations that are consistent with their personalities and/or strengths based upon three components: selection, variation, and retention. He purported that we choose the environments we interact and live in (selection), based upon differences we find among these environments (variance) and we leave those that are incompatible and stay within those that are compatible (retention) with our personalities. With regard to *evocation*, individuals unintentionally elicit behaviors from others in the environment with little control. As a result, we are influenced by these behaviors and thus by those who share our social environment(s) with us. Finally, Buss described the process of *manipulation* as the way in which an individual may "intentionally…alter, change, influence, or exploit others." (p. 1218)

Huebner (1989) describes three differing approaches to understanding human behavior: *personalism, environmental determinism,* and *interactionism. Personalism* refers to the focus on the individual to understand certain patterns and recognize behaviors that are repeated. *Environmental determinism* involves the observation of environmental factors and their support or inhibition of individual behavior patterns. Finally, *interactionism* refers to the analysis of interplay between a person and his/her environment in an effort to comprehend and predict future behavior. Huebner proposed that counselors not neglect the interaction of students and their environment as both are important to understand, treat, and diagnose clients.

David Seamon (1984), a researcher in the area of environmental psychology, believed that to ignore the ways that an individual's emotional experience interacts with his/her environment is to ignore a significant portion of that experience. He stated that oftentimes

psychology believes that a person "is a kind of isolated vessel whose emotional states and changes are without relation to the world at hand." As a proponent of a phenomenological perspective, he asserts that it would be better to focus on the person-environment immersion when looking at emotional experience (Seamon, 1982). He embraces the concept of understanding and seeking the meaning of events, as opposed to simply seeking to analyze, quantify, and explain.

Application to college student housing.

With this background of person-environment theory, we can now move on to its relevance to college student housing. There is little doubt that as dynamic, living beings we have a connection with the places we choose to live and interact. We develop attachments and a sense of belonging to these "spaces." A geographer, Tuan (1974), refers to this affective environmental bond as *topophilia*, which is defined as "love of place." Topophilia involves "all of the human being's affective ties with the material environment." (p.3). This tie can be thought of on a macro level as the tie to one's home country influenced by patriotism or upbringing. On a smaller scale, a reference to attachment one has to a favorite park, or neighborhood, or one's home, influenced by proximity and aesthetic appreciation is also relevant. Other works related to topophilia have examined related concepts such as *insideness* (Relph, 1976), *home* (Dovey, 1978), and *at-homeness* (Seamon, 1982). The idea is that one's home environment can be understand as a touchstone location to allow one to rest, recuperate, and re-energize for future excursions away from home (Seamon, 1984). For example, when students move into residence hall rooms, the furnishings are typically sparse, consisting of a bed, desk, chair, and perhaps small table. Often, students are encouraged to bring up their own creature comforts to make the room feel more like home. As a result, on any move-in day at a college or university across

America, one can easily observe cars, trucks, and trailers full of personal items such as lamps, microwaves, bean bag chairs, televisions, computers, and other personal items in an attempt to make one's new home feel more like the home they're leaving for the next 8-10 months. Once established, these rooms become the epicenter for daily life of their inhabitants, functioning as a bedroom, study room, and recreation room/lounge all in one. It is no wonder that students become attached to them as "home" and by association, the building/hall they live in as well.

When applying person-environment interaction theory to the college student population, behavior is viewed as a product of the student/educational environment interaction (Chambers & Phelps, 1993). Riker and DeCoster (1971) lend further support by stating that because environment influences behavior, a student's living environment holds a significant educational role. Learning takes place not only within the classroom, but also outside the classroom as well. Students are being educated about cooperation, collaboration, conflict-resolution, cultural differences, and various other life lessons simply through living in a communal such as a dorm or residence hall. As Moos (1976) stated, "The arranging of environment is probably the most powerful technique we have for influencing behaviors." (p. 4). In a study done by Cook (1987) examining the perceived social climate of residence hall floors, the authors surveyed 126 undergraduates in 8 different residence halls. They found that residence hall characteristics and fit added significantly to the predictive power of student characteristics and a diversity of student problems such as alcohol abuse, physical illness, and mental illness.

The Influence of College Environments on Student Development and Adjustment

This discussion leads us to the area of the college influence on student development. This topic area has a vast research literature history going back to the 1960's. Arthur Chickering and many of his contemporaries began to examine how the college environment helps to shape young people and move them into the transition into adulthood. At the time many of these papers were written, the country was witnessing the turbulence of the decade as evidenced by the Civil Rights movement, the beginning and escalation of the Vietnam War, and the increased visibility and open acceptance of drug use by young people. Chickering, McDowell, and Campagna (1969) completed a study at 13 small colleges in the U.S. examining the effects that the college environment has on the personality development of their respective student attendees. They found that certain kinds of development such as increased autonomy, emotional management and expressiveness, increased esthetic sensitivities and interests, along with decreased interest in material success do occur. Chickering (1974) later proposed that a comparable model for "college influence" is the womb. He writes:

> The diverse colleges provide safe havens and appropriate nourishment for the diverse students which characterize a pluralistic American society. College attenders become more autonomous, more flexible, more complex…more tolerant of ambiguity, less dogmatic, more intellectually curious. Students who do not attend college change less in these areas or move in contrary direction. So wombs are good things…And without the protection and nourishment many colleges offer, most seniors would not have become what they are today. (p. 92)

Moos (1979) supports this notion with his discussion on how students experience several psychological changes during their college experience that are attributable to college rather than through the general maturation process as shown by a lack of these changes in students who leave school prior to graduation. He also asserts that resident students experience these changes at a higher rate than commuter students. He lists examples such as increased autonomy, awareness of social and political issues, positive self-image, involvement as well as greater interpersonal and intellectual competence.

Other authors have written extensively on the effects of cocurricular experience on the development as well as emotional and physical health of students. In a four-year longitudinal study, Magolda (1992) found that the supports and challenges students experience through their cocurricular involvement has a significant impact on their intellectual development. She suggests that the cocurricular environment could play a more pivotal role if it were designed specifically to promote intellectual development. She wrote that further efforts by colleges and universities to marry students' classroom and outside-the-classroom experiences would result in further successes among their respective student populations.

Pritchard and Wilson (2003) completed a study predicting student success based on emotional and social factors rather than traditional demographic and academic variables. Their study found that a student's emotional health was significantly related to grade point average regardless of gender. Also, a student's emotional health was related to one's intention to drop out of school. Students who indicated and intent to leave school prior to graduation reported more fatigue and lower self-esteem than their fellow students. A contrary finding was that those who intended to stay in school utilized more positive coping mechanisms and often exhibited more acceptance when efforts to change a particular stressor failed. In a study done by Martin,

Swartz-Kulstad, and Madson (1999), the authors also found that problems with college student adjustment reside within both person and environmental factors. This study explored psychosocial factors which predict student adjustment at two very different universities with regard to size, focus, and population. The authors found that even with these differences, the factors of academic self-confidence, positive attitude toward the university, faculty support, and peer support were significant predictors of more successful college adjustment. The authors wrote: "The importance of the total academic experience, one that stimulates personal and social as well as academic development, cannot be overstated." (p. 128).

An integral part of student development and transition has been shown to be interaction and friendships with others (Johnson, Staton & Jorgensen-Earp, 1995; Paul & Brier, 2001). Johnson, Staton and Jorgensen-Earp (1995) focused on communication styles among students in their study. They defined communication as the way in which students begin to talk about shared meanings in college with regard to experiences, shared environments, and the behaviors of others. The dormitory residents in this study stressed camaraderie and sense of caring between roommates was supportive in their immediate settings. Social activities were also perceived as a means of providing diversion and more numerous opportunities for communication with others in an effort to gain information and make more friends. Paul and Brier (2001) explored the concept of "friendsickness" in their study, defined as the concern a student might have for the loss of precollege friends. These authors wrote that students often must move from an established network of friends at home to a new environment where they often must start over to begin and build new friend networks. They also found that those who focus more of their efforts backward on losing the precollege friends, rather than forward on

16

establishing new friendship networks, these students often have more difficulty transitioning to the overall college experience.

An important caveat to this is that understanding the factors that play a role in transition has consequences not only on student success, but also student attrition. Kerr, Johnson, Gans, and Krumrine (2004) found that students who are confused by their emotional reactions or who might have difficulty expressing themselves emotionally may find transition even more difficult than the average student. As a result, apprehension, anxiety, and loneliness may occur at higher levels throughout the academic year. These authors encourage efforts to intervene with these students as a way to help curb other more destructive behaviors such as alcohol, drug use, or eating disorders which often lead to student attrition or more severe behavioral problems both on and off campus.

The Current State of College Student Mental Health

Over the past twenty years, the state of college student mental health has taken, what some may consider, a downward trajectory. Much has been written in the literature regarding high prevalence rates and severity of mental health problems college students are experiencing and campus mental health professionals are observing (Gallagher, 2011; Gallagher, Gill, & Sysko, 2000; Gallagher, Zhang, & Taylor, 2004). In a 2007 national survey of undergraduates, 6% reported "seriously considering attempting suicide." (American College Health Association, 2008). According to the National Survey of Counseling Center Directors (NSCCD) at 228 institutions (Gallagher, 2011), 91% reported an increase in severe psychological problems among students. In addition, over the past five years, the following percentage of directors have noted increases in the following problems: 78% of crises requiring immediate response; 77%

17

psychiatric medication issues; 62% learning disabilities; 49% illicit drug use (other than alcohol); 42% self-injury issues (e.g. cutting to relieve anxiety); 42% alcohol abuse; 30% problems related to earlier sexual abuse; 24% eating disorders; and 23% sexual assault concerns (occurring on campus). Kitzrow (2003) found that student affairs administrators are also reporting an increase in time spent working with students to address serious mental health problems such as eating disorders (+58%), drug abuse (+42%), alcohol abuse (+35%), classroom disruption (+44%), and suicide attempts (+23%).

Gallagher et al. (2000), theorize that a variety of social and cultural factors such as divorce, family dysfunction, instability, poor parenting skills, poor frustration tolerance, violence, early experimentation with drugs, alcohol, and sex, and poor interpersonal attachments may account for some of the increase. They also proposed that due to the efficacy of newer medications, many students are able to attend college who might not have been able to do so in the past (Gallagher et al., 2000). This notion is supported by a study by Schwartz (2006) who found that over a ten year period (1992-2002), medication use among student clients at counseling centers had increased fivefold. Similarly, in a study done by Eisenberg, Gollust, Golberstein, and Hefner (2007), the authors randomly selected a sample from a large Midwest public university (N=2,843) and found 13.8% of undergraduates and 11.3% of graduate students screened positive for current panic disorder or generalized anxiety disorder while 2.55% of undergraduates and 1.6% of graduate students reported suicidal thoughts within 30 days prior to the survey. They also found the prevalence of depression (5.2%) was comparable to similar studies.

According to Hunt and Eisenberg (2010), although a basic understanding of the prevalence and correlates of student mental health is increasing, more exploration of approaches

outside of the traditional clinical environment is necessary. They proposed exploring areas such as peer support, residential settings and faculty relationships as areas to better understand and treat students with these issues. They further reported that 66% of schools surveyed in the 2008 NSCCD expressed an increase in faculty seeking counsel about high-risk students, which is a notable correlate to the increased vigilance following the shootings at Virginia Tech and Northern Illinois. Hoover and Lipka (2008) lend further support to the effects that these tragedies have had on college campuses to maintain safety and prevent future events like these from occurring again. They found that many schools have instituted *behavioral teams* which are often made up of various representatives from student affairs, campus police, residence life, the counseling center, and faculty to discuss crises and help to plan and coordinate responses and interventions when necessary. They also found that United Educators Insurance estimates that roughly one quarter of its clients in higher education had such teams prior to Virginia Tech, and now about 75% do (Hoover & Lipka, 2008). Dyson and Renk (2006) found that higher levels of stress as well as the use of avoidant coping strategies among college students can often lead to higher levels of depression. Because students often ignore their symptoms of stress, they are more susceptible to depression and other psychological problems in their academic careers. McCarthy, Fouladi, Juncker, and Matheny (2006) assert that while the damaging effects of depression and anxiety on college campuses may be acknowledged, students are often unaware of the relationship between them. They suggest that counselors encourage students to develop social interests as a way to inoculate them against anxiety and depression. Seligman and Wuyek (2007) proposed that anxiety disorder in young adults may be related to students' decision-making and experiences during college. They cite panic attacks related to separation from loved

ones and friends as well as decisions to stay closer to home as correlates to higher reported instances of separation anxiety disorder.

Finally, attitudes about mental illness in the general student population can affect the social climate and possible stigmatization of students struggling with mental health problems on campus (Haag-Granello & Granello, 2000). Students with mental health issues must not only deal with normal situations all college students face, but must do so with the with the added stressors and problems created by their particular illness, and in a setting that can be less than understanding and supportive. The authors state that educational programs that help teach students about the scope and nature of mental illness can go far in increasing the supportive network of the university as a whole.

The Influence of College Residence Halls

As previously noted, environment has a significant impact upon behavior. On a college campus, nowhere is this more evident than in a residence hall (Riker, 1965). Within them, students are exposed to a microcosm of the real world through physical and social interaction in their everyday experiences of living, studying, and socializing among their peers. As an antecedent of this exposure and influence, college housing, a significant aspect of the college environment, has both an educational and supportive role (Riker & DeCoster, 1971). The fact remains, however, that although the design aspects of residence halls are important, many were designed and built without an understanding of the influence of environment on student development or its overall importance (Blimling & Schuh, 1981). Housing facilities provide students a place to eat and sleep, but can also provide an opportunity for sharing, socializing, decision-making, and being exposed to different cultures (Riker & DeCoster, 1971; Blimling &

Schuh, 1981). Also, as a microcosm of society, student housing not only creates opportunities

for learning new ideas, but applying them and observing their effects within a controlled, social

context (Reidell & Howell, 1996). Chickering and Reisser (1993) wrote that interacting with

others is an essential component of identity formation because it enables the growth of a sense of

respect and interdependence. These authors also found that environmental influences accrued in

the residence halls, such as friendships and sense of community, have a powerful influence over

students' development, lending further support to the influence of environment on the individual

and his/her behavior.

Research into the interrelationship between behavior and physical design is best noted in

two studies by Brian Wilcox and Charles Holahan in the late 1970's. In the first study (Wilcox

& Holahan, 1976), the authors investigated the social ecology of the *megadorm* in university

student housing. They surveyed 110 freshmen to find if the physical size and floor level of the

halls had a significant impact on the students' perspectives toward their social situations and

toward their fellow students. The sample was selected from two high-rise halls with an average

of 1500 residents each as well as from two low-rise halls with an average occupancy of 250

students. The authors also compared the students attitudes between upper (6-13) and lower (1-5)

floor levels within the two high-rise buildings, in addition to comparing the low-rise hall

occupants' attitudes overall with those of the high-rise occupants. The results indicated that

indeed, building size and floor level significantly affected the degree of commitment that

students feel for one another, along with patterns of emotional support, and level of involvement

in organizational functioning. The authors suggested that because physical design characteristics

showed such a significant impact on the social climate of the residence hall environment, greater

attention to these factors on the part of universities when designing future living areas is

imperative. In a follow-up study (Holahan & Wilcox, 1978), the authors explored residential

satisfaction and friendship formation in both high-rise and low-rise student housing. In this

study, the authors again found a significant difference between the two types of building size. In

the low-rise halls, the results indicated that residents were significantly more satisfied with their

living environment overall, and made more in-hall friends than residents of the high-rise

buildings. Consequently, the authors also found that residents in the high-rise buildings had

more negative feelings regarding social contact/support, features of the physical environment,

and student involvement in policy decisions than their low-rise peers. Ultimately, they stress the

importance of viewing student adjustment through an interactional lens (Holahan & Wilcox,

1978).

Other researchers have performed similar studies exploring the effects that living

environment has on the academic performance and social adjustment of students. In a study

done by Pascarella and Terenzini (1980), the authors found that social isolation was the single

most salient predictor of student attrition, over and above academic performance. They also

reported that the environmental influence of different structural and organizational layouts in

residence arrangement is mediated by the quality and impact of interpersonal relationships fellow

students and faculty members. Similarly, Jordyn and Byrd (2003) explored how the living

arrangements of late adolescent/young adult university students affect their personal

development. They also found that the relationship between identity status and living

arrangement is interactive, with identity status influencing how one reacts to the various

challenges of autonomous living, coupled with success/failure dealing with those challenges

affecting one's identity development.

Social Support

Definitions.

Social support has been defined in past research as the existence or availability of people on whom we can rely for gratification of basic social needs including approval, esteem, and belonging (Kaplan, Cassel, & Gore, 1977; Sarason, Levine, Basham, & Sarason, 1983). These needs are often obtained through social networks evaluated in terms of perceived adequacy (Frey & Rothlisberger, 1996).

Cohen (2004) wrote that social support is associated with health outcomes that are not simply explained away by analyzing the individual personalities of patients. He defines social support as a "social network's provision of psychological and material resources *intended to benefit an individual's ability to cope with stress.*" (p. 676). Social support is comprised of three main types of support: *instrumental, informational, and emotional* (House, Umberson, & Landis, 1988). Instrumental support, which has also been referred to as tangible or non-psychological support, involves the provision of material aid, such as financial assistance. Informational support involves contributing information relevant to the individual's plight, as is the case with advice-giving. Emotional support focuses on meeting social-emotional needs, often through the expression of empathy, caring or understanding. The type of support must match the perceived coping requirements of the recipient in order to be effective.

Social support as a buffer for psychological distress.

Friends, family, and significant others can provide social support to positively affect an individual's self-esteem and self-efficacy and buffering the negative effects of stress (Thoits, 1995). The stress buffering model proposed in psychology asserts that social connections and

interactions benefit health by providing psychological and material resources needed to cope with stress (Cohen, 2004). Stress can affect health by promoting behaviors that are unhealthy (e.g. drinking alcohol, illicit drug use, smoking, overeating, sleep loss, etc.) and by increasing physiological activity in the sympathetic nervous system hypothalamic-pituitary-adrenal cortical axis (Cohen, Kessler, & Gordon, 1995). Through these mechanisms, social support can influence emotional health and well-being by helping to temper the effects of stress which might lead to depression, anxiety or other forms of psychological distress (Kawachi & Berkman, 2001). Therefore, increasing the availability of social support within existing social networks by improving social skills or building stronger ties to existing social network members can have increased positive impacts on health (Cohen, 2004).

The critical factor in social support acting as a stress buffer is the individual's belief that others (even if the only reliable source) will provide help to that individual in a time of need (Cohen & Wills, 1985). Other research has found that psychologically distressed individuals are consistently found to be more socially isolated (Kawachi & Berkman, 2001), and have less contact with friends. Also the lack of a partner or someone to confide in and feeling alone are also correlated with higher levels of psychological distress (Coyne & Downey, 1991; Stravynski & Boyer, 2001).

Finally, Cohen, Sherrod & Clark (1986) performed a study which explored the relationship between social skills and social support and whether the former influences the latter. Although there was some influence in certain circumstances of the study, an interesting result was that the authors found no evidence that the buffering mechanism of social support was mediated by the effects of social anxiety, social competence, or the level of self-disclosure of an individual.

Social support and the implications for college students.

There is a broad research base exploring the different implications that social support has on transition, development, and coping strategies for psychological distress in the college student populations. Moos (1979) claimed that students who experience lower levels of involvement and emotional support, and higher levels of competition, tend to express increased levels of physical and mental illness.

Rubio and Lubin (1986) performed a study sampling college students exploring the interaction of personality factors and the environment of the students. Their findings lent support to previously mentioned findings and also showed that social support has an important and independent relationship with psychological distress that is independent of personality factors, but interacts with them to prevent stress. Similarly, in a study by Nezlek and Allen (2006), the authors sampled 153 undergraduates on their reactivity to positive and negative events in their daily lives over the course of several weeks. They found that reactivity to negative events was moderated by social support and not by individual differences in depression, neuroticism, or extraversion. They also found that support from friends had more of a buffering effect on reactivity to negative events compared to social support from family. The authors explained that a possible reason for this is that some students rely on family support as a crutch or form of dependence, which may make them more susceptible to negative life events. In an earlier study, Saltzman and Holahan (2002) surveyed 333 undergraduates and found that parental and peer support relate to reduced depressive symptoms by bolstering self-efficacy and adaptive coping strategies.

Bolger and Amarel (2007) found that support that does not draw attention to itself or to the support recipient is particularly effective in helping people cope with important life stressors. This may have some relation to the overarching sense of feeling supported or connected to one's community that Sarason theorized (1974). Winefield, Winefield, and Tiggemann (1992) lend further support to this notion. In their study, they found that the type of support offered had less significance compared with the *source* of the support. This notion supports Sarason's later claim that specific forms of help matter less than the overall perceptions of being valued and accepted(Sarason, Shearin, Pierce, & Sarason, 1987). Hefner and Eisenberg (2009) also found that perceived quality of social support was strongly associated with lower likelihood of depression, anxiety, suicidal ideation, and eating disorders independent of the frequency of social contacts.

Tinto (1993) proposed a model of college student attrition that stated students who develop satisfying relationships with peers tend to earn better grades and are more inclined to remain in college than are students who fail to develop these significant ties. Several studies lend credence to this theory. For example, Foley-Nicpon, Huser, Hull-Banks, Sollensberger, Befort, and Robinson-Kurpius. (2006) performed a study exploring the relationship between loneliness and social support with college freshmen's academic performance and persistence. They found that loneliness compared to friend and family social support predicted academic persistence decisions. Students with lower levels of loneliness and more social support persisted in the academic setting. They suggested that college programs aimed at helping students develop social support networks in the new environment can decrease a student's reliance on precollege friendships or settings (e.g. high school friends, traveling home each weekend to visit friends/family as opposed to staying on campus to socialize).

Lending further support to this notion, Buote, Pratt, Adams, Birnie-Lefcovitch, Polivy, and Gallander-Wintre (2007) found that new friendships were most strongly related to social adjustment in students, but also showed a significant relationship with students' feelings of attachment to the university as a whole. They also found that new friends opened up avenues in expanding one's social networks, and that openness to new friendships was more prevalent in students who planned to live in residence halls compared to those planning to live at home. In their study on *friendsickness,* Paul and Brier (2001) suggest focusing on students' anticipatory coping to prevent future transition difficulties. They suggest aiding students by helping them to perform a self-appraisal of stressors and coping abilities, increase students' knowledge of coping mechanisms, and the activation of social support in their lives. They suggest that social support can be used to aid students by looking at past friendships and how they were established, how they might change, and what they might look forward to in newer friendships and interpersonal relationships at college. Furthermore, in a longitudinal study of 115 undergraduates over the course of the fall semester, Friedlander, Reid, Shupak, and Cribble (2007) found that changes in social support from friends had more of an effect on adjustment than support from family. The study was done at a primarily residential university where over 75 percent of the student population lives away from home. They found that even with regular contact with family members, it is the perceived availability of friends that makes the more positive difference in adjustment for students.

Finally, Mattanah, Ayers, Brand, and Brooks (2010) conducted a study exploring the effects of peer-led social support groups on student adjustment. They found that students who participated in these types of groups benefited from developing deeper, more meaningful connections with their peers, which did aid in their overall adjustment.

Sense of Community

Definitions.

The concept of psychological sense of community has been discussed and explored for several decades, thus leading to a broad research literature on the topic. Some of the earliest definitions were put forth by Sarason (1974). This author describes it as the perception of similarity, interdependence, a desire to maintain interdependence, and a sense of being part of a larger whole. Later definitions include one by Chavis and Newbrough(1986) which describe psychological sense of community as a specific form of social support that addresses how connected a member feels to a particular group, and that has also been associated with lower levels of psychological distress.

Perhaps one of the most popular and well-known definition is that of McMillan and Chavis (1986) which divides sense of community into 4 basic elements:

1) *Membership*: members have boundaries, emotional safety, a sense of belonging and identification, and personal investment.

2) *Influence*: members of a group must feel empowered to have influence over what a group does (otherwise motivation to participate is lacking), and group cohesiveness depends on the group having some influence over its members.

3) *Integration and Fulfillment of Needs*: the perceived similarity to others and congruity contribute to group interaction and cohesion.

4) *Shared Emotional Connection*: quality of interaction, investment, and a spiritual bond.

Later definitions have been proposed by Plas and Lewis (1996) who described the concept as an environmental context in which the quality of human relationships within certain territorial boundaries induces a shared sense of emotional connection and bonding. Also, Hill (1996) defined sense of community as a multidimensional construct made up of the elements of supportive relationships, similarity and relationship patterns, individual involvement, security, shared connection, and fulfillment of needs. Lounsbury and DeNeui (1996) defined sense of community as the feelings of belonging, being part of a supportive network of dependable relationships, feeling needed, and identifying with overarching values of a given group. Later, McMillan (1996) added several factors to his definition to include a combination of spirit, a sense of emotional safety, loyalty, acceptance, economical trade, and art (i.e. symbols and expression)

Sense of community and the implications for college students.

The concept of sense of community put forth by Sarason (1974), and later operationalized by McMillan and Chavis (1986), originated in community psychology and refers more to members' feelings about one another and their neighborhood (Pendola & Gen, 2008). The overall vigor of the construct of psychological sense of community can be seen in the research in its relation to various contexts including student burnout (McCarthy, Pretty, & Catano, 1990), university residence halls (Lounsbury & DeNeui, 1996; Sloan-Devlin et al., 2008), human diversity and cultural relativity (Townley, Kloos, Green, & Franco, 2011), supported housing for the seriously mentally ill (Townley & Kloos, 2011), and various others.

Lounsbury and DeNeui (1996) performed a study that was two-fold in its intent. First, they wanted to develop a measure of sense of community that was applicable to the college/university setting itself, rather than continue to attempt to generalize other measures that were not designed specifically for this population. Secondly, they wished to explore the relationship between sense of community and college size to explore whether larger-size institutions foster a greater sense of community than their smaller counterparts. As Chickering indicated (1969), college size is a strongly affective factor in the personal and social lives of students. The authors were successful in developing a scale that adhered to the central definitions of sense of community (e.g. Sarason, 1974; McMillan & Chavis, 1986), encompassing togetherness, attachment, investment, commitment to the setting, positive affect, concern for the welfare of the community, belongingness, togetherness, and an overall sense of community. The results also indicated that sense of community was inversely related to college size with smaller schools reporting a higher levels than larger ones. An interesting caveat to this study was the finding that over the total sample, students who reported living on campus had significantly higher SOC scores than students who lived off-campus.

In their study, Townley and Kloos (2011) looked at sense of community for individuals with mental illness residing in supported housing units and found psychosocial components of neighborhoods that are typically believed to impact sense of community among non-mentally ill persons operate similarly among individuals with mental illness. Therefore, to extrapolate these findings to housing units of non-mentally ill individuals on a university campus would be logical.

McCarthy, Pretty, and Cantano (1990) studied 360 undergraduates and found that stronger sense of community significantly correlated with less psychological distress and

30

burnout. The authors suggested for university counselors, that living environments and their psychological effects be considered when assessing students' presenting problems.

Perhaps one of the most informative studies regarding sense of community and its relationship to college students living in residence halls was done by Sloan-Devlin et al. (2008). In this study, 600 students were surveyed to examine the relationship between SOC and residence hall architecture. The authors examined the differences between older residence hall architecture designs (i.e. traditional single corridor floors) versus newer designs with clusters or "suites" that continue to be current popular choices among students. They explored the question of whether one design over the other affects the students rating of sense of community. The results indicated a lower sense of community in dorms with suites, even though residents rated them higher in amenities and comfort. Also, the size of the residence hall was a mediating factor with larger dorms reporting a lower sense of community than smaller dorms. Also, the results showed that traditional corridor design seems to foster sense of community better. The authors proposed that due to the spatial segregation in suites, residents may not interact and integrate with the overall dorm population as a whole. Also, on many campuses, students move into suites together in groups and as a result may convene together to the detriment of branching out to other suites to socialize and interact (Sloan-Devlin et al., 2008).

Campus Ecology and the Psychology of Students

As has been demonstrated, there is a vast body of research spanning the past 50 years about the integrative, comprehensive, and transactional nature of campus environments. How a student interacts with his/her environment can often be as important as what he/she learns in the classroom. Practitioners in higher education speak of *out-of-classroom learning* being as

important (if not more so) than learning inside the class room. This concept is certainly not new.

To understand the psychological underpinnings of a student's mental health, one must take into

account all that surrounds and influences that student.

Kaiser (1978) proposed that the campus ecology is concerned with both a student's

"consciousness" and the environment in which he or she lives. The campus environment is made

up of various facets of space: social, academic, physical, personal and many others that are

relevant to the experience of the student. Because of this integration of space, it seems obvious

that campus designers and administrators would see the utility in focusing on space when making

decisions that concern students. Kaiser (1978) stated:

> Every learning space has a demand load. It calls for certain responses from the student
>
> entering the space. A student and campus may be matched or mismatched. A
>
> mismatched space is one that fails to provide what the student needs or demands a
>
> response the student cannot give. Too great a mismatch is stressful for the student and
>
> may generate a negative reaction. (p. 24)

The student's experience, however, is not simply the result of stimulus-response to a

given facet of the college environment. The relationship is one of a much more holistic type.

This approach, developed by Altman and Rogoff (1987) and expanded by others (Wapner,

1998), is described as more of a systems-centered idea that, when applied to campus

environments, students are important and central components of the larger campus

environmental system, and that the influence is mutual. Consequently, a student's experience on

campus is influenced by many different facets of the campus environment. To that end, that

same student (and by extension, larger groups of students), is also an active agent of influence

upon the environment system, because he/she is a member of that system. This view implies that the student's own ecological background that he/she brings to college (e.g., life history, personality, and psychological dys/function) become important influences in the person-environment system. In terms of the present study, this theoretical perspective suggests that the decisions students make about where they live on campus will be affected by personal and environmental factors, and that students' college housing environments will act to shape their college and life experiences as well as their mental health.

CHAPTER 3

Method

This chapter begins by describing the sampling procedures and subject pool for this dissertation. This is followed by a description of the variables of the study, the measurement instruments, and details regarding methods of scoring these instruments. This is followed by a description of the methods by which the researcher collected data. The final section discusses the hypotheses and what statistical methods were used to test the hypotheses.

Participants

A sample of 704 college students aged 18-24 (mean age = 18.86) from two states were recruited for the study. Prior to analyses, the survey responses were reviewed to identify missing data. Twenty-one respondents stopped after partially completing the survey, and were removed from the data set. Following an outlier analysis, fourteen of these cases were excluded from the data set resulting in 690 remaining individuals whose data was used in the analyses. Of these individuals, men comprise 29.3% (n =202) and women 70.7% (n=488). The sample consisted of multiple racial categories: White (80.1%), Black (8.7%), Asian (2.9%), Hispanic (2.9%), and all other racial categories representing 5.4% of the sample. The subjects in this study were residents from various on-campus housing units at three different universities. These universities are located in West Lower Michigan, Southeast Lower Michigan, and East Central Kansas. Within each location, three types of on-campus housing were explored: low-capacity buildings (occupancy less than 200 residents), middle-capacity buildings (occupancy between 200 and 350 residents) and high-capacity buildings (occupancy greater than 350 residents). Approval to conduct research with human subjects was obtained from each university's respective institutional review board.

Variables and Measures

Demographic questionnaire. The following demographic information was solicited from each participant: age, gender, race/ethnicity, semesters completed, grade level, major, number of semesters subject has lived on campus, where each subject lived previously, current number of roommates/suitemates, and current hall. (see Appendix B).

This study contains one categorical independent variable and 3 continuous dependent variables. For each of the continuous variables, higher scores indicate subjects' reporting of higher degrees of that variable. The independent variable in the study is residence hall capacity and was divided into three categories (low, middle, and high). Gender, ethnicity, and location were explored as covariates. Gender was divided into two categories (male and female). Ethnicity was divided into 8 categories (Asian, African-American/Black, White/Caucasian, Hispanic/Latino, Middle Eastern, Native American/Alaskan, Pacific Islander, and Other). Campus location was divided into three subcategories (East Central Kansas (ECK), Southwest Michigan (SWM), and Southeast Michigan (SEM).

The three dependent variables in the study are perceived social support (SS) (with three subcategories of family, friends, and significant other, which are combined into one total score), psychological sense of community (SOC), and psychological distress (PD). The researcher used three self-report, quantitative measures to examine the three variables, and obtained permission via email from the authors of these measures to use them in the study.

Multidimensional Scale of Perceived Social Support. The first dependent variable, SS, was measured by the 12-item Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988; see Appendix C). This scale distinguishes perceived social support from three sources: family, friends, and a significant other. Sample items include: "There is a special person around when I am in need" as well as "I can talk about my problems with my friends." Respondents reported on a 7-point Likert-type scale (1 = very strongly disagree to 7 = very strongly agree) for each item. Subjects' total scores were summed and divided by the total number of items (12) to arrive at an overall score for each subject.

Internal reliabilities are high for the MSPSS with Cronbach's alpha scores of .90 or higher reported during several different analyses (Dahlem, Zimet, & Walker, 1991; Zimet, Dahlem, Zimet, & Farley, 1988; Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Factor analysis confirmed the subscale structure of the measure: family, friends, and significant other (Zimet et al., 1991). It also has good factorial and construct validity (Zimet et al., 1988). Reliability measures were run for the purposes of this study with a Cronbach's alpha measure of .899 on the modified questionnaire. Although lower than scores for the original, this still shows a relatively high level of internal consistency..

Campus Atmosphere Scale-Revised. The second dependent variable, SOC, was measured by the Campus Atmosphere Scale-Revised (See Appendix D). This scale was developed to measure psychological sense of community on college campuses (Lounsbury & DeNeui, 1995). This scale has demonstrated high internal consistency reliability measures (Cronbach's alpha) ranging from .88 to .92. and high validity as well (Lounsbury & DeNeui, 1995). Responses for each of the 14 items are structured on a five-point Likert-scale (1=strongly disagree to 5=strongly agree). The questions on this measure were slightly altered as each item

which referred to "campus environment" was changed to "hall." Sample items include: "I really feel like I belong in this hall" and "There is a strong feeling of togetherness in this hall." Total summed scores for each subject are divided by the total number of items to come up with an overall score. Given the alterations made from the original form of the questionnaire, a reliability measure was run for the purposes of this study,. The Cronbach's alpha showed a reliability score of .901 for this scale.

Kessler Psychological Distress Scale. The third dependent variable, PD, was measured by the Kessler Psychological Distress Scale ((Kessler, Andrews, Colpe, Hiripi et al. 2002). This scale is a 10-item questionnaire intended to yield a global measure of psychological distress based on questions about anxiety and depressive symptoms that a person has experienced recently. This scale has demonstrated high internal consistency reliability measures (Cronbach's alpha) = 0.93 (Kessler, Andrews, Colpe, Hiripi et al. 2002). Furthermore, the Kessler scale has been shown to have a high level of precision and accuracy in predicting serious mental illness in general population epidemiological studies (Kessler, Barker, Colpe, Epstein, et al., 2003). Responses for each of the 10 items are structured on a 5-point Likert-scale (1=none of the time to 5=all of the time). The numbers attached to the subject's 10 responses are summed to arrive at a total score of 10 to 50. The original version will be altered to read "during this semester" to be better applicable to the study's population (See Appendix E). Sample items include: "During this semester, about how often did you feel tired out for no good reason?" and "During this semester, about how often did you feel hopeless?" Again, due to alterations made to the original scale questions, a reliability measure was run for the purposes of this study. The Cronbach's alpha showed a reliability score of .872 which is slightly lower than the original scale, but still a robust score for internal consistency.

Procedures

The data were collected from three universities in the Southwestern Michigan (SWM), Southeastern Michigan (SEM), and East Central Kansas (ECK) areas. These regions were selected because of their proximity to the researcher's home base, their multi-capacity residence halls, their diverse student populations within their residence halls, and because each of their housing administrators granted permission to conduct research. Also, by utilizing different parts of the country, the hope is to increase the generalizability of the findings. Details regarding the size of the colleges, the different forms of housing, and other pertinent information were acquired through discussions with current housing staff as well as the author's graduate and professional experience at each of the respective universities.

The measures were input into survey form generated using Qualtrics Labs, Inc. software, Version 34993, of the Qualtrics Research Suite (Qualtrics, 2012). The researcher travelled to each university and met with the individual resident assistant (RA) assigned to each floor within each sampled hall, to further explain the purpose of the study, answer questions, and encourage participation. The researcher then disseminated a survey link to each residence hall's hall director who then agreed to send the link by email to every member of their respective residence hall. The resident assistants then aided participation by announcing that the two floors on each campus with the highest level of participation would win a pizza party for the floor, courtesy of the author. The tally of each floor's participants was kept by each hall's hall director to shield the participants from sharing identifying information with the author. All participants in the study were voluntary and provided with informed consent through the online survey (Appendix A), which explained that the information gathered is confidential and the participant could choose to disengage from the study at any time. Although no emails were collected by the

researcher to send out the survey, and every effort was made to insure that no identifying information was collected, there was an explanation as to the limitations of complete privacy regarding internet service provider addresses (ISP's).

Hypotheses

Prior research has established that both social support and psychological sense of community have an effect on the health and well-being of college students. Research has also shown that residence hall size has an impact on psychological well-being of college students by interacting with the development of social support resources (i.e. friendship and peer support). For this study, it is postulated that the capacity of a residence hall has a significant relationship with perceived social support and psychological sense of community in the prediction of psychological distress in residents.

This study contained three hypotheses. The independent variable is residence halls capacity, divided into three subcategories (low, medium, and high). The three dependent variables of the study are perceived social support (SS), psychological sense of community (SOC), and psychological distress (PD), all of which will be reported as a single score respectively. The first hypothesis will determine if there is a significant difference between subjects' SS ratings across differing residence hall capacities. This hypothesis will be tested using a one-way ANOVA with residence hall capacity as the independent variable and perceived social support as the dependent variable.

The second hypothesis will determine if there is a significant difference between subjects' SOC ratings across differing residence hall capacities. This hypothesis will also be tested using a one-way ANOVA with residence hall capacity as the independent variable and SOC as the dependent variable.

The third and main hypothesis will determine what the relative contribution of SS, SOC, and residence hall capacity is in determining the level of PD reported among subjects. The variables of gender, ethnicity, and location will be explored as covariates to determine their significance to the variance in psychological distress.   This hypothesis will be tested using a multiple regression analysis model with PD as the dependent variable and SS, SOC, and residence hall capacity as the independent variables.

CHAPTER 4

Results

The current study was designed to examine the relationship(s) between SS, SOC, and

levels of PD among college students living in residence halls of varying capacities. This chapter

reports the results of the statistical analyses conducted to investigate the proposed hypotheses.

An alpha level of .05 was used for all statistical tests. The data frequencies are listed in Table 1.

Table 2 is comprised of correlations, standard deviations and reliability measures for the three

measured variables of SS, SOC, and PD. Tables 3, 4, and 5 all list the means and standard

deviations of each measured variable (SS, SOC, and PD respectively) as a function of the

demographic variables. Table 6 lists the results of the one-way ANOVA analyzing SOC as a

function of residence hall capacity. Table 7 lists the results of the one-way ANOVA analyzing

SS as a function of residence hall capacity. Table 8 lists the intercorrelations among SS, SOC,

PD, residence hall capacity, and various covariates (e.g. gender, race, and campus). Table 9 lists

the summary of the regression analysis for SS, SOC, residence hall capacity, and covariate

variables on PD. Table 10 lists the ANOVA summary table from the regression analysis listed in

table 9. Finally, Table 11 lists the correlation analysis of the demographic questions as they are

related to the dependent variable, PD

Distribution of Data

Prior to the main analyses, the data were examined to identify any missing data, outliers,

and to check for the potential violation of the assumption of normality in the dependent

variables. Cases that were missing key data, such as the absence of entire measures or multiple

measures were removed from the data set, which resulted in 704 total cases remaining. Outlier

analysis revealed 14 cases that were removed from the data set resulting in 690 total cases remaining.

In order to check the assumption of normality in the dependent variables, SS, SOC, and PD, a visual examination of the data was conducted. Consultations of statistical tests of normality were not conducted at this time due to the high incidence of Type I error that is often cited concerning these tests, in addition to a greater tendency for skew and kurtosis in larger samples (Field, 2009). A visual representation of the data showed a relatively normal distribution for all three variables (see figures 1-3).

The sample characteristics for this study are displayed in Table 1. Participants were between 18 and 24 years of age, with a mean age of 18.86 (SD = .965). The sample was comprised of 29.3% males (n = 202) and 70.7% females (n = 488).). 80.1% of the participants were White (n = 553). The majority of subjects, (71.4%) identified themselves as freshman (n= 493). Also a majority of respondents, 71.3% (n = 492) had lived in campus housing for two semesters, while 76.8% indicated living at home prior to moving on-campus (n = 530). As for the campus distribution, 44.3% of the respondents came from the Southwest Lower Michigan campus (SWM) (n = 306), with 38.8% coming from East Central Kansas (ECK) (n = 268), and the final 16.8% coming from Southeast Lower Michigan (SEM) (n = 116). Finally, 42.9% of respondents were in the medium hall-capacity group (n = 296), 31.7% came from the high hall-capacity group (n = 219), and 25.4% came from the low hall-capacity group (n = 175).

Data Analysis

Hypothesis 1.

The first step in the analysis involved the hypothesis stating that subjects' means scores on the measure of perceived social support (SS) would significantly differ across varying residence hall capacities. A one-way ANOVA (see Table 7) revealed that at the $p < .05$ level, subjects' mean scores were not significantly different for SS across hall capacity $F(2,687) =$ .875, $p > .05$. Therefore, the null hypothesis cannot be rejected. A further breakdown of SS mean scores across each demographic variable subset is available in Table 3.

Hypothesis 2.

The second step in the analysis involved the hypothesis stating that subjects' mean scores on the measure of SOC would significantly differ across varying residence hall capacities. A further breakdown of SOC mean scores across each demographic variable subset is available in Table 4. Again, a one-way between-subjects ANOVA (See Table 6) was performed on subjects' SOC measure from the Campus Atmosphere Scale – Revised (CAS-R). The results of the ANOVA indicate that subjects' mean scores were indeed, significantly different across hall capacity $F(2, 687) = 7.747$, $p < .001$. Post-hoc analysis, using the Bonferroni test indicated that SOC mean scores for low hall capacity (M = 3.30, SD = .77, 95% CI [3.19, 3.42]) were significantly different from the SOC mean scores for high hall capacity (M = 3.03, SD = .75, 95% CI [2.93, 3.13]). Also, the SOC mean scores for medium hall capacity (3.25, SD = .72, 95% CI [3.16, 3.33] were also significantly different from the high capacity mean scores for SOC. However, there was no significant difference between SOC mean scores for low and medium hall capacities. This result allows a rejection of the null hypothesis that SOC mean

scores do not differ significantly across hall capacity and would indicate that the capacity of a hall may indeed influence the perception of SOC among residence hall students.

Hypothesis 3.

The final step involved utilizing a multiple regression analysis to explore the predictive ability of SS, SOC, and residence hall capacity on subjects' measures of PD using the Kessler Psychological Distress Scale. A complete breakdown of PD mean scores across each demographic variable subset is available in Table 5. In line with regression methodology, covariate variables were entered into the model in order of perceived importance to the dependent variable. Perceived importance was ascertained by consulting the predictive value identified in previous literature on SS and SOC as well as the results of the ANOVA for both Hypothesis 1 and 2. At the onset of data collection, the researcher intended not to include age as a covariate, as the majority of the students sampled were expected to be first or second-year students between ages 18 and 19. Although several demographic variables were significantly correlated with the dependent variable, psychological distress (see Table 11), many were not included in the regression analysis. A main reason for this decision was not to reduce the overall power of the analysis by having too many factors in the model (Field, 2009).

The resulting order of importance and subsequent entry into the regression model was as follows: gender, race, and campus location. The predictive variables of SS and SOC were added separately in the next respective steps of the model. Finally, residence hall capacity was added to the model in the final step in order to determine any added significance and variance explained, while also taking into account the covariate variables.

44

The results of this analysis indicated that the full model including all three independent variables of SS, SOC, and residence hall capacity was significant, $F(11, 678) = 383.28$, p < .001 (see Table 10). Looking closer at the individual steps of the model, in step 1, the step variables together appeared to be predictive of psychological distress, R^2 change= .02, $F(7, 682) = 2.18$, p <.05. However, upon closer inspection, only the SWM campus respondents and Black student responses showed any measurable significance. Consequently, the variance of Black student responses in Step 1 disappeared in subsequent steps.

The results of Step 2 showed that when SS was added to the predictive model, it accounted for a significant amount of variance in psychological distress after controlling for the covariate variables, $R^2\Delta=.12$, $F(1, 687) = 95.26$, p < .001. Likewise, in Step 3, the addition of SOC to the model also accounted for a significant amount of variance in psychological distress, $R^2\Delta = .02$, $F(1, 680) = 12.466$, p < .001. In Step 4, however, the results indicated that residence hall capacity did not add a significant amount of predictive variance to the model, $R^2\Delta = .003$, $F(2, 678) = 1.15$, p = .32. When examining standardized beta significance in the full model, SS, ($\beta = .-.34$, $t(678) = -9.00$, p < .001), and SOC ($\beta = -.13$, $t(678) = -3.50$, p < .01) remained significant in the full model (see Table 9). It is also noted that the SW Michigan campus scores for psychological distress were significantly higher ($\beta = .10$, $t(678) = 2.34$, p < .05).

CHAPTER 5

Discussion

This chapter includes a summary of the statistical findings as they pertain to each of the proposed hypotheses as well as an interpretation of those findings both in the context of the current study and the student residence hall life literature as a whole. Also included is a discussion of possible implications for the field of psychology, as well as university counselors, administrators, and faculty. Limitations to the present study are also presented as are future directions for research.

Summary of Findings

Research indicates that college students' transition to college, and continued success while attending is often linked to a higher perceived level of social support from friends, family, and significant others (Cohen, Sherrod, & Clark, 1986; Friedlander, Reid, Shupak, & Cribble, 2007; Foley-Nicpon et al., 2006; Hefner & Eisenberg, 2009; Wintre & Sugar, 2000). Furthermore, research has also linked a sense of community among students as a precursor for continued matriculation and success at the collegiate level (Cheng, 2004; Chickering & Reiser, 1993; Jacobs & Archie, 2008; Lounsbury & DeNui, 1996; Sloan-Devlin et al., 2008). Various studies have also explored the roles that certain living environments may have in the success or attrition of students at the collegiate level (Arboleda, Wang, Shelley, & Whalen, 2003; Astin, 1999; Jordyn & Byrd, 2003; Kurotsuchi-Inkelas & Weisman, 2003; Pascarella & Terenzini, 1980). What seems to be lacking, however is a direct analysis of the effects these factors have on the psychological well-being of today's college students. This study, therefore, examines the relationship between students' perceived social support (SS), their sense of community (SOC)

46

within their respective living areas, and the size of their living facilities (as measured by overall student capacity), and whether these factors have any predictive ability toward students' reported psychological distress (PD).

In the first hypothesis, it was found that SS mean scores were not significantly different across differing residence hall capacities, and therefore, the size of the hall did not have a significant influence on how students perceived their social support networks. Thus a student living in a hall built for 49 did not differ significantly from a resident of a hall built for 900. This result is contrary to previous research by Holahan and Wilcox (1978), who found that larger halls negatively influenced measures of friendship formation and residential satisfaction. That study was also conducted on a single campus while the present study included three separate campuses in two different states. A similar study by Foley-Nicpon et al. (2006) which focused on the relationship of loneliness, social support, and academic performance/persistence found that SS accounted for only a small amount of variance between students living on-campus in differing residence hall environments. This study also found that SS accounted for a small amount of variance between students living on-campus versus those living off-campus. Perhaps in the study conducted by Foley-Nicpon et al., as well as the present study, some students derived more of a sense of support from family, significant others, or friends from home. These relationships might provide enough support to overcome a lack of friendships made "in-hall". Another possibility is that the Multidimensional Scale of Perceived Social Support (Dahlem, Zimet, & Walker, 1991), used in the present study does not make a distinctive delineation between social support entities from home – these include family, friends, significant others - compared to campus relationships – i.e. classmates, friends in organizations - compared to those in the residence halls, such as roommates, suitemates or floor mates. This may also be a factor as to

47

why the means of these scores across the differing sampled halls and sampled campuses did not vary significantly.

In the second hypothesis, results indicated that SOC mean scores were significantly different across differing residence hall capacities, specifically, that low (less than 200) and medium (between 200 and 350) both differed significantly from high hall capacity (greater than 350). The lack of a statistical difference between small and medium hall capacities may indicate that the scale used to divide low and medium was not far enough apart to overcome their equivalence. This finding supports previous research (Holahan &Wilcox, 1978; Wilcox & Holahan, 1976) which showed that students in smaller halls showed higher levels of commitment to each other, and a greater sense of community compared to those living in larger halls. This finding follows the logic that students living in large residence halls that have a higher student capacity may find themselves feeling less a part of the hall. At the SWM university in the present study, students in the smaller halls had a tendency to hang out in the hall on weekends, while students in larger halls were more apt to leave their halls for other entertainment options either on or off-campus. This hall cohesiveness among smaller hall residents was also observed at both the SEM Campus and ECK campus. One might assume that with greater numbers of potential interactions with other students in larger capacity halls, students should be able to make friends more easily. Perhaps, however, students in larger halls find themselves clinging to their own immediate and proximal peer group developed over the first few months in the hall. With time, they may eventually branch out, but they may be intimidated by the sheer size and number of people, thus the process may take more time than it would in a much smaller, more intimate living scenario.

In a related study in the field of community psychology and urban planning, Pendola and Gen (2008) describe four different communities in San Francisco and how their physical makeup influences sense of community. In this case, the two neighborhoods that are more like "main street" - opposed to a high density urban area or a more spread out suburban area - had higher levels of reported sense of community among residents. In this example, neighborhoods in which residents had more face-to-face opportunities, along with mixed-use land consisting of single-family homes in close proximity to businesses, reported higher levels of sense of community. The authors theorized that the relative "bedroom-community" quality of the suburbs suggested more privacy and thus residents act accordingly. In contrast, the urban neighborhood may also be a hindrance to building a sense of community due to its high traffic and overwhelming physical press of other people. Transposing these findings to the residence hall setting, perhaps small residence halls allow students the smaller-scale, more intimate opportunity to develop community among its occupants compared to the relative privacy of an apartment or the hustle and bustle of the 600-900 resident, 5-10 story mega dorm.

Furthermore, similar studies involving the influence of residence hall room type and alcohol use (Cross, Zimmerman, & O'Grady, 2009; Sharmer, 2005) have shown that the room designs *within* buildings (i.e. traditional, suite, apartment) have an influence on the perceived level of sense of community among students, thereby influencing their level of alcohol use. As suite-style or apartment-style halls have a tendency to house larger clusters of students within an independent space (i.e. 4-6 suitemates, versus 2 roommates in a traditional residence hall room), the impetus to interact with other residents in the hall is lessened. This may be especially true in apartment-style living areas in which privacy is more of a focus than traditional residence halls. Sloan-Devlin et al. (2008) hypothesized that increased alcohol use is a result of lower sense of

community as students residing in suites are less integrated to the hall as a whole because they do not venture out of their suites as much. Therefore alcohol becomes more of a social lubricant to overcome the physical barriers between students in these types of living areas. Smaller halls tend to have lower amounts of alcohol abuse and the reason may be that residents in smaller halls have less of a need to utilize alcohol to socialize with their fellow hall mates. Although the present study did not directly explore differences in room design, this may be an important mediating factor and should be explored in future research.

The third hypothesis proposed that SS, SOC, and hall capacity together, would hold some predictive value in determining PD among residents taking into account certain covariates. The results indicated that overall there was indeed a significant relationship among SS, SOC, and PD. This supports previous research that SS and SOC have significant influence on various aspects of college students' well-being (Friedlander, Reid, Shupak, & Cribble, 2007; Lounsbury & DeNeui, 1996; Sloan-Devlin, et al., 2008). Furthermore, in a study that explored environmental predictors of stress in residence hall students (Dusselier, Dunn, Wang, Shelley, & Whalen, 2005), the authors found that residents who perceived more respect and cooperation with each other reported lower amounts of stress. For the current study, the results indicate an inverse relationship between both SS and SOC and PD (see Table 8). Following the logic of the previous studies and the results of the present study, one could make the prediction that as scores on the SS and SOC scales rise, the level of psychological distress will be lower. Given the evidence of prior research of the influence that social support and sense of community have on the academic and social well-being of college students, it is not surprising that the present study shows a similar pattern with psychological distress among residence hall students.

Gender was not found to have a significant predictive relationship with PD. Dusselier et al. (2005) also found no significant difference between male and female participants for their study on stressors. Holahan and Wilcox (1978) however, did find an interaction between gender and type of dormitory in friendship formation, with women rating friendship formation easier in the smaller dormitories as opposed to men rating the larger ones easier. Again, that study was done on one campus compared to the three of the present study.

A surprising result of the present study was the lack of significant predictive power that hall capacity had on PD scores. Again, although SS and SOC scores were found to be significant across all four steps of the regression model, hall capacity showed no significance in the full model. Although this finding may seem to contradict previous studies by Wilcox and Holahan (1978), the truth is that SS and SOC were shown to have a significant predictive value on PD scores, but without a direct influence from hall capacity. This could mean that college administrators can be less inclined to consider the hall size when addressing how residence halls affect the psychosocial well-being of its occupants. One might also propose that because there is a link between SOC and hall capacity, and also a link between SOC and PD, perhaps hall capacity acts more as a mediator variable between SOC and PD. This path is less clear when considering SS as there was not a distinct relationship between SS and hall capacity in the first hypothesis of the present study. Nonetheless, these findings merit further exploration into what mechanisms are at play when considering the effects of SS and SOC on PD in residence hall students.

Finally, the results indicated that psychological distress scores on the SW Michigan campus were significantly higher and this was consistent through all steps of the model. There are many possibilities for this, but one possibility stands out. At the SWM campus counseling

51

center, many clients come into the center for career counseling. A sizeable proportion of these clients are looking for alternative majors due to an inability to gain secondary admission into their original chosen major (e.g. nursing, physical therapy, occupational therapy, radiology tech., business). This campus was attracting a high number of high-level students to a few specific majors which only allowed a certain number of students into the major per year. As a result, many upper class students were retaking prerequisite courses sometimes 3 or 4 times to improve their grade point average and boost their standing when they reapplied to the prospective major school. This caused many students to panic when they were unable to gain admittance into their school of choice, especially nursing and allied health majors, (J.Zaugra, personal communication, August 16, 2009). This factor may have contributed to the findings in the present study.

Overall, this study has shown complex results to the hypothesized assumptions. First, although SS was not shown to be related to hall capacity, it was shown to have a significant influence on PD scores. Second, SOC was shown to be related to hall capacity and to be significantly predictive of PD scores. Third, hall capacity was not shown to be related to the predictive ability of SS or SOC on PD scores. Fourth, gender and race were not significant covariates for the aforementioned variables. Finally, only one campus (SWM) showed significantly higher PD scores among participants.

Conclusions and Implications

Given the recent events that have happened on various college campuses in the past 15 years, more areas of the campus environment are under increased scrutiny to help determine not only how to help students be successful, but also how to help those students who are in distress.

52

Whereas the focus in the past might have been on academic achievement, successful transition to the university learning environment, and preparation for employment after college, nowadays, the psychosocial well-being of students while they are living and studying on campus has pushed its way to the forefront.

Faculty and administrators must acknowledge the fact that real world problems are affecting the college population and cannot simply be ignored until after graduation. As a result, it is imperative that colleges re-evaluate how their various parts interact with and influence students as well as what changes must be made. By doing so, they can ensure not only a timely matriculation path, but also a safe and healthy community.

Limitations

There are various limitations to this study which may have influenced the outcome of the aforementioned hypotheses. Smith and Glass (1987) and Ary, Jacobs, and Razavieh (1996) outline several threats to internal and external validity. Among those which may be considered for the present study include instrumentation, implementation bias, history, differential selection of participants in addition to other measurement limitations. With regard to history, students living in campus residence halls have a wide variety of experiences over the course of an academic year. It is possible that an event could have happened to various groups of students that influenced their responses to the survey questions which might not have anything to do with living in a residence hall. Differential selection of participants may have occurred as the surveys were taken at one moment in time and did not take into consideration any possible substantive differences between the various comparison groups. Implementation bias may have occurred as floor resident assistants (RA) in each hall were integral in getting the surveys back. Although

the initial distribution was done consistently by this author, the fact that the RA had a hand in motivating their residents to respond might have confounded the results. Although efforts were made to address population validity by utilizing three separate campuses and a sample size near 700 for maximum generalizability, there is still the possibility that this study is limited in its scope as the campuses were from two different states, both in the Midwest.

Coupled with the aforementioned limitations, certain measurement limitations must also be considered. For example, the instrument used to measure psychological distress had relatively high reliability among general populations but had not been tested specifically on college-only populations. Also, due to the fact that participants were already assigned to their respective residence hall living units, it was impossible to randomly assign them to a specific hall population. In addition, this study relied on self-report measures and may not portray the true level of psychological distress participants were experiencing. Furthermore, with the majority of the sample population being White, the level of generalizability to ethnic minority students is limited. Finally, the timing of the survey may have created a relevant limitation in the current study. March was chosen as a time when friendships and relationships were well established from the fall semester, or the beginning of the spring semester. It may be wise in future endeavors, to have a measurement taken in the fall semester coupled with one in the spring semester to get a more accurate idea of the influence of these variables over time.

Future Research Directions

Hall capacity, sense of community, and psychological distress.

Although no significant relationship was found between residence hall capacity and PD directly, the results did show several other important factors. First, SS and SOC predict the level of PD among students. Also, residence hall capacity predicts SOC. Not so clear, however, is what other variables may be mediating these relationships. It would be prudent for the next step to be an examination of possible mediating variables between SOC, hall capacity, and PD. Also, it would make sense to consider a more longitudinal design, exploring how hall capacity influences students who choose to live there for more than one academic year.

Finally, if a future study is undertaken, a pre-exam including psychological background questions might be useful to better understand the sample population. Therefore, weeding out those individuals who already have psychological issues as well as taking into consideration certain personality characteristics that might predispose a subject to actively or not actively seek out social contact in the hall.

Residence hall influence on mental health.

There is research to indicate that as greater numbers of students enroll at colleges and universities across the nation, there will be an increase in those students who either develop mental health issues while at college, or exacerbate the ones they have prior to coming on campus (Mowbray et al., 2006; Schwartz, 2006; Stukenberg, Dacey, & Nagy, 2006). Perhaps future research would include cooperation between residence life administrators working with campus counselors to develop a campus psychological survey to be completed by all residence hall students prior to move-in. Several multi-campus epidemiological studies have been

commissioned recently to aid in understanding the present state of college student mental health. Some of these include the Study of College Student Well-being (Cornell Research Program On Self-Injurious Behavior, 2009), and a national study of suicidal ideation and behavior on campus based at the University of Texas at Austin (University of Texas Counseling and Mental Health Center, 2006). These and other studies continue to increase the amount of information that is available to college and university administrators. The goal is that gathering baseline information on students' mental health would help administrators and front-line helpers better evaluate who might need assistance, and to develop strategies to help them get it.

Future Professional Directions

With past research in housing focused more on the areas of attrition, academic success, and student development, college and university administrators have focused their design of newer on-campus living communities to increase student comfort, privacy, sense of place, and a sense of self (Clemons, Banning, & McKelfrish, 2004). As other studies (Cheng, 2004; Grimm, Balogh, Thompson, & Hardy, 2004) affirm, a focus on more private residential settings such as suite-style or apartment facilities certainly can increase the level of satisfaction among residents, but students still desire a living environment that is conducive to the interactions of their peers culturally, intellectually, and socially.

With the continued increase of psychotropic medications prescribed to the traditional 18-25 college population (Schwartz, 2006), more and more students who might not have been able to attend college 30 years ago, are choosing to embrace the full college experience today. This may be a blessing as well as a curse. Although it is allowing more and more people to attend college, it is forcing college and university campuses to rethink how they can better serve their

student populations. One of those ways is to more actively research how campus living environments influence and shape the mental health of those who live there. Through continued research in this area, tools may be developed that would give university administrators, educators, and counselors more information to help students who are in distress, and also might help housing officials better match incoming students to particular living/learning environments. Through design options that take into account mental health influences, colleges may be able to increase graduation rates while also decreasing levels of depression and anxiety among the student populace.

For campus counselors, this knowledge points to a fact that they are well aware of, but only now is the rest of campus catching onto: The college campus experience is truly a microcosm of the off-campus world, for better or worse. College administrators must realize that to truly embrace the concept of "student development", they must also include mental health under this umbrella. Perhaps more research in this area would lead to more funding for on-campus facilities and staff to better help students who are in distress, rather than referring them off-campus. As more campuses experiment with novel ways to serve students' mental health needs (e.g. services in residence halls or recreation facilities), not only is the stigma associated with mental health lessened, but these efforts create more and better access for those who might not otherwise be able to afford help (Rawls, Johnson, & Bartels, 2004).

References

American College Health Association (2008). American College Health Association-National

College Health Assessment II: Reference Group Executive Summary. Baltimore, MD:

American College Health Association. Retrieved from: http://www.acha-

ncha.org/docs/ACHA-NCHA_ReferenceGroup_ExecutiveSummary_Fall2008.pdf

Altman I., & Rogoff, B., (1987). World views in psychology: Trait, interactional, organismic,

and transactional perspectives. In D. Stokols & I. Altman (Eds.), *Handbook of*

environmental psychology (Vol. 1, pp. 1-40) New York: Wiley.

Arboleda, A., Wang, Y., Shelley, M.C., & Whalen, D.F., (2003). Predictors of residence hall

involvement. *Journal of College Student Development, 44(4)*, 517-531.

Ary, D., Jacobs, L., C., & Razavieh, A. (1996). Introduction to research in education, Fort

Worth: Harcourt Brace.

Astin, A.W. (1977). The impact of dormitory living on students. *Educational Record, 54*, 204-

210.

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal*

of College Student Development, 40, 518-529.

Baum, A., Harpin, R. E., & Valins, S. (1975). The role of group phenomena in the experience

of crowding. *Environment and Behavior, 7*, 185-198.

Beekhoven, S., DeJong, U., & Van Hout, H. (2004). The impact of first-year students' living

situation on the integration process and study progress. *Educational Studies, 30(3),*277-

290. doi: 10.1080/0305569042000224224

Biliczky, C. (2005, June 6). Colleges offer plush new dorms. Akron Beacon Journal.

Retrieved from http://web.lexisnexis.com/universe/document?_m=

1afaf090b77ff57191f89a981766c6cd&_docnum=1&wchp=dGLbVtb-

zSkVA&_md5=4a35bfe9406b088539cd1ad1eed57eea

Blimling, G.S., & Schuh, J.H. (1981). *Increasing the educational role of residence halls.* San

Francisco, CA: Jossey-Bass.

Bolger, N., Amarel, D. (2007). Effects of social support visibility on adjustment to stress:

Experimental evidence. Journal of Personality and Social Psychology, 92, 458-475.

Buote, V.M., Pratt, M.W., Adams, G., Birnie-Lefcovitch, S., Polivy, J., & Gallander-Wintre, M.

(2007). The importance of friends: Friendship and adjustment among 1st-year university

students. *Journal of Adolescent Research*, 22(6), 665-689.

Buss, D.M. (1987). Selection, evocation, and manipulation. *Journal of Personality and Social

Psychology, 53,* 1214-1221.

Chambers, T. & Phelps, C.E. (1993). Student activism as a form of leadership and student

development. *NASPA Journal, 31*, 19-29.

Chavis, D. M., & Newbrough, J. (1986). The meaning of "community" in community

psychology. *Journal of Community Psychology*, 14, 335-340.

Cheng, D.X., (2004). Students' sense of campus community: What it means, and what to do

about it. *NASPA Journal, 41(2)*, 216-234.

Chickering, A.W. (1969). *Education and Identity.* San Francisco, CA: Jossey-Bass.

Chickering, A.W. (1972). Undergraduate academic experience. *Journal of Educational*

Psychology, 63(2), 134-148. Doi: 10.1037/h0032635

Chickering, A.W. (1974). The impact of various college environments on personality

development. *Journal of American College Health Association, 23,* 82-93.

Chickering, A.W., McDowell, J., & Campagna, D. (1969). Institutional differences and student

development. *Journal of Educational Psychology, 60(4),* 315-326.

Chickering, A.W. & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco, CA:

Jossey-Bass.

Cohen, S. (2004). Social relationships and health. *American Psychologist,* 59, 676-684.

Cohen, S., Kessler, R. C., & Gordon, L. U. (1995). Strategies for measuring stress in psychiatric

and physical disorders. In S. Cohen, R. C. Kessler, & L. U. Gordon (Eds.), *Measuring*

Stress (pp. 3–28). New York: Oxford University Press.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis.

Psychological Bulletin, 98, 310–357.

Cohen, S., Sherrod, D. R., & Clark, M. S. (1986). Social skills and the stress-protective role of

social support. *Journal of Personality and Social Psychology*, 50, 963–973.

Cook, J.R. (1987). Anticipatory person-environment fit as a predictor of college student health

      and adjustment. *Journal of College Student Personnel,28*(5), 394-398.

Corbett, J. A. (1973). Are the suites the answer? *Environment and Behavior, 5*, 413-419.

Cornell Research Program on Self-Injurious Behavior. (2012). Retrieved from

      http://www.crpsib.com/default.asp

Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support,

      and coping processes. *Annual Review of Psychology, 42*, 401–425.

Cronkite, R.C. & Moos, R.H. (1995). Life context coping processes, and depression. In E.E.

      Bechman & W.R. Leber (Eds.). *Handbook of depression* (2nd ed.) (pp. 569-587). New

      York: Guilford Press.

Cross, J.E., Zimmerman, D., & O'Grady, M.A. (2009). Residence hall room type and alcohol use

      among college students living on campus. *Environment and Behavior, 41(4),* 583-603.

      doi: 10.1177/0013916508338169

Dahlem, N.W., Zimet, G. D., & Walker, R.R. (1991). The multidimensional scale of perceived

      social support: A confirmation study. *Journal of Clinical Psychology, 47*(6), 756-761.

Dovey, K. (1978). Home: An ordering principle in space, *Landscape, 22*, 27-30.

Durden, E. D., Hill, T. D., & Angel, R. J. (2007). Social demands, social supports, and

      psychological distress among low-income women. *Journal of Social and Personal*

      Relationships, 24, 343–361.

Dusselier, L., Dunn, B., Wang, Y., Shelley, M.C. & Whalen, D.F. (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54(1)*, 15-24.

Dyson, R. & Renk, K. (2006). Freshman adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology, 82* (10), 1231-1244.

Eisenberg, D., Gollust, S.E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*, 77(4), 534-542.

Erwin, T.D. Love, W.B. (1989). Selected environmental factors in student development. *NASPA Journal, 26*, 256-264.

Feldman, K.A. & Newcomb, T.M. (1969). *The impact of college on students.* Piscataway, NJ: Transaction publishers.

Field, A. (2009). *Discovering statistics using SPSS* (3rd Ed.), London: Sage Publications Ltd.

Foley-Nicpon, M., Huser, L., Hull-Blanks, E., Sollensberger, S., Befort, C., & Robinson-Kurpius, S.E. (2006). The relationship of loneliness and social support with college freshmen's academic performance and persistence. *Journal of College Student Retention, 8*(3), 345-358.

Frey, C.U. & Rothlisberger, C. (1996). Social support in healthy adolescents. *Journal of Youth and Adolescence, 25*, 17-32.

Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259-274.

Gallagher, R. (2011). National Survey of Counseling Center Directors. [Online]. Alexandria, VA: International Association of Counseling Services Retrieved from: http://www.iacsinc.org/2011%20NSCCD.pdf

Gallagher, R., Gill, A., & Sysko, H. (2000). National survey of counseling center directors. Alexandria, VA: International Association of Counseling Services.

Ghallager, R.P., Zhang, B. & Taylor, R. (2004). *National survey of counseling center directors* (Monograph Series No.8N). Alexandria, VA: International Association of Counseling Services.

Haag-Granello, D. & Granello, P. F. (2000). Defining mental illness: The relationship between college students' beliefs about the definition of mental illness and tolerance. *Journal of College Counseling*, 3, 100-112.

Halamandaris, K.E. & Power, K.G. (1999). Individual differences, social support and coping with the examination stress: A study of the psychosocial and academic adjustment of first year home students. *Personality and Individual Differences, 26,* 665-685.

Ham. L.S. & Hope, D.A. (2003). College students and problematic drinking: A review of the literature. *Clinical Psychology Review, 23(5), 719-759.*

Hefner, J., & Eisenberg, D. (2009). Social support and mental health among college students. *American Journal of Orthopsychiatry, 79*(4), 491-499. doi: 10.1037/a0016918

Heilweil, M. (1973b). The influence of dormitory architecture on resident behavior. *Environment and Behavior, 5*, 377-412.

Hill, J.L. (1996). Psychological sense of community: Suggestions for future research. *Journal of Community Psychology, 24*, 431-438.

Hobfoll, S.E. & Vaux, A. (1993). Social support: Social resources and social context. In L. Golberger & S. Breznirz (Eds.). *Theoretical an clinical aspects* (pp. 685-705). New York: Free Press.

Holahan, C.J. & Wilcox, B.L. (1978). Residential satisfaction and friendship formation in high- and low-rise student housing: An interactional analysis. *Journal of Educational Psychology, 70(2),* 237-241.

Holland, J. (1966). *The Psychology of vocational choice: A theory of personality types and model environments.* Waltham, MA: Blaisdell.

Holland, J. (1992). *Making vocational choices: A theory of vocational personalities and work environments (2nd ed.).* Odessa, FL: Psychological Assessment Resources.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.

Hoover, E. & Lipka, S. (2008). Colleges find ways to identify troubled students. *Chronicle of Higher Education*, 54(32), A10-A12.

House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. *Annual Review of Sociology, 14*, 293–318.

Huebner, L.A. (1989). The impact of the ecological approach on therapy and diagnosis. *NASPA Journal, 26*, 103-109.

Hunt, J. & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46*, 3-10.

Jacobs, J., & Archie, T. (2008). Investigating sense of community in first-year college students. *Journal of Experiential Education, 30(3)*, 282-285.

Johnson, G.M., Staton, A.Q., & Jorgansen-Earp, C.R. (1995). An ecological perspective on the transition of new university freshmen. *Communication Education, 44,* 336-352.

Jordyn, M. & Byrd, M. (2003). The relationship between the living arrangements of university students and their identity development. *Adolescence, 38(150),* 267-278.

Kadison, R. (2004, December 10). The mental-health crisis: What colleges must do. *The Chronicle of Higher Education,* B20.

Kaiser, L.R. (1978). Campus ecology and campus design. In James H. Banning (Ed.) Campus ecology: A perspective for student affairs [Monograph]. *NASPA Journal Monograph Series.* Retrieved from http://campusecologist.com/files/Monograph.pdf

Kaplan, B.H., Cassel, J., & Gore, S. (1977). Social support and health. *Medical Care, 15*, 47-58.

Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health: Bulletin of the New York Academy of Medicine,78,* 458–467.

Kerr, S., Johnson, V.K., Gans, S.E., & Krumrine, J. (2004). Predicting adjustment during the

> transition to college: Alexithymia, perceived stress, and psychological symptoms.

> *Journal of College Student Development, 45(6),* 593-611.

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., . . .

> Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and

> trends in non-specific psychological distress. *Psychological Medicine, 32*, 959 –976.

> doi:10.1017/S0033291702006074

Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiript, E.,…Zaslavsky,

> A.M. (2003). Screening for serious mental illness in the general population. *Archives of*

> *General Psychiatry, 60,* 184-189.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005).

> Lifetime prevalence and age-of-onset distributions of DSM–IV disorders in the national

> comorbidity survey. *Replication.Archives of General Psychiatry*, 62, 593–602.

> doi:10.1001/archpsyc.62.6.593

Kitzrow, M.A. (2003). The mental health needs of today's college students: Challenges and

> recommendations. *NASPA Journal, 41(1),* 165-179.

Kurotsuchi Inkelas, K. & Weisman, J. L., (2003). Different by design: An examination of student

> outcomes among participants in three types of living-learning programs. *Journal of*

> *College Student Development, 44(3)*, 336-368.

Lounsbury, J.W., & DeNeui, D. (1996). Collegiate psychological sense of community in relation to size of college/university and extraversion. *Journal of Community Psychology, 24*(4), 381-394.

Lounsbury, J., & DeNeui, D. (1995). Psychological sense of community on campus. *College Student Journal, 29*, 270-277.

Magolda, M.B.B. (1992). Cocurricular influences on college students' intellectual development. *Journal of College Student Development, 33,* 203-213.

Martin, Jr., W.E., Swartz-Kulstad, J.L., & Madson, M. (1999). Psychosocial factors that predict the college adjustment of first-year undergraduate students: Implications for college counselors. *Journal of College Counseling, 2,* 121-133.

Mathis, M. & Lecci, L. (1999). Hardiness and college adjustment: Identifying students in need of services. *Journal of College Student Development, 40(3),* 305-309.

Mattanah, J.F., Ayers, J.F., Brand, B.L., Brooks, L.J., Quimby, J.L., & McNary, S.W. (2010). A social support intervention to ease the college transition: Exploring main effects and moderators. *Journal of College Student Development, 51*(1), 93-108. doi: 10.1353/csd.0.0116

McCarthy, C.J., Fouladi, R. T., Juncker, B. D., & Matheny, K. B. (2006). Psychological resources as stress buffers: Their relationship to university students' anxiety and depression. *Journal of College Counseling*, 9, 99-110.

McCarthy, M. E., Pretty, G. M. H., & Catano, V. (1990). Psychological sense of community and student burnout. *Journal of College Student Development, 31,* 211-216.

McKee, B. (2005, September 1). The new college mixer. *The New York Times*, pp. F1, F7.

McMillan, D.W. (1996). Sense of community. Journal of Community Psychology, 24(4), 315-325.

McMillan, D.W., & Chavis, D.M. (1986). Sense of community: A definition and theory. *American Journal of Community Psychology, 14*(1), 6-23.

Moos, R. H. (1976). *The human context: Environmental determinants of behavior.* New York: Wiley.

Moos, R.H. (1979). *Evaluating Educational Environments.* San Francisco, CA: Jossey-Bass.

Mowbray, C.T., Megivern, D., Mandiberg, J.M., Strauss, S., Stein, C.H.,… Lett, R. (2006). Campus mental health services: Recommendations for change. *American Journal of Orthopsychiatry, 76(2),* 226-237.

Murray, J.L., Snider, B.R., & Midkiff, R.M., Jr. (1999). The effects of training on resident assistant job performance. *Journal of College Student Development, 40(6),* 744-747.

Newcomb, T.M. (1962). Student peer-group influence and intellectual outcomes of college experiences. In R. Sutherland, W. Holtzman, E. Koile, & B. Smith (Eds.). *Personality factors on campus.* Austin, TX: Hogg Foundation for Mental Health.

Newcomb, T.M. (1966). Research on student characteristics: Current approaches. In L. Dennis & J. Kauffman (Eds.). *The college and the students.* Washington, DC: American Council on Education.

Nezlek, J.B., & Allen, M.R. (2006). Social support as a moderator of day-to-day relationships between daily negative events and daily psychological well-being. *European Journal of Personality*, 20, 53-68.

Pascarella, E.T. & Terenzini, P.T., (1980). Student-faculty and student-peer relationships as

    mediators of the structural effects of undergraduate residence arrangement. *Journal of*

    Educational Research, 73(6), 344-353.

Paul, E.L. & Brier, S. (2001). Friendsickness in the transition to college: Precollege predictors

    and college adjustment correlates. *Journal of Counseling & Development, 79,* 77-89.

Pendola, R. & Gen, S. (2008) Does "main street" promote sense of community? A comparison

    of san francisco neighborhoods. *Environment and Behavior, 40 (4)*, 545-574

Plas, J.M. & Lewis, S.E. (1996). Environmental factors and sense of community in a planned

    town. *American Journal of Community Psychology,24,* 109-143.

Pritchard, M.E. & Wilson, G.S. (2003). Using emotional and social factors to predict student

    success. *Journal of College Student Development, 44(1),* 18-18-28.

Qualtrics Labs, Inc. (2012).   Qualtrics Survey Software (Version 34993) [Computer Software].

    Provo, UT: Qualtrics Labs, Inc. Retrieved from http://www.qualtrics.com

Rawls, D.T., Johnson, D. & Bartels, E. (2004). The counselor-in-residence program:

    Reconfiguring support services for a new millennium. *Journal of College Counseling,7*,

    162- 169.

Relph, E. (1976). *Place and placelessness*. London: Pron.

Riedel, H.T. & Howell, J. (1996). Campus learners: A place to grow. *Journal of Housing and*

    Community Development, 53, 34-38.

Riker, H.C. (1965). *College Housing As Learning Centers.* University of Florida: The American

    College Personnel Association.

Riker, H.C. & DeCoster, D.A. (1971). The educational role in college student housing. *Journal*

    of College and University Student Housing, 1, 1-4.

Rubio, C.T. & Lubin, B. (1986). College student mental health: A person-environment

    interactional analysis. *Journal of Clinical Psychology, 42(1),* 205-212.

Russell, D. (1982). The measurement of loneliness. In L.A. Peplau & D. Periman (Eds.),

    Loneliness: A sourcebook of current theory, research, and therapy (p. 81-104). New

    York: John Wiley & Sons.

Saltzman, K. M. & Holahan, C.J. (2002). Social support, self-efficacy, and depressive

    symptoms: An integrative model. *Journal of Social and Clinical Psychology*,

    21(3), 309-322.

Sarason, S.B. (1974). *The Psychological Sense of Community: Prospects for a Community*

    Psychology. San Francisco, CA: Jossey-Bass.

Sarason, I.G., Levine, H.M., Basham, R.B., & Sarason, B.R. (1983). Assessing social support:

    The social support questionnaire. *Journal of Personality and Social Psychology, 44,* 127-

    139.

Sarason, B. R., Shearin, E. N., Pierce, G. R., & Sarason, I. G. (1987). Intercorrelations of social

    support measures: Theoretical and practical implications. *Journal of Personality and*

    Social Psychology, 32, 813-832.

Schwartz, A.J. (2006). Are college students more disturbed today? Stability in the acuity and

    qualitative character of pychopathology of college counseling center clients: 1992-1993

    through 2001-2002. *Journal of American College Health, 54(6),* 327-337.

Seamon, D. (1982). The phenomenological contribution to environmental psychology. *Journal*

    of Environmental Psychology, 2, 119-140.

Seamon, D. (1984). Emotional experience of the environment. *American Behavioral Scientist,*

    27(6), 757-770.

Seeman, T. E. (1996). Social ties and health: The benefits of social integration. *The Annals of*

    Epidemiology, 6, 442–445.

Seligman, L.D., & Wuyek, L.A. (2007). Correlates of separation anxiety symptoms among first-

    semester college students: An exploratory study. *Journal of Psychology*, 141(2),

    135-145.

Shaikh, B.T. & Deschamps, J.P. (2006). Life in a university residence: Issues, concerns and

    responses. *Education for Health, 19(1),* 43-51. doi: 10.1080/13576280500534628

Sharmer, L. (2005). Campus living arrangements as a risk factor for participation in drinking

    games among undergraduates. *Journal of College and University Student Housing,*

    33(2), 37-43

Sloan-Devlin, A., Donovan, S., Nicolov, A., Nold, O., & Zandan, G. (2008). Residence hall

    architecture and sense of community. *Environment and Behavior, 40*(4), 487-521.

    doi: 10.1177/0013916507301128

Smith, M.L. & Glass, G.V. (1987). Research and evaluation in education and the social

    sciences. Englewood Cliffs, NJ: Prentice Hall.

Sommer, R. (1968). Student reactions to four types of residence hall. *Journal of College*

    Student Personnel, 4, 232-237.

Stravynski, A., & Boyer, R. (2001). Loneliness in relation to suicide ideation and parasuicide: A

    population-wide study. *Suicide & Life-Threatening Behavior, 31*, 32–40.

Stukenberg, K.W., Dacey, C.M., & Nagy, M.S. (2006). Psychotherapy services provided by a

    college counseling center: Continuity through change over 37 years. *Journal of College*

    Student Psychotherapy, 20(4), 53-70.

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next?

    Journal of Health and Social Behavior, Extra Issue, 53–79.

Thompson, J., Samiratedu, V., & Rafter, J. (1993). The effects of on-campus residence on first-

    time college students. *NASPA Journal, 31,* 41-47.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.).

    Chicago, IL: University of Chicago Press.

Townley, G., & Kloos, B. (2011). Examining the psychological sense of community for

    individuals with serious mental illness residing in supported housing environments.

    Community Mental Health Journal, 47, 436-446. doi: 10.1007/s10597-010-9338-9

Townley, G., Kloos, B., Green, E.P., & Franco, M.M. (2011). Reconcilable differences? Human

    diversity, cultural relativity, and sense of community. *American Journal of Community*

    Psychology, 47(1-2), 69-85. Doi: 10.1007/s10464-010-9379-9

Tuan, Y. (1974). *Topophilia: A study of environmental perceptions, attitudes, and values.*
   Englewood Cliffs, NJ: Prentice-Hall.

University of Texas Counseling and Mental Health Center. (2006). *The nature of suicidal crises
   in college students*. (CMHC Project 5). Retrieved from University of Texas Counseling
   and Mental Health Center website: http://cmhc.utexas.edu/rc_project5.html

U.S. Department of Education, National Center for Education Statistics (2005a). *The condition of
   education 2005,* (NCES 2005 094), Washington, DC: National Center for Education
   Statistics.

Wampold, B.E., Ankarlo, G., Mondin, G., Trinidad-Carrillo, M., Baumler, B., & Prater, K.
   (1995). *Journal of Counseling Psychology, 42(3),* 365-379.

Wapner, S. (1995). Toward integration: Environmental psychology in relation to other subfields
   of psychology. *Environment and Behavior, 27(1),* 9-33.

Wilcox, B.L. & Holahan, C.J. (1976). Social ecology of the megadorm in university student
   housing. *Journal of Educational Psychology, 68(4),* 453-458.

Winefield, H., Winefield, A., & Tiggemann, M. (1992). Social support and psychological well-
   being in young adults: The multi-dimensional support scale. *Journal of Personality
   Assessment, 58*, 198-210.

Wintre, M. G. & Sugar, L.A., (2000). Relationships with parents, personality, and university
   transition. *Journal of College Student Development. 41(2)*, 202-214.

Zimet, G.D., Dahlem, N.W., Zimet, S.G., & Farley, G.K. (1988). The multidimensional scale of

   perceived social support. *Journal of Personality Assessment, 52(1).* 30-41.

Zimet, G.D., Powell, S.Z., Farley, G.K., Werkman, S., & Berkoff, K.A. (1990). Psychometric

   characteristics of the multidimensional scale of perceived social support. *Journal of*

   Personality Assessment, 55(3-4), 610-617.

APPENDIX A

Information Statement

The Department of Psychology and Research in Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand the role sense of community plays in the relationship between social support and psychological distress in residence/scholarship hall students. This will entail your completion of a questionnaire. The questionnaire is expected to take approximately 7-10 minutes to complete.

The content of the questionnaires should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of the potential relationship residence hall size, social support, and sense of community have with psychological distress. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the survey indicates your willingness to participate in this project and that you are at least age eighteen. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429, write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, or email mdenning@ku.edu.

Sincerely,

Dan Suitor, M.A.   Karen Multon, Ph.D.
Principal Investigator   Faculty Supervisor
Department of Psychology   Department of Psychology
and Research in Education   and Research in Education
Joseph R. Pearson Hall   Joseph R. Pearson Hall
University of Kansas   University of Kansas
Lawrence, KS 66045   Lawrence, KS 66045
(913) 522-0694   (785) 864-3931
suitor@ku.edu   kmulton@ku.edu

APPENDIX B

Demographic Questionnaire

1. What is your age?

2. What is your gender?
    a. male
    b. female

3. What is your race/ethnicity?
    a. African-American/Black
    b. Asian
    c. Middle Eastern
    d. Caucasian
    e. Hispanic/Latino(a)
    f. Native American/Alaskan
    g. Native Hawaiian/Pacific Islander
    h. Other

4. How many semesters have you completed?
    a. 0…this is my first semester in college.
    b. 1 semester
    c. 2 semesters
    d. 3 semesters
    e. 4 semesters
    f. 5 semesters
    g. 6 semesters
    h. 7 semesters
    i. 8 semesters
    j. 9 semesters
    k. 10 semesters
    l. More than 10 semesters

5. What is your current class standing?
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
    e. Graduate Student

6. What is your major?

7. How many semesters have you lived in campus housing?
   (Please include this current semester)
         a. 1 semester
         b. 2 semesters
         c. 3 semesters
         d. 4 semesters
         e. 5 semesters
         f. 6 semesters
         g. 7 semesters
         h. 8 semesters
         i. 9 semesters
         j. 10 semesters
         k. More than 10 semesters

8. Where did you live previously?
         a. Campus Housing
         b. Off-campus apartment
         c. Off-campus private residence hall
         d. At home

9. How many roommates and/or suitemates do you currently have?
         a. one
         b. two
         c. three
         d. four
         e. five
         f. six
         g. seven
         h. eight

10. Where do you currently live on campus?
          Hall   _____
          Floor _____

Items and Instructions for Social Support Scale

Instructions: Please read each of the following statements below and write the number that corresponds to your response in the space to the left of the statement.

1 = Very Strongly Disagree

2= Strongly Disagree

3=Disagree

4=Neutral

5=Agree

6=Strongly Agree

7= Very Strongly Agree

1. ____There is a special person who is around when I am in need.
2. ____There is a special person with whom I can share my joys and sorrows.
3. ____My family really tries to help me.
4. ____I get the emotional help and support I need from my family.
5. ____I have a special person who is a real source of comfort to me.
6. ____My friends really try to help me.
7. ____I can count on my friend when things go wrong.
8. ____I can talk about my problems with my family.
9. ____I have friends with whom I can share my joys and sorrows.
10. ____There is a special person in my life who cares about my feelings.
11. ____My family is willing to help me make decisions.
12. ____I can talk about my problems with my friends.

APPENDIX D

Permission from author to use Multidimensional Scale of Perceived Social Support

RE: Request for permission to use MSPSS

Zimet, Gregory D [gzimet@iupui.edu]

Sent: Thursday, February 02, 2012 3:58 PM

To: suitor

Attachments:MSPSS refs.doc (41 KB); MSPSS.doc (34 KB)

Hello Daniel,

You have my permission to use the MSPSS in your dissertation research.   I have attached a copy of the scale and a document listing studies that have reported on the psychometric properties of the MSPSS.

I hope your research goes well.

Sincerely,
Greg Zimet

===
Gregory D. Zimet, PhD
Professor of Pediatrics & Clinical Psychology
Section of Adolescent Medicine
Indiana University School of Medicine
Health Information & Translational Sciences
410 W. 10th Street, HS 1001
Indianapolis, IN 46202
USA

Phone: +1-317-274-8812
Fax: +1-317-274-0133
e-mail: gzimet@iupui.edu

_____
From: suitor [suitor@ku.edu]
Sent: Thursday, February 02, 2012 2:39 PM
To: Zimet, Gregory D
Subject: Request for permission to use MSPSS

Dr. Zimet,

My name is Dan Suitor, and I am writing to request permission to use the Multidimensional Scale of Perceived Social Support(MSPSS) in my dissertation research. My dissertation is exploring the relationship between social support, psychological sense of community, and residence hall capacity/size with level of psychological distress in undergraduate residents. I am drawn to the MSPSS for its psychometric properties as well as its brevity.

I appreciate your time and look forward to your correspondence.

Sincerely,

Daniel T. Suitor, MA
Doctoral Candidate~Counseling Psychology
The University of Kansas
Advisor: Dr. Karen Multon, PhD

APPENDIX E

Items and Instructions for Sense of Community Scale

Instructions: Please read each of the following statements below and write the number that corresponds to your response in the space to the left of the statement.

Please answer the following 14 questions regarding your current residence/scholarship hall.

1 = Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

1. ____I really feel like I belong in this hall.
2. ____There is a sociable atmosphere in this hall.
3. ____I wish I had chosen a different hall to live in than this one.
4. ____Students feel they can get help if they are in trouble.
5. ____I would recommend this hall to students in my high school.
6. ____People in my life like this hall.
7. ____There is a strong feeling of togetherness in this hall.
8. ____I someday plan to give alumni contributions to this hall.
9. ____I really enjoy living here.
10. ____Students here really care about what happens to this hall.
11. ____I feel very attached to this hall.
12. ____Student life in this hall is very stimulating.
13. ____If I am/were going to college next year, I would continue to live here.
14. ____There is a real sense of community in this hall.

APPENDIX F

Permission from author to use the Collegiate Sense of Community Scale-Revised

Re: Request for use of PSC scale

JLounsbury@aol.com [JLounsbury@aol.com]

Sent: Thursday, February 02, 2012 3:31 PM

To: suitor

Attachments: psc4.sur.doc (51 KB)

Hi Daniel,

Thanks for your interest in our work. You may indeed use our PSC scale and adapt items as needed. Attached is a copy of our scale along with some other scales.

Please let me know what you find.

Best wishes,

John

John W. Lounsbury
Professor
Dept. of Psychology
University of Tennessee
Knoxville, TN 37996-0900

In a message dated 2/2/2012 3:05:13 P.M. Eastern Standard Time, suitor@ku.edu writes:

Dr. Lounsbury,

My name is Dan Suitor and I am a doctoral candidate in Counseling Psychology at the University of Kansas. I am writing to request permission to use your Collegiate Psychological

Sense of Community Scale in my dissertation research. My dissertation is exploring the relationship between social support, sense of community, and residence hall capacity with levels of psychological distress in students who live in the halls. I feel your scale would be a logical one to measure sense of community, and due to its brevity, would be perfect for my study.

I am also requesting that I be allowed to adapt it by changing "campus environment" to either "residence hall" or simply "hall" for my study's purposes.

I appreciate your time and look forward to hearing from you.

Sincerely,

Daniel T. Suitor, MA
Doctoral Candidate~Counseling Psychology
University of Kansas

Items and Instructions for Psychological Distress Scale

These questions concern how you have been feeling over this semester. Tick a box below each question that best represents how you have been.

1. During this semester, about how often did you feel tired for no good reason?
    1. None of the time   2. A little of the time   3. Some of the time 4 . Most of the time
    5. All of the time

2, During this semester, about how often did you feel nervous?
    1. None of the time   2. A little of the time   3. Some of the time 4. Most of the time
    5. All of the time

3. During this semester, about how often did you feel so nervous that nothing could calm you down?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

4. During this semester, about how often did you feel hopeless?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

5. During this semester, about how often did you feel restless or fidgety?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

6. During this semester, about how often did you feel so restless you could not sit still?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

7. During this semester, about how often did you feel depressed?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

8. During this semester, about how often did you feel that everything was an effort?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

9. During this semester, about how often did you feel so sad that nothing could cheer you up?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

10. During this semester, about how often did you feel worthless?
    1. None of the time   2. A little of the time   3. Some of the time   4 . Most of the time
    5. All of the time

APPENDIX H

Permission from author to use Kessler Psychological Distress Scale (K10)

Re: K10 Scale permission request for use

Kessler, Ronald [kessler@hcp.med.harvard.edu]

Sent: Thursday, February 02, 2012 2:39 PM

To: suitor

D you have my permission to use the scale. Ron Kessler

----- Original Message -----
From: suitor [mailto:suitor@ku.edu]
Sent: Thursday, February 02, 2012 02:29 PM
To: Kessler, Ronald
Subject: K10 Scale permission request for use

Dr. Kessler,

My name is Daniel T. Suitor, and I am a doctoral candidate in counseling psychology at the
University of Kansas. I am writing to you to request permission to use your Kessler
Psychological Distress Scale (K10) in my dissertation research. I am specifically looking at the
effect that residence hall capacity has on the level of psychological distress in university
undergraduates, using perceived social support and psychological sense of community as co-
variates.

I am interested in the K10 for its psychometric properties as well as its brevity, coupled with its
use for non-clinical populations.

I appreciate your time and look forward to hearing from you.

Sincerely,

Daniel T. Suitor, MA
Doctoral Candidate ~ Counseling Psychology
University of Kansas

Table 1

Sample Demographics

Variable	N	F	%	M	SD
Age	690			18.86	.965
18		280	40.6		
19		295	42.8		
20		70	10.1		
21		29	4.2		
22		12	1.7		
23		2	0.3		
24		2	0.3		
Gender	690				
Male		202	29.3		
Female		488	70.7		
Race/Ethnicity	690				
Asian		20	2.9		
Black		60	8.7		
Hispanic		20	2.9		
White		553	80.1		
Other		37	5.4		

Note. Frequencies may not add up to 100% due to rounding.

Table 1

Sample Demographics, Continued

Variable	*N*	*F*	*%*	*M*	*SD*
Semesters Completed	690				
Zero		7	1.0		
One		463	67.1		
Two		69	10.0		
Three		76	11.0		
Four		18	2.6		
Five		23	3.3		
Six		12	1.7		
Seven		12	1.7		
Eight		7	1.0		
Nine		1	0.10		
More Than Ten		2	0.30		
Class Standing	690				
Freshman		493	71.4		
Sophomore		117	17.0		
Junior		53	7.7		
Senior		25	3.6		
Graduate Student		2	0.3		

Note. Frequencies may not add up to 100% due to rounding.

Table 1

Sample Demographics, Continued

Variable	*N*	*F*	*%*	*M*	*SD*
Semesters in Campus Housing	690			2.50	1.44
One		58	8.4		
Two		492	71.3		
Three		21	3.0		
Four		68	9.9		
Five		13	1.9		
Six		15	2.2		
Seven		5	0.7		
Eight		15	2.2		
Nine		1	0.1		
More Than Ten		2	0.3		
Lived Previously	690				
Campus Housing		155	22.5		
Off-Campus Apartment		3	0.4		
Off-Campus Private Res. Hall		1	0.1		
At Home		530	76.9		
No Response		1	0.1		

Note. Frequencies may not add up to 100% due to rounding.

Table 1

Sample Demographics, Continued

Variable	*N*	*F*	*%*	*M*	*SD*
Roommates/Suitemates	690			1.85	1.02
One		387	56.1		
Two		43	6.2		
Three		238	34.5		
Four		18	2.6		
Five		4	0.6		
Campus	690				
SW Michigan		306	44.3		
SE Michigan		116	16.8		
EC Kansas		268	38.8		
Hall Capacity	690				
Low		175	25.4		
Medium		296	42.9		
High		219	31.7		

Note. Frequencies may not add up to 100% due to rounding.

Table 2

Correlations, Means, Standard Deviations, and Reliability Coefficients of the Measured Variables (*N* = 690)

Variables	1	2	3
1. SS	-	.12*	-.35**
2. SOC		-	-.20**
3. PD			-
M	5.64	3.20	22.6
SD	.82	.75	6.18
Alpha	.90	.90	.87

Note: SS = Perceived Social Support Scale; SOC = Collegiate Psychological Sense of Community; PD = K-10 Psychological Distress Scale

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

Table 3

Means and Standard Deviations of Scores on Social Support Measure as a Function of Demographic Variables (*N* = 690)

Variables	n	M	SD	CI 95%
Age				
18	280	5.64	.85	[5.54, 5.74]
19	295	5.64	.77	[5.56, 5.67]
20	70	5.68	.97	[5.45, 5.91]
21	29	5.38	.75	[5.09, 5.66]
22	12	5.62	.55	[5.27, 5.97]
23	2	6.13	.29	[3.48, 8.77]
24	2	5.71	1.00	[-3.29, 14.71]
Gender				
Male	202	5.37	.86	[5.25, 5.49]
Female	488	5.74	.78	[5.67, 5.81]
Race				
Asian	20	5.48	1.00	[5.01, 5.95]
Black	60	5.26	.94	[5.02, 5.51]
Hispanic	20	5.79	.98	[5.33, 6.25]
White	553	5.68	.78	[5.62, 5.75]
Other	37	5.53	.88	[5.24, 5.83]
Class Standing				
Freshman	493	5.64	.81	[5.57, 5.72]
Sophomore	117	5.56	.88	[5.40, 5.72]
Junior	53	5.73	.83	[5.50, 5.96]
Senior	25	5.60	.69	[5.32, 5.89]
Graduate	2	5.50	.71	[-.85, 11.85]
Roommates				
One	387	5.67	.84	[5.59, 5.75]
Two	43	5.48	.78	[5.24, 5.72]
Three	238	5.62	.79	[5.52, 5.73]
Four	18	5.26	.71	[4.91, 5.62]
Five	4	6.17	.67	[5.10, 7.23]
Campus				
SE Michigan	116	5.51	.88	[5.35, 5.67]
SW Michigan	306	5.72	.77	[5.63, 5.80]
EC Kansas	268	5.60	.84	[5.50, 5.70]
Hall Capacity				
Low	175	5.70	.73	[5.59, 5.81]
Medium	296	5.60	.83	[5.51, 5.70]
High	219	5.63	.86	[5.51, 5.74]

Table 4

Means and Standard Deviations of Scores on Sense of Community Measure as a Function of Demographic Variables (*N* = 690)

Variables	n	M	SD	CI 95%
Age				
18	280	3.04	.76	[2.95, 3.13]
19	295	3.21	.71	[3.13, 3.29]
20	70	3.47	.67	[3.31, 3.63]
21	29	3.50	.80	[3.20, 3.81]
22	12	3.57	.75	[3.09, 4.04]
23	2	4.29	.00006	[4.28, 4.30]
24	2	4.10	.25	[1.84, 6.37]
Gender				
Male	202	3.50	.61	[3.41, 3.58]
Female	488	3.07	.76	[3.00, 3.13]
Race				
Asian	20	3.25	.87	[2.85, 3.65]
Black	60	3.12	.74	[2.93, 3.31]
Hispanic	20	3.18	.80	[2.81, 3.55]
White	553	3.19	.75	[3.13, 3.26]
Other	37	3.25	.71	[3.01, 3.48]
Class Standing				
Freshman	493	3.12	.74	[3.06, 3.19]
Sophomore	117	3.26	.76	[3.12, 3.40]
Junior	53	3.45	.73	[3.25, 3.65]
Senior	25	3.66	.61	[3.41, 3.92]
Graduate	2	3.82	.66	[-2.08, 9.72]
Roommates				
One	387	3.09	.74	[3.01, 3.16]
Two	43	3.26	.87	[3.00, 3.53]
Three	238	3.43	.71	[3.25, 3.43]
Four	18	3.25	.70	[2.90, 3.59]
Five	4	3.21	.80	[1.95, 4.48]
Campus				
SE Michigan	116	3.22	.70	[3.09, 3.35]
SW Michigan	306	2.99	.75	[2.91, 3.08]
EC Kansas	268	3.41	.71	[3.32, 3.49]
Hall Capacity				
Low	175	3.30	.77	[3.19, 3.42]
Medium	296	3.25	.72	[3.16, 3.33]
High	219	3.03	.75	[2.93, 3.13]

Table 5

Means and Standard Deviations of Scores on Psychological Distress Measure as a Function of

Demographic Variables (*N* = 690)

Variables	*n*	M	SD	CI 95%
Age				
18	280	23.16	6.21	[22.42, 23.90]
19	295	23.46	6.20	[21.75, 23.17]
20	70	21.70	5.84	[20.31, 23.09]
21	29	22.38	5.88	[20.14, 24.62]
22	12	16.75	5.31	[13.38, 20.12]
23	2	20.50	0.71	[14.15, 26.85]
24	2	27.00	2.83	[1.58, 52.41]
Gender				
Male	202	22.66	6.44	[21.77, 23.56]
Female	488	22.53	6.07	[21.99, 23.07]
Race				
Asian	20	22.60	5.38	[20.08, 25.12]
Black	60	24.32	5.60	[22.87, 25.76]
Hispanic	20	23.85	7.61	[20.29, 27.41]
White	553	22.36	6.17	[21.85, 22.88]
Other	37	22.11	6.60	[19.91, 24.31]
Class Standing				
Freshman	493	23.05	6.25	[22.50, 23.60]
Sophomore	117	21.32	5.67	[20.29, 22.36]
Junior	53	22.08	5.45	[20.57, 23.58]
Senior	25	19.92	7.18	[16.96, 22.88]
Graduate	2	23.00	8.49	[-53.24, 99.24]
Roommates				
One	387	22.8	5.97	[22.16, 23.35]
Two	43	21.5	6.79	[19.40, 23.58]
Three	238	22.4	6.42	[21.56, 23.20]
Four	18	23.8	6.35	[20.62, 26.93]
Five	4	22.0	4.40	[15.00, 29.00]
Campus				
SE Michigan	116	22.9	6.98	[21.66, 24.23]
SW Michigan	306	23.2	5.93	[22.52, 23.85]
EC Kansas	268	21.7	6.02	[20.98, 22.42]
Hall Capacity				
Low	175	22.5	6.24	[21.58, 23.45]
Medium	296	22.1	6.11	[21.41, 22.80]
High	219	23.2	6.19	[22.42, 24.07]

Table 6

Differences in Sense of Community Measure as a function of Residence Hall Capacity, One-Way Analysis of Variance (*N* = 690)

	n	*M*	*SD*	SE	95% CI
Residence Hall Capacity					
Low	175	3.30	.77	.06	[3.19, 3.42]
Medium	296	3.25	.72	.04	[3.16, 3.33]
High	219	3.03	.75	.05	[2.93, 3.13]

	SS	*df*	*MS*	F	η^2	p
Sense of Community						
Between Groups	8.49	2	4.25	7.75**	.15	.00**
Within Groups	376.61	687	.55			
Total	385.10	689				

*p<.05, **p < .001

Table 7

Results of Differences in Residence Hall Capacity on Social Support Measure, One-Way Analysis of Variance (*N* = 690)

	n	*M*	*SD*	SE	95% CI
Residence Hall Capacity					
Low	175	5.70	.73	.06	[5.60, 5.81]
Medium	296	5.60	.83	.05	[5.61, 5.70]
High	219	5.62	.86	.06	[5.51, 5.73]

	SS	*df*	*MS*	F	η^2	p
Social Support						
Between Groups	1.17	2	.59	.88	.05	.42
Within Groups	460.58	687	.670			
Total	461.76	689				

*p< .05, **p< .01

Table 8

Intercorrelations Among Social Support, Sense of Community, Psychological Distress, Hall Capacity, and Covariates (N=690).

Correlation	White v. Asian	White v. Black	White v. Hispanic	White v. Other	ECK v. SEM	ECK v. SWM	SS	SOC	PD	High v. Low	High v. Med.
Gender	.12**	-.04	.003	.03	.05	-.25***	-.21***	.26***	.01	.04	.11**
Race											
White v. Asian	---	-.05	-.03	-.04	-.03	-.10**	-.03	.13	.001	.06	-.06
White v. Black		---	-.05	-.07*	.10**	.05	-.14***	-.03	.09*	-.10**	-.02
White v. Hispanic			---	-.04	-.03	.002	.03	-.003	.04	-.02	-.05
White v. Other				---	-.04	-.10**	-.03	.02	-.02	-.11**	.04
Campus											
ECK v. SEM					---	-.40***	-.07*	.02	.03	-.10**	-.12**
ECK v. SWM						---	.09*	-.24***	.09*	.06	-.07*
SS							---	.12**	-.35***	.05	-.04
SOC								---	-.20***	.09*	.06
PD									---	-.01	-.07*
Hall Capacity											
High v. Low										---	-.51***
High v. Med.											---

Note. ECK = East Central Kansas; SEM = Southeast Michigan; SWM = Southwest Michigan; SS = Social Support Scale; SOC = Sense of Community Scale; PD = Psychological Distress Scale

*p<.05; **p<.01; ***p<.001

Table 9

Summary of Regression Analysis for Social Support, Sense of Community, Residence Hall Capacity and Controlled Variables Predicting Psychological Distress (N = 690)

Step and Predictor Variable	R^2	ΔR^2	B	SE B	β	t	p	B 95% CI
Step 1	.02*	.02*						
Gender			.512	.53	.04	.97	.333	[-.53, 1.57]
Race								
White x Asian			.63	1.42	.02	.44	.657	[-2.15, 3.41]
White x Black			1.75	.84	.08*	2.08	.038*	[.10, 3.40]
White x Hispanic			1.57	1.40	.043	1.12	.263	[-1.18, 4.31]
White x Other			.111	1.05	.004	.106	.916	[-1.95, 2.18]
Campus								
ECK x SEM			1.16	.69	.07	1.67	.095	[-.20, 2.52]
ECK x SWM			1.56	.54	.13*	2.89	.004*	[.50, 2.61]
Step 2	.14**	.12**						
Gender			-.46	.51	-.03	-.90	.369	[-1.46, .543]
Race								
White x Asian			.41	1.33	.01	.31	.756	[-2.20, 3.02]
White x Black			.58	.80	.03	.73	.466	[-.984, 2.15]
White x Hispanic			1.87	1.31	.05	1.42	.155	[-.71, 4.44]
White x Other			-.21	.99	-.01	-.21	.831	[-2.15, 1.73]
Campus								
ECK x SEM			.96	.65	.06	1.43.	.14	[-.32, 2.24]
ECK x SWM			1.68	.51	.14**	3.32	.001**	[.69, 2.67]
Social Support			-2.71	.28	-.36	-9.76	.000**	[-3.26, -2.17]

Note. ECK = East Central Kansas; SEM = Southeast Michigan; SWM = Southwest Michigan

*p< .05; ** p< .01

Table 9

Summary of Regression Analysis for Social Support, Sense of Community, Residence Hall Capacity and Controlled Variables Predicting Psychological Distress (N = 690), Continued

Step and Predictor Variable	R^2	ΔR^2	B	SE B	β	t	p	B 95% CI
Step 3	.16**	.02**						
Gender			.001	.52	.00	.001	1.00	[-1.03, 1.03]
Race								
White x Asian			.24	1.32	.006	.18	.86	[-2.35, 2.83]
White x Black			.65	.79	.03	.82	.41	[-.90, 2.20]
White x Hispanic			1.81	1.30	.05	1.40	.17	[-.75, 4.36]
White x Other			-.25	.98	-.01	-.25	.80	[-2.17, 1.67]
Campus								
ECK x SEM			.78	.65	.05	1.21	.23	[-.49, 2.05]
ECK x SWM			1.30	.51	.10*	2.53	.012*	[.29, 2.30]
SS			-2.52	.28	-.33**	-8.97	.00**	[-3.07, -1.97]
SOC			-1.11	.31	-.13**	-3.53	.00**	[-1.73, -.49]
Step 4	.16	.003						
Gender			.08	.53	.01	.14	.89	[-.96, 1.11]
Race								
White x Asian			.05	1.32	.001	.04	.97	[-2.55, 2.65]
White x Black			.64	.80	.30	.80	.42	[-.93, 2.20]
White x Hispanic			1.70	1.31	.05	1.30	.20	[-.88, 4.25]
White x Other			-.25	.99	-.01	-.25	.80	[-2.18, 1.70]
Campus								
ECK x SEM			.60	.67	.04	.90	.37	[-.71, 1.91]
ECK x SWM			1.21	.52	.10*	2.34	.02*	[.20, 2.22]
SS			-2.53	.28	-.34**	-9.00	.00**	[-3.10, -1.98]
SOC			-1.10	.32	-.13**	-3.50	.00**	[-1.72, -.48]
Hall Capacity								
High x Medium			-.72	.54	-.06	-1.35	.18	[-1.78, .33]
High x Low			-.09	.61	-.01	-.14	.89	[-1.30, 1.11]

Note. SS = Social Support; SOC = Sense of Community; ECK = East Central Kansas; SEM = Southeast Michigan; SWM = Southwest Michigan

*p < .05; **p < .01

Table 10

ANOVA Summary of Regression Analysis for Social Support, Sense of Community, Residence Hall Capacity and Controlled Variables Predicting Psychological Distress (N = 690)

Model		SS	df	MS	F	p
1	Regression	576.73	7	82.39	2.18	.034*
	Residual	25732.43	682	37.73		
2	Regression	3734.61	8	466.83	14.08	.000**
	Residual	22574.55	681	33.15		
3	Regression	4140.99	9	460.11	14.11	.000**
	Residual	22168.17	680	32.60		
4	Regression	4216.11	11	383.28	11.76	.000**
	Residual	22093.05	678	32.59		

*p < .05; **p< .001

Table 11

Correlations of the Demographic Questions with the Dependent Variable (Psychological Distress Scale) (N = 690).

Variable	Psychological Distress Scale
Age	-.102**
Gender	.010
Race	.001
Semesters Completed	.069*
Class Standing	-.114**
Semesters in Housing	-.139**
Number of Roommates	-.018
Campus	-.091**
Hall Capacity	.049

*p < .05; **p < .01

APPENDIX J

Figures

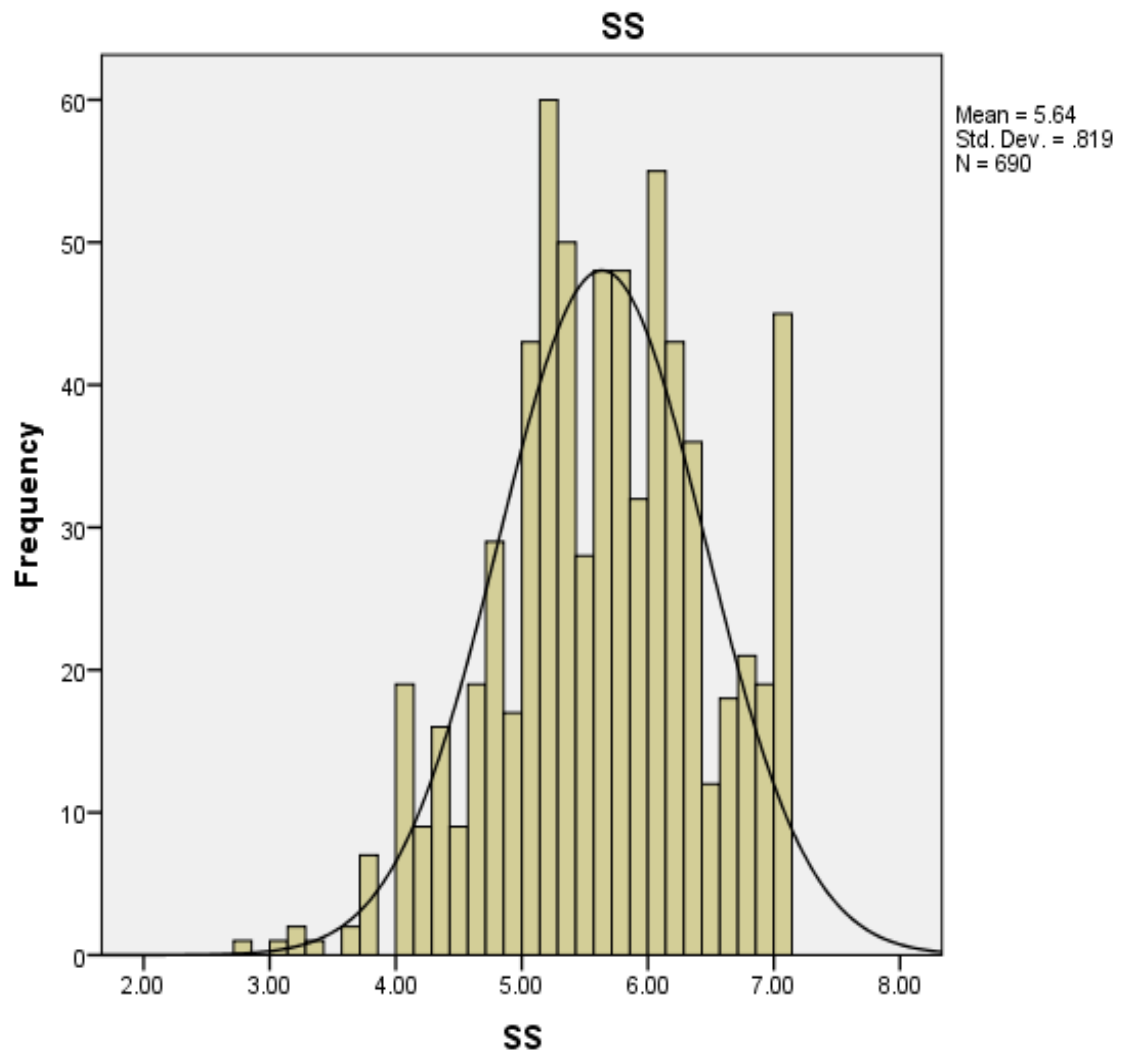*Figure 1. Distribution of Social Support (SS) Totals.*
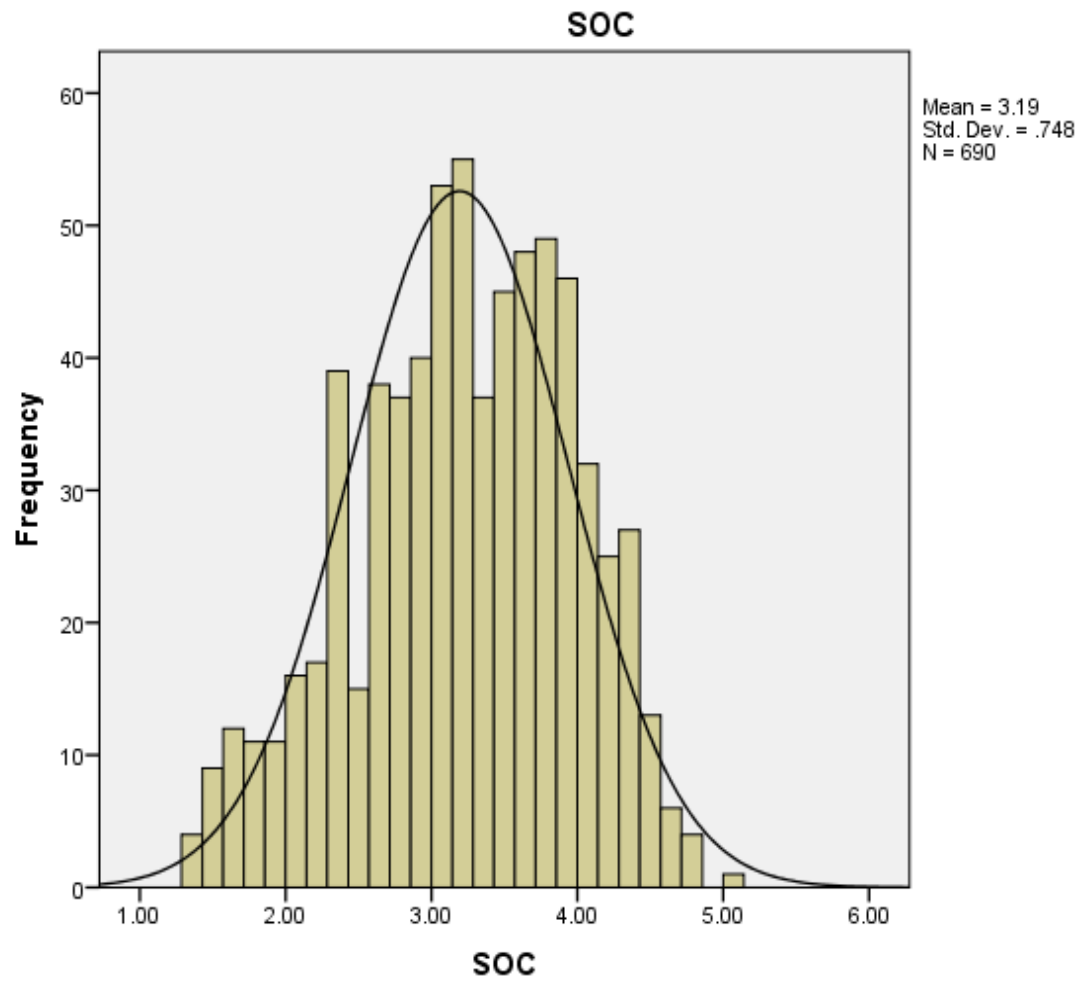
Figure 2. Distribution of Sense of Community (SOC) Totals.

Figure 3. Distribution of Psychological Distress (PD) Totals.

DISTRESS

Mean = 22.57
Std. Dev. = 6.179
N = 690