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Effects of High Proximity Living Accommodations on the Stress Levels and Self-Perceptions of College Students Living in Residence Halls at Western Kentucky University

Aaron W. Hughey

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EFFECTS OF HIGH PROXIMITY LIVING ACCOMMODATIONS
ON THE STRESS LEVELS AND SELF-PERCEPTIONS
OF COLLEGE STUDENTS LIVING IN RESIDENCE HALLS
AT WESTERN KENTUCKY UNIVERSITY

A Thesis
Presented to
the Faculty of the Department of Educational Leadership
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the
Specialist in Education Degree

by
Aaron Wilson Hughey
August 1983
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ON THE STRESS LEVELS AND SELF-PERCEPTIONS
OF COLLEGE STUDENTS LIVING IN RESIDENCE HALLS
AT WESTERN KENTUCKY UNIVERSITY

Recommended May 6, 1983

Thomas L. Updike, Jr.
Chairman of Specialist Project

Approved May 17, 1983

Elmer Gray
Dean of the Graduate College
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Appreciation is also extended to Mr. Howard Bailey, Assistant Dean of Student Affairs. His support contributed to the viability of the study in numerous ways.

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EFFECTS OF HIGH PROXIMITY LIVING ACCOMMODATIONS ON THE STRESS LEVELS AND SELF-PERCEPTIONS OF COLLEGE STUDENTS LIVING IN RESIDENCE HALLS AT WESTERN KENTUCKY UNIVERSITY

Aarcn Hughey August 1983 62 pages
Directed by: T. L. Updike, S. B. Schnacke, C. W. Kreisler
Educational Leadership Department, Western Kentucky University

Selected occupants of University residence hall rooms accommodating three students in a physical facility originally designed for only two occupants were compared to selected occupants of rooms accommodating two residents in a physical facility originally designed for two occupants. They were compared along two psychological dimensions: frustration (stress) and self-perception. Both groups responded to an instrument package consisting of The Student Life Event Questionnaire, The Self-Perception Assessment, and The Frustration Assessment. These instruments were designed to measure relative stress levels and relative strengths of self-perception.

The returned instrument packages were scored and a comparison was made between the two groups through a series of t tests. The possible relationship between stress and self-perception was assessed through use of the Pearson r.

There was no statistically significant difference in the mean scores reported by the two groups on The Student Life Event Questionnaire at the .01 level of significance.
A statistically significant difference was found to exist between the scores reported by the two groups on The Self-Perception Assessment at the .01 level of significance. The triple-occupancy group demonstrated a characteristically lower strength of self-perception. A statistically significant difference was also found to exist between the scores reported by the two groups on The Frustration Assessment at the .01 level of significance. The triple-occupancy group demonstrated a characteristically higher level of stress as exhibited through frustration.

Pearson r correlation coefficients revealed that the scores reported by both groups on The Self-Perception Assessment and The Frustration Assessment were not related to any meaningful extent. For the entire sample, the correlation coefficient was .021.

Based on these considerations, the recommendation was made that colleges and universities refrain from assigning three students into a physical facility designed for only two occupants. Reasons for this recommendation included the demonstrated detrimental effects of such an arrangement on the personal, social, emotional and educational well-being of the individuals involved.
INTRODUCTION

Purpose of the Study

The decision to assign three residents per room in three residence halls at Western Kentucky University was made primarily to provide on-campus housing for those students requesting it (Osborne, 1982). In essence, it was an administrative decision based on financial considerations and the desire to derive maximum yield from available facilities. No effort was made to examine the possible psychological consequences that this practice could have on the residents involved (Osborne, 1982). The current research project was an attempt to provide some meaningful insight into the various psychological implications of "tripled" room accommodations.

The purposes of the study were twofold. First, the project attempted to examine the possible detrimental effects of high proximity living accommodations on students' overall stress level as manifest through varying degrees of frustration. Second, the project investigated the possible detrimental effects of high proximity living accommodations on students' self-perceptions. It should be noted, however, that no attempt was made to define any
cause-effect relationship which may exist between frustration and self-perception. Such an effort would have required a much more extensive inquiry than was possible within the parameters of the present study. The primary aim of this project was to determine if high proximity living accommodations have adverse psychological effects on students who live in such environments.

Operational Definitions of Terms

**Double-occupancy.** Having two students per room as the normal living arrangement. A double-occupancy room contained two University-assigned residents. A double-occupancy hall contained only double-occupancy rooms.

**Double-occupancy group.** One-hundred and fifty randomly selected occupants of double-occupancy rooms. They were selected from the double-occupancy population.

**Double-occupancy population.** All students at Western Kentucky University who resided in double-occupancy rooms at the time of the study.

**Frustration.** A psychological manifestation as measured by The Frustration Assessment.

**High proximity living accommodations.** Any room in the residence hall system at Western Kentucky University which was originally intended for two occupants, but was modified by the addition of supplemental equipment to accommodate three or more occupants.
Private room. Any room within a residence hall at Western Kentucky University which was occupied by only one student at the time of the study.

Self-perception. A psychological manifestation as measured by The Self-Perception Assessment.

Tripled. Having three students per room as the assigned living arrangement. At Western Kentucky University, these rooms were formerly double-occupancy, but were modified by the addition of extra equipment (bunk beds, dressers, etc.) to accommodate three occupants. A tripled room contained three University-assigned residents. A tripled hall contained predominantly tripled rooms.

Triple-occupancy group. One-hundred and fifty randomly selected occupants of tripled rooms. They were selected from the triple-occupancy population.

Triple-occupancy population. All students who resided in tripled rooms at Western Kentucky University at the time of the study.

Review of the Literature

The present study deals with the concept of "personal space" as it relates to various residence hall living arrangements. Whereas the total number of studies pertaining to the particular subject under consideration has grown to well over 200, a concise explanation of the inter-relationship between personal
space and relative degrees of stress has yet to be proposed (Altman, 1976). Even less effort has been directed toward a concise examination of the possible effects of decreased personal space on the stress levels of college students who live in residence halls.

Evans and Howard (1973) have theorized that personal space is "a mediating cognitive construct which allows human organisms to operate at acceptable stress levels" (p. 334). Although their theory does not proceed very far beyond this general statement, a prediction which extends logically from it is that people who are in situations which restrict personal space will tend to exhibit higher stress levels than those who are in less-restrictive situations.

A majority of the current research in the area of personal space has concentrated on examining the stress produced by violations of an individual's personal space or by interaction with another person who is perceived as being a "stressor" (Long, Selby and Calhoun, 1980). When an individual's personal space has been "invaded" by another human being, the individual will typically attempt to increase the physical distance between the two parties involved. Furthermore, when an individual interacts with a stress-producing other, such interaction is almost always conducted at a greater distance than would otherwise be the case (Sommer, 1969). It has also been demonstrated that increased anxiety, which
can be viewed as the internalized product of a stressful situation, generally reduces the desire to be in close contact with others (Freedman, Sears and Carlsmith, 1978). Indeed, a distinct relationship between anxiety and desired affiliation has been well documented (Schachter, 1959).

One interesting way of conceptualizing stress reactions is through psychosocial theory. According to this particular theoretical orientation, psychosocial stressors originate as the result of a complex interaction between socialization and perception processes. Stated more directly, the psychosocial approach to stress emphasizes sociological events which are perceived as being undesirable based upon past experiences or other learning avenues (Girdano and Everly, 1979).

The primary psychosocial process associated with stress is the manifestation of a psychological entity known as frustration. Frustration is said to occur when an individual is prevented from actualizing certain tendencies. The ability to deal with frustration is, to an extent, a function of the adaptive capacity of the particular individual (Ruff and Korchin, 1967). Regardless of varying capacities, however, all human beings have specific drives which must be fulfilled periodically. These tendencies constitute behaviors which "need" to be performed or goals which "need" to be attained. From an emotional standpoint, people
respond to frustration with expressions of anger and aggression, and with specific internalized responses which can be detrimental to the organism from a physiological perspective (Selye, 1980).

Frustration is a reliable indicator of stress (Arnold, 1967). Furthermore, frustration can occur in a variety of settings that are common to everyday experience or it can evolve from rather unique circumstances. Indications are, however, that the stress reaction which is precipitated through frustration is relatively the same regardless of origin (Saegert, Mackintosh and West, 1976). The degree may fluctuate, but not the essentials of the reaction itself.

As alluded to previously, frustration can be viewed as a consequence of "blocked task completion." The blockage may have many causes, but the end result remains the same. The individual is inhibited (blocked) from engaging in behaviors which would precipitate need reduction.

One of the most significant causes of blocked task completion centers around the concept of "overloading" (Weitz, 1970). According to Weitz, overloading exists when the organism attempts to deal with too many variables concurrently. In the struggle to accomplish many tasks, very few are actually realized. Overloading can lead directly to the frustration reaction (Weitz, 1970).
Perhaps the most instrumental factor related to overloading is the concept of "overcrowding." Freedman (1975) has defined crowding as the "perception" of being crowded in relation to a space allotted per organism ratio. Implied in this definition is the notion that an individual's perception of a given situation determines whether or not crowding actually exists. Thus, if the perception of overcrowding exists, then overcrowding genuinely exists. The psychosocial stressor is present and therefore the response can be expected to follow.

Confinement through physical restraint has long been utilized as a major variable in stress-related studies (Weitz, 1970). The idea of physical restraint, though, is not always a clearly defined concept. Different people react to varying levels of restraint in equally varying degrees. Such a viewpoint inherently suggests a subjective interpretation of what is considered "restraining." Personal attributes, such as the individual's personal space requirements, have been shown to influence the experience of crowding (Dooley, 1974). Furthermore, the two fundamental components of density, the number of people and the amount of available space per person, may create divergent psychological effects (Saegert, 1973). Such effects can also interact to form a perception of restraint which may or may not be viable from an objective standpoint.
Experimentally, overcrowding has been demonstrated to be highly detrimental to many different varieties of animals. Researchers at the National Institute of Mental Health (1969) have found that there is abundant evidence that among animals, at least, crowded living conditions and their immediate consequence impose a stress that can lead to abnormal behavior, reproductive failure, sickness, and even death. (p. 3)

Calhoun (1962) has demonstrated that high density rat populations adequately supplied with resources come to behave in antisocial ways, show signs of physiological disturbance, and display frequent deviant sexual and maternal behavior.

These findings have aroused much speculation about the possible effects of increased density (overcrowding) on humans. However, it must be noted that similar detrimental effects have not been documented as thoroughly as has been the case with lesser life forms. Studies such as those by Loring (1956) and Schmitt (1966) suggest an association between high proximity living and various social and physiological pathologies. In laboratory studies of overcrowding, Hutt and Vaizey (1966) and Griffitt and Veitch (1971) found that when room size was kept constant, larger groups of subjects behaved in a more antisocial fashion.

Similarly, studies of crowding in penitentiaries...
have found that inmates who are confined to cells with many other prisoners exhibit higher blood pressure levels than those in less crowded cells (Girdano and Everly, 1979). Obviously, the highly crowded cells create an atmosphere of insecurity and depersonalization which is more frustrating than the atmosphere present in less crowded cells (Girdano and Everly, 1979).

The complexities associated with human beings have made it extremely difficult to ascertain specific causative elements with respect to the psychophysiological aspects of crowding. The lack of a sufficiently detailed theoretical model, however, does not prohibit a speculative investigation of the crowding response. Within the context of this study, it was considered acceptable to assume that when individuals feel frustrated due to overcrowding, similar stress reactions occur (Tanner, 1976; Singer, 1975).

When more people are added to a given environment, the cognitive complexity of the situation is potentially greater because there are more variables and quite often more uncertainty about the behaviors and motives of the involved parties (Saegert, Mackintosh and West, 1976). Milgram (1970) has termed such an environment an "overload situation" in that the individual is confronted with more information than can be successfully processed. Overload situations can lead to feelings of inadequacy on the part of the affected individual,
resulting in further negative psychological consequences.

These considerations bring another aspect of frustration as a psychological stressor into focus. Overcrowding may also adversely influence an individual's self-perception. Self-perception, or self-concept, refers to the image that an individual has of him or herself. Psychologists have long viewed self-perception as perhaps the single most influential factor in determining behavior (Girdano and Everly, 1979).

Lazarus (1966) has theorized that the stronger the self-perception, the less susceptible the individual will be to stress-inducing situations. The greater the degree to which persons perceive themselves as being in control of a given situation, the less severe will be their stress response.

Ruff and Korchin (1967) have stated that higher, more stable self-perceptions lead to greater overall competence and better adaptive capability. They (Ruff and Korchin) additionally assert that people who have strong self-perceptions seem to have a more successful life orientation. It would appear, then, that self-perception is basic to higher levels of functioning. If self-perception is maintained intact, it should follow that the individual will be better able to cope with stress-inducing variables such as overcrowding.

Interaction between all of these variables has yet to be satisfactorily explored. As of yet, there has been
almost no definitive research into the possible connection between self-perception and frustration level as they both relate to high proximity living accommodations. Does exposure to such an environment increase the level of frustration (stress) in college students who live in residence halls? Does exposure to a high proximity living arrangement tend to retard self-perception among those exposed to the situation? The present study purported to provide some meaningful insights into these problems through an investigation of the issue within the college setting at Western Kentucky University.

Statement of the Hypothesis

The following hypothesis was utilized for testing purposes within the context of the current project:

Students residing in triple-occupancy room accommodations which were originally designed for double-occupancy will exhibit higher levels of frustration (stress) and lower self-perceptions than students who reside in double-occupancy room accommodations which were designed for double-occupancy.

Conversely, the null hypothesis tested during the course of the current study read as follows:

There is no significant difference in the levels of frustration (stress) and self-perceptions of students living in triple-occupancy room accommodations which were...
originally designed for double-occupancy and those living in double-occupancy room accommodations which were designed for double-occupancy.
METHOD

The procedures which were utilized within the context of the project were specifically designed to produce data that are both accurate and reliable from a scientific perspective. Careful attention was given to every detail in order to maximize the overall generalizability of the results attained. The selection of both the triple-occupancy group and the double-occupancy group was accomplished in a random manner, thus helping to insure that the two sample groups were characteristically representative of the populations from which they were drawn. Similarly, the instruments selected for use in the project were equally reliable. All three instruments have been shown to yield viable data in a multiplicity of experimental situations.

Subjects

Participants in the study were selected from an initial population consisting of all students at Western Kentucky University who resided in on-campus housing facilities during the week of October 4-8, 1982. This initial population consisted of approximately 5,400 students and included all students who were living in University-maintained residence halls.
during the seventh week of Fall Semester 1982. For the intent and purpose of the present project, a sample size of 300 was deemed appropriate. Such a sample size represented approximately 5.5 percent of the total target population. Of these 300 subjects, 150 were selected to constitute the double-occupancy group, and 150 were selected to form the triple-occupancy group.

Before proceeding with an indepth description of how the selection process was instituted, it should be noted that individuals who lived in the residence halls at Western Kentucky University at the time of the study had a moderate amount of input regarding where their particular room assignments were located. Many of the residents in both double-occupancy and triple-occupancy halls were in an assignment which complemented their desires and needs at that time. Other occupants, however, were living in a residential arrangement which was not their first or second personal preference. Therefore, the possibility exists that the double-occupancy population and the triple-occupancy population adhered to divergent sets of psychological descriptors. Such a difference in psychological profile has not been demonstrated, and subsequent speculation of such a variety was not perceived as being a threat to the validity of the project.
The triple-occupancy group consisted of occupants of tripled rooms in Florence Schneider, North, and East Halls. These are the only three residence halls at Western Kentucky University that housed three students per room at the time of the study. Within these three buildings, approximately 740 students were residentially maintained. North and East Halls were occupied exclusively by males, whereas Florence Schneider Hall was occupied only by females. Overall, the triple-occupancy population consisted of 493 males and 230 females.

Through consultation with various authoritative resources in the area of research design (Gay, 1976; Champion, 1975), it was determined that a triple-occupancy group of 150 subjects would be needed in order to reflect an accurate representation of the total triple-occupancy population. Such a sample size constituted approximately 20 percent of the tripled population at Western Kentucky University.

Likewise, the double-occupancy group was made up of occupants of double-occupancy rooms throughout the remaining 14 residence halls on campus. Residents of private rooms -- that is, students assigned to either a double-occupancy or a triple-occupancy room, but without any roommates -- were exempted from the study. The availability of computer-generated rosters for each residence hall made the elimination of residents who were assigned to private rooms possible with
only a minimal amount of effort. A total of 150 students were involved in the double-occupancy group, a number equivalent to that selected for the triple-occupancy group.

Procedures utilized for random selection of both the triple-occupancy group and the double-occupancy group were modified from those described by Gay (1976). Random selection of the triple-occupancy group was accomplished in the following manner: Three cards were constructed for each tripled room in each of the three tripled halls. Since the sleeping arrangement in a tripled room involved the use of a bunk bed and a single bed, the three occupants of each room were designated as either "Left," "Right," or "Top." When the labeling process was completed, each room had three cards inscribed as such: "N325L," "N325R," and "N325T." (In this particular example, the "N" stood for "North Hall.") The same procedure was carried out for every tripled room on campus. When finished, a pool of 723 cards was generated.

From this initial pool, 150 cards were drawn in order to constitute the triple-occupancy group. Each time a card was drawn, its particular designation was noted; then it was placed back into the pool. By following this procedure repeatedly, each card always had a statistically equal chance of being selected. Furthermore, all 723 cards were mixed after each drawing, allowing for maximum randomness to be approximated.
Random selection of the double-occupancy group was accomplished in a somewhat similar manner. Of the 4,657 students residing in double-occupancy halls at the time of the study, only 4,493 were actually living in a double-occupancy arrangement. This difference can be attributed to two primary factors. First, some students had acquired private rooms by agreeing to pay an additional housing fee (Osborne, 1982). Second, paraprofessional student staff members were allowed to reside in private rooms, provided that enough space was available to permit an arrangement.

For a population size of 4,493, it was not feasible to construct cards for each applicable room as was done with the triple-occupancy group. Therefore, an alternate procedure was utilized that allowed for selection to be made through the use of four sets of cards. Set One contained 14 cards, each imprinted with the name of one of the 14 double-occupancy residence halls on campus. Throughout the selection process used to determine the 150 members of the double-occupancy group, an initial card was always drawn from Set One.

Set Two contained cards used for the determination of specific floor designations. It consisted of ten cards, each imprinted with a number ranging from one to ten. These numbers represented the various floors of the hall chosen by using Set One. For example, if
Central Hall was selected from Set One, and "7" was selected from Set Two, then the particular subject to be selected for participation in the study would be found on the seventh floor of Central Hall.

Set Three contained 23 cards, each imprinted with a number ranging from 3 to 26, with the exception of 13. These numbers corresponded to the 23 student-occupied floors in Pearce-Ford Tower. If Pearce-Ford Tower were selected in the initial drawing, Set Three was used to determine a specific floor designation.

Finally, a fourth set of cards was utilized to make specific room and resident selections. Set Four consisted of 92 cards labeled with a room designation of 1 through 46, and a further distinguishing label of either "L" (for Left) or "R" (for Right). Once a particular hall and a particular floor were determined, a final drawing was made from Set Four in order to determine the specific occupant of the specific room selected. A typical selection follows:

Drawing from Set One .............. Bates-Runner
Drawing from Set Two .............. "5"
Drawing from Set Four ............. "16 - R"

The subject selected for the double-occupancy group from this drawing was the person who lived on the right side of room 516 in Bates-Runner Hall.

Since the double-occupancy halls are not consistent with reference to the number of floors per building or
the number or rooms per floor, if a non-existent selection was made, it was discarded and the process was continued until 150 actual residents were selected. Although somewhat complicated to describe, the selection system was considered adequate for the intent and purpose of the current study. Admittedly, the selection process was not purely random from a statistical viewpoint. However, the systematic selection procedure utilized was not likely to produce sampling bias (Gay, 1976). The exact composition of the four sets of cards can be found in Appendix A.

Instruments

The instrument package utilized for the study consisted of three separate assessment subunits: (1) The Student Life Event Questionnaire, (2) The Self-Perception Assessment, and (3) The Frustration Assessment. Within each instrument package, these three subunits were presented as a continuous questionnaire under the title of "The American College Student Profile." This particular title was selected in an attempt to minimize any bias that may have resulted from exposure to the nomenclature originally associated with the instruments. A copy of the three instruments utilized during this project, along with the scoring procedures for each instrument, can be found in Appendix B. Also, a copy of the actual instrument package, along with the cover letter that accompanied it, can be seen in Appendix C.

The Student Life Event Questionnaire was developed
by Holmes and Rahe (1967) as a means of broadly measuring the levels of stress an individual may be experiencing at any given point in life. A modified form of the instrument was used within the context of the current study. However, it must be noted that these modifications in no way affect the qualitative functions of the instrument (Girdano and Everly, 1979).

The Student Life Event Questionnaire assigns numerical values to various "life events" that can frequently occur in the lives of college students. Using this strategy, it is then possible to derive an individual stress factor for each subject. Within the actual instrument package, these numerical values were omitted. From a psychological perspective, the Student Life Event Questionnaire was used in an effort to identify any intervening variables which may have been influencing the self-perception and frustration levels of the subject at the time of the study.

The Self-Perception Assessment is a brief instrument developed by Girdano and Everly (1979) in order to measure relative differences in self-perception. It consists of ten multiple-choice questions which are structured in a similar fashion and scored in concordance with a standardized scale. The instrument is used to identify strong, moderate and weak self-perceptions. The Self-Perception Assessment has been demonstrated to be both reliable and valid in a
variety of experimental studies (Girdano and Everly, 1979; Geer, Davidson and Gatchell, 1980).

The Frustration Assessment is another brief instrument developed by Girdano and Everly (1979) in order to measure stress level as induced through frustration. It likewise consists of ten items and is scored in a manner similar to The Self-Perception Assessment. Through use of The Frustration Assessment, researchers can ascertain stress levels ranging from low to high on a relatively broad scale. The most extensive use of the instrument has been by Girdano and Everly. They have utilized The Frustration Assessment in numerous studies dealing with stress management. Girdano and Everly state that the instrument reveals "a realistic profile of relative stress levels" (p. 66).

All three of these instruments were selected because of their ease of administration and their ability to measure self-perception and frustration without significantly affecting either entity. All three instruments tend to achieve their designed purposes in a very efficient manner. Instruments which are longer or more complicated can sometimes intimidate the subject and thus cause the development of unwanted bias.

**Distribution and Rate of Return**

Once the selection process for both the triple-occupancy group and the double-occupancy group had
been completed, the instrument packages were assembled and prepared for distribution to the individual subjects. The packages were arranged by hall and then placed in envelopes which specified their various destinations. Each bundle of instrument packages was then hand delivered to the Residence Hall Director responsible for the designated building.

All instrument packages were hand delivered to the appropriate residents by the Hall Directors between the hours of 12 noon and 12 midnight on October 4, 1982. At that time, the Hall Directors informed the subjects that the completed questionnaires were to be returned to them, in person, by 12 midnight on October 6, 1982. In actuality, instrument packages that were returned by 12 midnight on October 8, 1982, were considered appropriate for use in the project. Such a personalized approach to the distribution of the instrument packages was considered advantageous from a return rate perspective.

The pattern of distribution and the rate of return for each specified subgroup can be seen in Table 1.
Table 1
Total Number and Percentage of Instrument Packages
Distributed and Returned by Group

<table>
<thead>
<tr>
<th>Group</th>
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<th>Double-occupancy</th>
<th>Triple-occupancy</th>
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<td></td>
<td>m</td>
<td>f</td>
<td>t</td>
</tr>
<tr>
<td>Number distributed</td>
<td>67</td>
<td>83</td>
<td>150</td>
<td>76</td>
</tr>
<tr>
<td>Number returned</td>
<td>48</td>
<td>71</td>
<td>119</td>
<td>59</td>
</tr>
<tr>
<td>Return percentage</td>
<td>72</td>
<td>86</td>
<td>79</td>
<td>78</td>
</tr>
</tbody>
</table>

Note. m = male
f = female
t = total
RESULTS

For the 227 instrument packages which were returned by the participating subjects, raw scores were computed for each of the three separate instruments: The Student Life Event Questionnaire, The Self-Perception Assessment, and The Frustration Assessment. A detailed listing of these raw scores is available on request from the researcher.

Once the raw scores were assimilated into a manageable form, two different statistical procedures were applied to the data derived through the current project. First, the scores on all three instruments for the double-occupancy group and the triple-occupancy group were compared to see if they are statistically different using a series of \( t \) tests. Second, the scores on The Self-Perception Assessment and The Frustration Assessment were tested for degree of association using the Pearson \( r \) (product-moment correlation coefficient). The following section of this report presents the results of these statistical procedures with only a preliminary discussion of their meaning in relation to the overall project. A more detailed interpretation of the results and their various implications will be presented in Chapter 4.
**t test Administration**

A preliminary statistical profile of the data was constructed in order to formulate a mathematical description of the various sets of scores for all three instruments. Such a profile was deemed appropriate before the data could be subjected to a series of t tests. The details of this statistical analysis can be seen in Table 2, Table 3, and Table 4.

Using the descriptive statistical data contained in Table 2, Table 3, and Table 4, a series of t tests were performed in order to determine if the three sets of scores differ to a statistically significant extent. The scores on each of the three instruments were compared between the double-occupancy group and the triple-occupancy group. Furthermore, the male and female segments of the two groups were compared using the same procedure as applied to the groups as a whole.

The t test was selected as a test of significance due to the fact that the data set conformed to the following preliminary assumptions:

1. The data is at the interval-level,
2. The populations are assumed to be normally distributed, and
3. The standard deviation for the population is unknown.

The following formula was used in the computation
Table 2
Statistical Data by Group Necessary for the Facilitation of \( t \) tests on the Scores Derived through The Student Life Event Questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>( \bar{X} )</th>
<th>( s^2 )</th>
<th>( s )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Double-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>146.48</td>
<td>4622.50</td>
<td>67.98</td>
</tr>
<tr>
<td>Females</td>
<td>147.00</td>
<td>4312.39</td>
<td>65.67</td>
</tr>
<tr>
<td>Total</td>
<td>146.79</td>
<td>4411.34</td>
<td>66.41</td>
</tr>
<tr>
<td><strong>Triple-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>156.74</td>
<td>5993.34</td>
<td>77.41</td>
</tr>
<tr>
<td>Females</td>
<td>163.18</td>
<td>3489.78</td>
<td>59.07</td>
</tr>
<tr>
<td>Total</td>
<td>159.66</td>
<td>4857.46</td>
<td>69.69</td>
</tr>
</tbody>
</table>

**Note.** \( \bar{X} \) = mean  
\( s^2 \) = variance  
\( s \) = standard deviation
Table 3
Statistical Data by Group Necessary for the Facilitation of t tests on the Scores Derived through The Self-Perception Assessment

<table>
<thead>
<tr>
<th>Group</th>
<th>( \bar{X} )</th>
<th>( s^2 )</th>
<th>( s )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Double-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>21.43</td>
<td>53.91</td>
<td>7.34</td>
</tr>
<tr>
<td>Females</td>
<td>21.22</td>
<td>60.73</td>
<td>7.79</td>
</tr>
<tr>
<td>Total</td>
<td>21.31</td>
<td>57.61</td>
<td>7.59</td>
</tr>
<tr>
<td><strong>Triple-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>26.06</td>
<td>28.64</td>
<td>5.35</td>
</tr>
<tr>
<td>Females</td>
<td>24.28</td>
<td>44.94</td>
<td>6.70</td>
</tr>
<tr>
<td>Total</td>
<td>25.26</td>
<td>36.03</td>
<td>6.00</td>
</tr>
</tbody>
</table>

Note. \( \bar{X} \) = mean
\( s^2 \) = variance
\( s \) = standard deviation
Table 4
Statistical Data by Group Necessary for the Facilitation of \( \bar{t} \) tests on the Scores Derived through The Frustration Assessment

<table>
<thead>
<tr>
<th>Group</th>
<th>( \bar{X} )</th>
<th>( s^2 )</th>
<th>( s )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Double-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>21.77</td>
<td>59.92</td>
<td>7.74</td>
</tr>
<tr>
<td>Females</td>
<td>21.05</td>
<td>65.33</td>
<td>8.08</td>
</tr>
<tr>
<td>Total</td>
<td>21.34</td>
<td>63.15</td>
<td>7.94</td>
</tr>
<tr>
<td><strong>Triple-occupancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>25.83</td>
<td>32.00</td>
<td>5.65</td>
</tr>
<tr>
<td>Females</td>
<td>24.26</td>
<td>30.93</td>
<td>5.56</td>
</tr>
<tr>
<td>Total</td>
<td>25.12</td>
<td>31.51</td>
<td>5.61</td>
</tr>
</tbody>
</table>

Note. \( \bar{X} = \text{mean} \)

\( s^2 = \text{variance} \)

\( s = \text{standard deviation} \)
of \( t \) values:

\[
t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1} - S_{\bar{X}_2}}.
\]

Furthermore, \( S_{\bar{X}_1} - S_{\bar{X}_2} \) = the standard error of the difference between the two means

\[
= \sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}.
\]

It should be noted that \( s_1^2 \) and \( s_2^2 \) designate the variances for the first and second samples, and \( N_1 \) and \( N_2 \) designate the sample sizes for the first and second samples.

In all cases, the degrees of freedom (df) for the \( t \) test were derived through the following formula:

\[
(N_1 - 1) + (N_2 - 1).
\]

For reading significant \( t \) values, a standardized table was utilized. In the particular case of this research project, the table was taken from a book by Siegel (1956), Statistics for the Behavioral Sciences.

Table 5 gives an overview of the details of each \( t \) test conducted. The significant \( t \) values found in Table 5 were taken directly from Siegel.

The first \( t \) test was performed in order to measure the statistically significant difference, if any, between the mean scores reported by the double-occupancy group.
Table 5
Comparison of the Double-occupancy Group and the Triple-occupancy Group by t test Administration

<table>
<thead>
<tr>
<th>Instrument</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Life Event Questionnaire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>146.48</td>
<td>156.74</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Females</td>
<td>147.00</td>
<td>163.18</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>146.79</td>
<td>159.66</td>
<td>225</td>
<td>2.576</td>
<td>1.42</td>
<td>-</td>
</tr>
<tr>
<td>Self-Perception Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>21.43</td>
<td>26.06</td>
<td>106</td>
<td>2.660</td>
<td>2.89</td>
<td>x</td>
</tr>
<tr>
<td>Females</td>
<td>21.22</td>
<td>24.28</td>
<td>118</td>
<td>2.660</td>
<td>2.30</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>21.31</td>
<td>25.26</td>
<td>225</td>
<td>2.576</td>
<td>4.37</td>
<td>x</td>
</tr>
<tr>
<td>Frustration Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>21.77</td>
<td>25.83</td>
<td>106</td>
<td>2.660</td>
<td>2.26</td>
<td>-</td>
</tr>
<tr>
<td>Females</td>
<td>21.05</td>
<td>24.26</td>
<td>118</td>
<td>2.660</td>
<td>2.07</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>21.34</td>
<td>25.12</td>
<td>225</td>
<td>2.576</td>
<td>4.168</td>
<td>x</td>
</tr>
</tbody>
</table>

Note. 1 = double-occupancy X
2 = triple-occupancy X
3 = degrees of freedom
4 = significant t value
5 = observed t value
6 = significance or lack of significance at .01 level
and the triple-occupancy group on The Student Life Event Questionnaire. First, the standard error of the difference between the two means was computed and found to be 9.058. Next, the degrees of freedom were calculated to be 225. From the standardized table of significant $t$ values, it was noted that in order for the two means to be statistically different at the .01 level of significance (with df = 225), a $t$ value of 2.576 or greater would need to be demonstrated. Since the observed $t$ value is only 1.42, it was determined that a statistically significant difference does not exist between the mean scores reported for the double-occupancy group and the triple-occupancy group on The Student Life Event Questionnaire.

The second $t$ test was carried out in an attempt to measure the statistically significant difference, if any, between the mean scores reported by the double-occupancy group and the triple-occupancy group on The Self-Perception Assessment. The standard error of the difference between the two means was found to be .904. The degrees of freedom remain the same since the same two groups were still being compared. Such being the case, it was noted from the standardized table that for the two means to be statistically different at the .01 level of significance, a $t$ value of 2.576 or greater would have to be demonstrated. Since the observed $t$ value is 4.369, it was found that a statistically significant difference does indeed exist between the mean scores reported for the double-occupancy
group and the triple-occupancy group on The Self-Perception Assessment.

The third $t$ test was administered in order to ascertain the possible statistically significant difference between the mean scores reported by the double-occupancy group and the triple-occupancy group on The Frustration Assessment. In this particular case, the standard error of the difference between the two means was shown to be .907. Since the degrees of freedom remain at 225, it was noted that for the difference between the two means to be statistically different at the .01 level of significance, a $t$ value of 2.576 or greater would have to be demonstrated. In reality, the observed $t$ value is 4.168, indicative of a statistically significant difference between the mean scores reported by the two groups on The Frustration Assessment.

As an additional check on the variability of the two groups which were studied, separate $t$ tests were conducted for just the male and female components of the double-occupancy group and the triple-occupancy group. These $t$ tests were performed on the mean scores reported by the two gender subgroups on The Self-Perception Assessment and The Frustration Assessment. In short, the mean scores reported by the two male subgroups on The Self-Perception were determined to be statistically different at the .01 level of significance. Similarly, a $t$ test was performed on the
female counterparts within the same two subgroups. It was found that the female mean scores were not statistically different at the .01 level of significance. However, further analysis revealed that a statistically significant difference does exist at the .05 level of significance.

The mean scores reported by the male and female components of the double-occupancy group and the triple-occupancy group on The Frustration Assessment were subjected to t tests to check for any statistically significant differences which might exist. In both instances, the means were not found to be statistically different at the .01 level of significance. Further inspection of the data revealed that a statistically significant difference does exist at the .05 level of significance for both the male and female components of both groups on The Frustration Assessment.

**Pearson r Computation**

In addition to the preceding series of t tests, the Pearson r (product-moment correlation coefficient) was calculated in an attempt to determine the degree of association between the scores on The Self-Perception Assessment and The Frustration Assessment. The preliminary statistical data necessary for the computation of Pearson r correlation coefficients is found in Table 6.

The Pearson r was selected as a parametric measure of association because the data set conforms to its
Table 6
Statistical Data Necessary for the Computation by Group of Pearson r Correlation Coefficients

<table>
<thead>
<tr>
<th>Group</th>
<th>$\Sigma X$</th>
<th>$\Sigma Y$</th>
<th>$\Sigma X^2$</th>
<th>$\Sigma Y^2$</th>
<th>$\Sigma XY$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double-occupancy</td>
<td>1,029</td>
<td>1,045</td>
<td>24,607</td>
<td>25,627</td>
<td>22,473</td>
</tr>
<tr>
<td>Triple-occupancy</td>
<td>1,538</td>
<td>1,524</td>
<td>41,782</td>
<td>41,254</td>
<td>39,709</td>
</tr>
<tr>
<td>Total</td>
<td>2,567</td>
<td>2,569</td>
<td>66,389</td>
<td>66,881</td>
<td>62,182</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double-occupancy</td>
<td>1,546</td>
<td>1,488</td>
<td>37,026</td>
<td>36,308</td>
<td>31,336</td>
</tr>
<tr>
<td>Triple-occupancy</td>
<td>1,190</td>
<td>1,189</td>
<td>31,102</td>
<td>30,367</td>
<td>29,276</td>
</tr>
<tr>
<td>Total</td>
<td>2,736</td>
<td>2,677</td>
<td>68,128</td>
<td>66,675</td>
<td>60,612</td>
</tr>
<tr>
<td>Combined Total</td>
<td>5,303</td>
<td>5,246</td>
<td>134,517</td>
<td>133,556</td>
<td>122,794</td>
</tr>
</tbody>
</table>

Note. X = scores on The Self-Perception Assessment
Y = scores on The Frustration Assessment
primary underlying assumptions. The data is assumed to be at the interval level of measurement and the association between the two variables can be defined in a linear fashion. As Champion (1970) states in his book *Basic Statistics for Social Research*, "when the assumptions underlying its use are met, the Pearson r is perhaps the best coefficient of association to use" (p. 201).

The Pearson r is calculated using the following formula:

\[
r = \frac{\sum XY - (\sum X)(\sum Y)}{\sqrt{\left[\sum X^2 - (\sum X)^2\right]\left[\sum Y^2 - (\sum Y)^2\right]}}.
\]

Use of this formula will derive a numerical value between -1.00 and 1.00. As is characteristic of almost all parametric measures of association, correlation coefficients between 0.00 and 1.00 are considered positive, with the degree of association increasing as the value approaches 1.00. Correlation coefficients which range between 0.00 and -1.00 are considered negative, with the inverse relationship increasing in strength as the value approaches -1.00.

The correlation coefficients for the various subgroups within the double-occupancy group and the triple-occupancy group are found in Table 7. As noted within Table 7, the coefficients range from -0.256 to 0.219, with the overall correlation coefficient for the entire sample computed to be 0.021. In short, a very weak degree of association was found to exist between the level of
Table 7
Pearson r Correlation Coefficients by Group
for Scores Reported on The Self-Perception Assessment
and The Frustration Assessment

<table>
<thead>
<tr>
<th>Group</th>
<th>Pearson r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
</tr>
<tr>
<td>Double-occupancy</td>
<td>.026</td>
</tr>
<tr>
<td>Triple-occupancy</td>
<td>-.010</td>
</tr>
<tr>
<td>Total</td>
<td>.110</td>
</tr>
<tr>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>Double-occupancy</td>
<td>-.256</td>
</tr>
<tr>
<td>Triple-occupancy</td>
<td>.219</td>
</tr>
<tr>
<td>Total</td>
<td>-.067</td>
</tr>
<tr>
<td>Combined</td>
<td>.021</td>
</tr>
</tbody>
</table>
stress and the strength of self-perception among the participants in the project. The implications of this realization will be discussed further in Chapter 4.
DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

In keeping with the primary objectives of the research project as described within the introductory section of this report, it should be reiterated that the fundamental reasons for conducting the study were twofold. First, an attempt was made to ascertain the effects, if any, of placing three University students into a room originally designed for only two occupants on the stress levels of the involved parties. Second, an attempt was made to examine the effects, if any, of the same arrangement on the self-perceptions of the participating students.

During the course of the study it was also possible to examine the possible existence of a relationship between the two psychological manifestations central to the current research effort: stress and self-perception. After an analysis of the data generated through the study, it can be stated with a moderate amount of authority that several meaningful insights have been achieved.

Of the 300 instrument packages that were distributed to the two comparison groups, 227 were returned to the researcher in a completed form. Such a fraction represented an overall return percentage of approxi-
mately 75.6. The double-occupancy group had an overall return rate of 79.3 percent, while the triple-occupancy group had a return rate of 72.0 percent. It was consequently determined that enough individuals from both groups responded to the instrument package to make the results valid for purposes of extrapolation and generalization.

The Student Life Event Questionnaire

The mean score for the double-occupancy group on The Student Life Event Questionnaire was 146.48. Such a score is indicative of a low to moderate level of stress based on events which have occurred in the lives of the participants during the preceding 12 months. Similarly, the triple-occupancy group had a mean score of 159.66, again indicative of a low to moderate level of life-event stress. By subjecting the two means to a t test, it was found that they are not statistically different at the .01 level of significance. This finding was advantageous in relation to the primary objectives of the study in that it demonstrated a stress level present within the two groups that was relatively the same throughout both samples. The scores reported on The Frustration Assessment and The Self-Perception could now be considered within a much more objective framework. It cannot be assumed that the two populations from which the groups were selected supported divergent levels
of life-event stress.

The Self-Perception Assessment

The mean score on The Self-Perception Assessment for the double-occupancy group was 21.31. On the standardized scale used to evaluate the numerical value derived through use of The Self-Perception Assessment, 21.31 is indicative of a moderate strength of self-perception. In the case of this particular instrument, the standardized evaluation scale is a graduated continuum which ranges from weak to strong. The mean score on The Self-Perception Assessment for the triple-occupancy group was 25.26, indicative of a mean self-perception strength which falls between low and moderate.

By subjecting the two mean scores to a t-test, it was determined that a statistically significant difference does exist between the two groups at the .01 level of significance. Residents assigned three-to-a-room displayed a characteristically lower strength of self-perception than did the two-to-a-room subjects. The implications of this lowered strength of self-perception are numerous. Individuals who possess low self-perceptions tend to demonstrate impaired social, personal, emotional and intellectual functioning (Ruff and Korchin, 1967). Such impairment can lead to a significant disadvantage in the ability to adjust adequately to the college environment. The result of
this inability to satisfactorily adjust to the college environment is detrimental for both the individual and the institution from a retention standpoint. Although there is still a lot of room for discussion regarding these observations, it is clear that a low self-perception can have very detrimental consequences along several critical educational and sociological continuums (Ruff and Korchin, 1967).

The Frustration Assessment

Frustration levels have been utilized successfully in order to measure relative degrees of overall stress (Tanner, 1976; Singer, 1975). The Frustration Assessment was devised as a means of measuring varying levels of frustration. As such, it can be used to indirectly measure relative stress levels (Girdano and Everly, 1979).

The mean score for the double-occupancy group on The Frustration Assessment was 21.34. On the standardized scale used to evaluate the numerical value derived through use of The Frustration Assessment, 21.34 is indicative of a low to moderate stress level in relation to a graduated continuum which ranges from low to high. The mean score on the same instrument for the triple-occupancy group was 25.12. On the same graduated scale as used for the double-occupancy group, 25.12 is indicative of a moderate to high level of stress.

Subjecting these two means to a t test, it was found that they are statistically different at the .01
level of significance. Such a distinct difference in stress levels is a contributing factor in many undesirable situational realities (Schmitt, 1966; Loring, 1956). As a general rule, as stress levels increase, performance levels decrease (Weitz, 1970). From an educational perspective, this realization can have profound implications. The contemporary college student is already subject to an inordinate number of stress-inducing variables from a multiplicity of sources. Financial concerns, academic anxieties, and social pressures all exert a tremendous influence on the college students of today. The additional stress precipitated by living in a high proximity environment can be devastating to many students.

Observations by Sex

The statistically significant differences observed between the double-occupancy group and the triple-occupancy group on both The Self-Perception Assessment and The Frustration Assessment extend to both the male and female components of each group. As noted in the previous section of this report, the differences in the mean scores for three subgroup components of the total participating sample were not statistically significant at the .01 level of significance. However, all differences demonstrated through t-test administration were statistically significant at the .05 level of significance. Such an observation tends to reinforce the assertion that the differences found during the course of this
study are not gender-related. From a purely scientific perspective, this is also a criterion which lends credibility to any generalizations which are made from the data generated through the study. Such a realization helps to discredit any criticism which revolves around the suggestion that the male and female segments of the sample may have demonstrated dissimilar responses as a result of inherent differences within the subjects themselves.

**Degree of Association between Variables**

In order to assess the relationship, if any, between self-perception and stress within the double-occupancy group and the triple-occupancy group, a series of Pearson $r$ (product-moment correlation coefficient) calculations were made on the appropriate data. Using the Pearson $r$, a comparison was made between the scores reported on The Self-Perception Assessment and The Frustration Assessment for the following groups and subgroups: (1) double-occupancy males, (2) triple-occupancy males, (3) both double-occupancy and triple-occupancy males, (4) double-occupancy females, (5) triple-occupancy females, (6) both double-occupancy and triple-occupancy females, and (7) the male and female sample as a whole.

As noted in the previous chapter, the degree of association between the scores reported on The Self-Perception Assessment and The Frustration Assessment ranged from a correlation coefficient of $-0.256$ for the
double-occupancy females to a correlation coefficient of .219 for the triple-occupancy females. Overall, the correlation coefficient for the entire sample was .021.

It can be concluded from these measures of association that the two variables being studied (stress and self-perception) are not related to any meaningful extent, at least within the context of the present study. Reasons for this conclusion can remain only speculative in nature until a more extensive investigation can be conducted. Based solely on the data generated from this project, however, it can be hypothesized that the two variables do not exert a direct influence on each other.

Recommendations

Recommendations submitted as a direct result of this study should be viewed in their appropriate context. The various implications of high proximity living accommodations have yet to be fully explored. As such, any recommendations which result from the current study must be considered in relation to similar investigations that have been conducted into the area of proximics. With these realizations in mind, it is safe to proceed.

Colleges and universities such as Western Kentucky University, which make the decision to assign three students into a room which was originally designed for only two occupants, could be engaging in a policy which is
detrimental to the residents who reside in such an arrange-
ment. As demonstrated through this study, students who
live in high proximity situations characteristically ex-
hibit higher levels of stress and lower self-perceptions
than students who live in less compact environments.
Since the detrimental consequences of higher stress levels
and lower self-perceptions have been well documented in
the literature, it is strongly recommended that Western
Kentucky University, and other institutions that have
such a housing option, refrain from this practice at
least until the full ramifications of their actions can
be sufficiently explored. The only possible exception
to such a blanket policy would be in the case of an emer-
gency situation where the practice of tripling is unavoids-
able. Even then, action should be taken as soon as
possible to alleviate the situation and return the resi-
dents to double-occupancy status.

Students who are provided with the option of residing
in a triple-occupancy situation as opposed to a double-
occupancy situation should consider the detrimental ef-
facts that living in such a high proximity environment
might have on their personal, social, emotional and
educational well-being. In the short term, such an arrange-
ment will undoubtedly seem advantageous from a financial
perspective. But the psychological impact of overcrowd-
ing on academic performance and personal privacy should
be considered very seriously before any final decisions
regarding triple-occupancy housing accommodations are made. At Western Kentucky University, many students have little or no choice in the matter (Osborne, 1982). If they are low on the priority list for residence hall room assignments, chances are that they will be assigned to a triple-occupancy room. Taking this into consideration, it is recommended that students who wish to avoid being assigned to a tripled room submit their housing forms to the University Housing Office as early as possible. Such a practice will cause the student to receive a higher priority designation for assignment purposes, thus increasing the probability of being assigned into a double-occupancy room.

At Western Kentucky University, the policy of assigning three students to a room originally intended for only two occupants was instituted in an effort to accommodate more students within the available physical facilities. The result of this move has been a reduction in financial costs for both the student and the University. High demand for on-campus housing was instrumental in bringing the policy into existence. However, in the next few years the practice of tripling rooms in order to increase capacity may become somewhat of a dead issue. As overall enrollment at Western Kentucky University and other institutions continues to decline, the demand for on-campus housing will also subside.
If present predictions are accurate, colleges and universities (including Western Kentucky University) will experience a dramatic upward shift in enrollment during the late 1980s and early 1990s. At that time, the question of whether or not to assign three students into a room originally designed for only two occupants should be answered within more definitive parameters. The current study represents only a segment of that definitive answer. However, it is a segment which cannot be ignored. Tripling, as demonstrated through the current study, can have very negative consequences. It is the moral and ethical responsibility of all colleges and universities to deal realistically with these consequences.
## Appendix A: Composition of the Four Card Sets

<table>
<thead>
<tr>
<th>Set One</th>
<th>Set Two</th>
<th>Set Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bates-Runner</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Bemis-Lawrence</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Central</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Gilbert</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Hugh Poland</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>McCormack</td>
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<td>8</td>
</tr>
<tr>
<td>McLean</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Potter</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Rodes-Harlin</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>South</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>West</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Barnes-Campbell</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Douglas Keen</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Pearce-Ford Tower</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Set Four

<p>| | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 R</td>
<td>9 R</td>
<td>17 R</td>
<td>25 R</td>
<td>33 R</td>
<td>41 R</td>
<td>3 L</td>
<td>11 L</td>
<td>19 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 R</td>
<td>10 R</td>
<td>18 R</td>
<td>26 R</td>
<td>34 R</td>
<td>42 R</td>
<td>4 L</td>
<td>12 L</td>
<td>20 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 R</td>
<td>11 R</td>
<td>19 R</td>
<td>27 R</td>
<td>35 R</td>
<td>43 R</td>
<td>5 L</td>
<td>13 L</td>
<td>21 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 R</td>
<td>12 R</td>
<td>20 R</td>
<td>28 R</td>
<td>36 R</td>
<td>44 R</td>
<td>6 L</td>
<td>14 L</td>
<td>22 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 R</td>
<td>13 R</td>
<td>21 R</td>
<td>29 R</td>
<td>37 R</td>
<td>45 R</td>
<td>7 L</td>
<td>15 L</td>
<td>23 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 R</td>
<td>14 R</td>
<td>22 R</td>
<td>30 R</td>
<td>38 R</td>
<td>46 R</td>
<td>8 L</td>
<td>16 L</td>
<td>24 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 R</td>
<td>15 R</td>
<td>23 R</td>
<td>31 R</td>
<td>39 R</td>
<td>1 L</td>
<td>9 L</td>
<td>17 L</td>
<td>25 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 R</td>
<td>16 R</td>
<td>24 R</td>
<td>32 R</td>
<td>40 R</td>
<td>2 L</td>
<td>10 L</td>
<td>18 L</td>
<td>26 L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Set Four, continued

27 L 30 L 33 L 36 L 39 L 42 L 45 L  
28 L 31 L 34 L 37 L 40 L 43 L 46 L  
29 L 32 L 35 L 38 L 41 L 44 L
Appendix B: The Student Life Event Questionnaire

Below are listed events which occur in the life of a college student. Place a check in the left-hand column for each of those events that has happened to you during the last 12 months.

<table>
<thead>
<tr>
<th>Life Event</th>
<th>Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death of a close family member</td>
<td>100</td>
</tr>
<tr>
<td>Jail term</td>
<td>80</td>
</tr>
<tr>
<td>Final year or first year in college</td>
<td>63</td>
</tr>
<tr>
<td>Pregnancy (to you or caused by you)</td>
<td>60</td>
</tr>
<tr>
<td>Severe personal illness or injury</td>
<td>53</td>
</tr>
<tr>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>Any interpersonal problems</td>
<td>45</td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>40</td>
</tr>
<tr>
<td>Death of a close personal friend</td>
<td>40</td>
</tr>
<tr>
<td>Arguments with your roommate (frequent)</td>
<td>40</td>
</tr>
<tr>
<td>Major disagreements with your family</td>
<td>40</td>
</tr>
<tr>
<td>Major change in personal habits</td>
<td>30</td>
</tr>
<tr>
<td>Beginning or ending a job</td>
<td>30</td>
</tr>
<tr>
<td>Problems with your boss or professor</td>
<td>25</td>
</tr>
<tr>
<td>Outstanding personal achievement</td>
<td>25</td>
</tr>
<tr>
<td>Failure in some course</td>
<td>25</td>
</tr>
<tr>
<td>Final exams</td>
<td>20</td>
</tr>
<tr>
<td>Increased or decreased dating</td>
<td>20</td>
</tr>
<tr>
<td>Change in working conditions</td>
<td>20</td>
</tr>
<tr>
<td>Change in your major</td>
<td>20</td>
</tr>
<tr>
<td>Change in your sleeping habits</td>
<td>18</td>
</tr>
</tbody>
</table>
The Student Life Event Questionnaire, continued

<table>
<thead>
<tr>
<th>Life Event</th>
<th>Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ Several-day vacation</td>
<td>15</td>
</tr>
<tr>
<td>___ Change in eating habits</td>
<td>15</td>
</tr>
<tr>
<td>___ Family reunion</td>
<td>15</td>
</tr>
<tr>
<td>___ Change in recreational activities</td>
<td>15</td>
</tr>
<tr>
<td>___ Minor illness or injury</td>
<td>15</td>
</tr>
<tr>
<td>___ Minor violations of the law</td>
<td>11</td>
</tr>
</tbody>
</table>

Scoring:
0 - 150: Low level of stress based on Life Change
150 - 300: Moderate level of stress based on Life Change
300 - Above: High level of stress based on Life Change

The Self-Perception Assessment

Choose the alternative that best summarizes how you generally behave, and place your answer in the space provided.

___ 1. When I face a difficult task, I try my best and will usually succeed.
   (a) Almost always true  
   (b) Often true
   (c) Seldom true
   (d) Almost never true

___ 2. I am at ease when around members of the opposite sex.
   (a) Almost always true
   (b) Often true
   (c) Seldom true
   (d) Almost never true

___ 3. I feel that I have a lot going for me.
   (a) Almost always true
   (b) Often true
   (c) Seldom true
   (d) Almost never true

___ 4. I have a very high degree of confidence in my own
The Self-Perception Assessment, continued

5. I prefer to be in control of my own life as opposed to having someone else make decisions for me.
   (a) Almost always true   (b) Often true
   (c) Seldom true          (d) Almost never true

6. I am comfortable and at ease around my superiors.
   (a) Almost always true   (b) Often true
   (c) Seldom true          (d) Almost never true

7. I am often overly self-conscious or shy when among strangers.
   (a) Almost always true   (b) Often true
   (c) Seldom true          (d) Almost never true

8. Whenever something goes wrong, I tend to blame myself.
   (a) Almost always true   (b) Often true
   (c) Seldom true          (d) Almost never true

9. When I don't succeed, I tend to let it depress me more than I should.
   (a) Almost always true   (b) Often true
   (c) Seldom true          (d) Almost never true

10. I often feel that I am beyond helping.
    (a) Almost always true   (b) Often true
    (c) Seldom true          (d) Almost never true
The Self-Perception Assessment, continued

Scoring: 1 - 6: a = 1, b = 2, c = 3, d = 4
    7 - 10: a = 4, b = 3, c = 2, d = 1
10 - 19: Strong self-perception
20 - 25: Moderate self-perception
26 - 40: Low (weak) self-perception

The Frustration Assessment

Choose the most appropriate answer for each of the 10 statements below as it usually pertains to you. Place the letter of your response in the space to the left of the question.

1. When I can’t do something "my way," I simply adjust to do it the easiest way.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

2. I get "upset" when someone in front of me drives slowly.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

3. It bothers me when my plans are dependent upon the actions of others.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

4. Whenever possible, I tend to avoid large crowds.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true
The Frustration Assessment, continued

5. I am uncomfortable having to stand in long lines.
   (a) Almost always true (b) Often true
   (c) Seldom true (d) Almost never true

6. Arguments upset me.
   (a) Almost always true (b) Often true
   (c) Seldom true (d) Almost never true

7. When my plans don't "flow smoothly," I become anxious.
   (a) Almost always true (b) Often true
   (c) Seldom true (d) Almost never true

8. I require a lot of room (space) to live and work in.
   (a) Almost always true (b) Often true
   (c) Seldom true (d) Almost never true

9. When I am busy at some task, I hate to be disturbed.
   (a) Almost always true (b) Often true
   (c) Seldom true (d) Almost never true

10. I believe that "all good things are worth waiting for."

Scoring: 1 and 10: a = 1, b = 2, c = 3, d = 4
      2 - 9: a = 4, b = 3, c = 2, d = 1
26 - 40: High frustration/High stress
20 - 25: Moderate frustration/Moderate stress
10 - 19: Low frustration/Low stress
Appendix C: Instrument Package

**American College Student Profile**

Dear Resident:

You have been selected to participate in a very important research project which is currently being conducted on the campus of Western Kentucky University.

The purpose of this study is to establish a psychological profile of the "typical" college student. Therefore, it is essential that you be completely open and honest in responding to the enclosed survey.

You will remain strictly anonymous in all published materials which may result from this project.

Please take just a few minutes of your time to fill out the following survey form. In order to keep the response time consistent with everyone involved in the project, please return your completed survey to your Hall Director within 48 hours if possible.

Thank you very much for your part in this research endeavor.

---

**American College Student Profile**

Below are listed events which occur in the life of a college student. Place a check in the left-hand column for each of those events that have happened to you during the last 12 months.

- [ ] Death of a close family member
- [ ] Jail term
Instrument Package, continued

- Final year or first year in college
- Pregnancy (to you or caused by you)
- Severe personal illness or injury
- Marriage
- Any interpersonal problems
- Financial difficulties
- Death of a close friend
- Arguments with your roommate (frequent)
- Major disagreements with your family
- Major change in personal habits
- Beginning or ending a job
- Problems with your boss or professor
- Outstanding personal achievement
- Failure in some course
- Final exams
- Increased or decreased dating
- Change in working conditions
- Change in your major
- Change in your sleeping habits
- Several-day vacation
- Change in eating habits
- Family reunion
- Change in recreational activities
- Minor illness or injury
Instrument Package, continued

____ Minor violations of the law

Choose the alternative that best summarizes how you generally behave, and place your answer in the space provided.

____ 1. When I face a difficult task, I try my best and will usually succeed.
   (a) Almost always true    (b) Often true
   (c) Seldom true           (d) Almost never true

____ 2. I am at ease when around members of the opposite sex.
   (a) Almost always true    (b) Often true
   (c) Seldom true           (d) Almost never true

____ 3. I feel that I have a lot going for me.
   (a) Almost always true    (b) Often true
   (c) Seldom true           (d) Almost never true

____ 4. I have a very high degree of confidence in my own abilities.
   (a) Almost always true    (b) Often true
   (c) Seldom true           (d) Almost never true

____ 5. I prefer to be in control of my own life as opposed to having someone else make decisions for me.
   (a) Almost always true    (b) Often true
   (c) Seldom true           (d) Almost never true

____ 6. I am comfortable and at ease around my superiors.
   (a) Almost always true    (b) Often true
Instrument Package, continued

7. I am often overly self-conscious or shy when among strangers.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

8. Whenever something goes wrong, I tend to blame myself.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

9. When I don't succeed, I tend to let it depress me more than I should.
   (a) Almost always true   (b) Often true
   (c) Seldom true           (d) Almost never true

10. I often feel that I am beyond helping.
    (a) Almost always true   (b) Often true
    (c) Seldom true           (d) Almost never true

11. When I can't do something "my way," I simply adjust to do it the easiest way.
    (a) Almost always true   (b) Often true
    (c) Seldom true           (d) Almost never true

12. I get "upset" when someone in front of me drives slowly.
    (a) Almost always true   (b) Often true
    (c) Seldom true           (d) Almost never true

13. It bothers me when my plans are dependent upon the actions of others.
Instrument Package, continued

14. Whenever possible, I tend to avoid large crowds.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

15. I am uncomfortable having to stand in long lines.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

16. Arguments upset me.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

17. When my plans don't "flow smoothly," I become anxious.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

18. I require a lot of room (space) to live and work in.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

19. When I am busy at some task, I hate to be disturbed.
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true

20. I believe that "all good things are worth waiting for."
   (a) Almost always true  (b) Often true
   (c) Seldom true        (d) Almost never true
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