Example 12.2 Abstract

Abstract

The purpose of this study will be to determine the effectiveness of a cognitive-behavioral group therapy program used by the U.S. Army Medical Center, Heidelberg, Germany, to treat depression among (a) soldiers, (b) family members, and (c) civilian employees eligible for medical care at military hospitals. Participants will have been diagnosed as clinically or non-clinically depressed by a (a) psychiatrist, (b) counseling psychologist, or (c) staff counselor and will have been referred to the group by the diagnosing professional. Sources cited in this study will be (a) published articles, (b) books, (c) interviews with practitioners of group work in the treatment of depression, and (d) the internet. The Beck Depression Inventory-II (BDI-II) will be used to assess the degree of depression in clients before and after participation in group therapy. To establish the permanence of change, a follow-up assessment using the BDI-II will be completed four months after termination of therapy. Descriptive statistics (means, standard deviations, and percentages) and a non-independent *t*-test ($t_{(14)} = 2.145$, $p \leq .05$) will be used in presenting the data. Participants will be expected to show reduced levels of depression after participating in the group therapy program and will be expected to continue to improve for at least four months after termination of treatment.

Notes: 1. The main parts of an Abstract include the **topic, purpose, sources of info, statistical applications, and anticipated findings** (review APA, page 14+). A4 or U.S. Letter paper size required, as applicable to your university.
2. 1.5-inch left margin, two inch top margin, and one inch right and bottom margins. First line of Abstract is *not* indented. Statistics, if any, must be presented in accordance with APA 3.57. Page numbered after title page as Roman numeral two (ii).

12.1.3 Table of Contents.

In Chapter 2, Figure 2.2 provided an example of the Table of Contents. For publishers, this is not a requirement; however, for school reports, this may be required.

12.1.4 Introduction.

After the Abstract, the Introduction brings the reader into focus about the topic. Information from the general to the specific is presented. Some key sources may be included. Below in **Example 12.3** and more extensively in **Example 12.4** are illustrations of complete Introductions. In Example 12.3, the title is shown before the Introduction to provide you with the purpose.

Example 12.3 Introduction

Evaluating the influence granite countertops (above any other countertop type) have on Knob Noster, Missouri, homebuyers' purchasing decisions

Introduction

Knob Noster, Missouri, is a bustling town of 2,740 people acknowledged for its close proximity to Knob Noster State Park and Whiteman Air Force Base, according to the 2010 Knob Noster United States Census Bureau report (Shukert & Dawson, 2006, http://knobnostergov.com/living.html). Shukert and Dawson asserted the local population increased one percent per year from 1980-2000, and is

Example 12.3 Introduction

expected to reach 3,000 people by 2015. The turnover rate for the area is 28.5% due to a military station being in close proximity to the town; therefore, there is a constant stream of homebuyers in the area looking to make a big purchase (A. Williams, personal communication, February 10, 2012).

The dictionary terminology of a homebuyer is "a person who buys or expects to buy a house" ("Homebuyer," n.d.). However, for the purpose of this tasking, a *homebuyer* will be a person in the completion stages of a home purchase. This includes someone who (a) has been approved for financing in the purchase of a home, (b) is within a week of their closing date, (c) has purchased a home in the past week, or (d) is a combination of (a) and (b). The specificity is due to the concept that homebuyers in the zenith of a purchase are emotional; and therefore, more precision can be expected in survey results the closer the survey can be to the actual purchase ("Avoiding Homebuyers Remorse," 2009).

Homebuyers' purchasing decisions can result in the biggest acquisitions made during their lifetimes. As such, it is important to understand what buyers look for to effectively put a sought-after house on the market to be sold. Amy Williams (personal communication, February 10, 2012), a North Carolina realtor, revealed that granite countertops have turned from more than just a passing trend into a must-have in most homes. As a real-estate investor, it will be important to gain understanding into the truth of this statement, or decide if various cheaper countertop types will entice buyers the same way as granite.

Granite is made when magma slowly cools deep within the earth creating beautiful designs and minerals throughout the rock ("Granite," 2001). Like a fingerprint, granite comes in many colors and no two slabs are alike. Working with this stone was "mastered some 4000 years ago", but it is still a desired commodity today (Hunt, 2005, p. 110). This eye-catching, durable rock of igneous origin is used as a building material on projects ranging from national monuments to countertops, and is also the "most widely available stone on the planet" (Hunt, p. 110).

Although the rock is common, granite is expensive because "production has become limited as a result of strong competition from mostly third world resources" and other countries like China, who is now a "dominant force in world granite suppliers" (Hunt, 2005, p. 111). The price for an average sized kitchen outfitted with granite countertops ranges from $2,200-$5,500, according to *Countertops: The Hottest Rocks*, a 2007 *Consumer Reports Magazine* article. For the purpose of this study, *granite* will refer to (a) tile, (b) composite, (c) reclaimed, or (d) slab form granite.

As of February 2012, 128 homes were on the market to be sold in the Knob Noster community (A. Williams, personal communication, 10 February, 2012). The future buyers of these homes will be the target population due to the fact that the researcher is looking for a career in renovating houses (also known as house-flipping). Homebuyers' decisions will give the researcher insight into planning for upcoming projects in home renovations. The *purpose* of this tasking will be to find out if the feature of granite countertops in a home will have influence on homebuyers' purchasing decisions.

Example 12.4 Extended Introduction

Introduction

Overview.

The penal system and mental health experts are plagued with the question of how to best deal with sex offenders. In some states, convicted sex offenders are considered dangerous and are remanded to mental institutions or confined to residential treatment facilities once they have fulfilled their legal obligations. According to Alexander (1994), this is because sex offenders often times suffer from *personality disorders* or *psychopathic disorders*, which are considered untreatable illnesses. As a result, sex offenders are disproportionately serving long periods of confinement in the name of civil

Example 12.4 Extended Introduction

commitment. Consequently, mental institutions and other residential-based treatment facilities have become the dumping grounds for sex offenders in order to protect society.

The reality is that sooner or later a number of sex offenders are reintegrated into the community, causing grave concern among members of society. The primary concern is the likelihood that they will *recidivate* (reoffend). Although no one can make that determination unequivocally, forensic clinicians are frequently asked to assess the dangerousness of the client and the likelihood that they will recidivate. This can be a very difficult task, as many factors must be taken into consideration when assessing recidivism.

There appears to be disagreement in the literature as to the role of treatment factors versus personal factors in predicting sexual re-offending. Some authorities suggest there is no or even negative association between treatment and reoffending. For instance, Seto and Barbaree (1999) found that in cases where adequate treatment intervention was applied to sex offenders, it had no measurable effect on the rate of recidivism. In contrast, after completing a treatment program, some offenders were actually associated with reoffending in more serious violent or sexual offenses (Seto & Barbaree). Others have found that good treatment intervention wasn't the key factor in reoffending, however personal characteristics such as, "psychopathy, deviant sexual interests, and offense history are consistently associated with sex offender recidivism and are therefore important to consider when appraising risk and making management decisions" (Seto & Barbaree, p. 1). Still others have found beneficial treatment interventions that have a positive effect on the rate of recidivism. Various studies conducted found that treatment interventions such as biomedical, psychotherapy, cognitive-behavioral, pharmacology, and relapse prevention were actually successful in reducing recidivism. For the purposes of this study, an analysis of various treatment interventions in the residential and community-based setting will be conducted in order to assess recidivism rates.

Simmons (1994) also profiled sex offenders to determine which pose the greatest risk to society. Simmons reported that "sex offenders come from all socioeconomic backgrounds, about a third were abused as children" (1994, p. 1), and a prominent commonality is that they grew up in a sexually repressed environment. Overall, mental health experts reported that psychopathic sadists (i.e., rapists) pose the greatest risk to society (Simmons). However, convicted *pedophiles* (extrafamilial child molesters) seem to get the most publicity. Those convicted are likely to be released back into the community at some point, and consequently the threat to society must be evaluated. The personality characteristics of adult male pedophiles, as well as administered treatment interventions must be evaluated in determining the likelihood of recidivism. Therefore, the purpose of this study will be to analyze the personality characteristics of pedophiles receiving residential-based treatment, as well as those receiving community-based treatment, in order to predict recidivism.

Statement of the problem.

The penal system is taxed with the dilemma of what to do with convicted pedophiles in order to best protect society. The greatest challenge is accurately determining predictors of recidivism and addressing them appropriately.

The fact that pedophiles will not be locked up indefinitely must be considered. Mental health providers are obligated to implement treatment interventions, yet these interventions may or may not be effective in eliminating recidivism. It is important to consider that the majority of sex offenders don't even have access to adequate treatment. To exasperate the problem, a number of sex offenders suffer from certain personality disorders that many professionals consider to be untreatable.

It is conceivable that without treatment interventions, convicted pedophiles are not properly equipped to successfully transition back into society. Therefore, the proposed study involves analyzing the respective personality characteristics in conjunction with residential and community-based treatment interventions in order to predict and ultimately help reduce the rate of recidivism.

Example 12.4 Extended Introduction

Need for the study.

It is necessary to conduct a study to determine the impact of pedophiles receiving residentially-based, as well as community-based treatment on the rate of recidivism. Once the outcome of the treatment interventions are analyzed, it will be necessary to identify the intervention most effective in reducing recidivism.

This proposed study will include profiling personalities of pedophiles housed at the Northwest State Correctional Facility in Vermont, where they are receiving residential-based treatment. In addition, the study will include profiling personalities of pedophiles residing in Vermont, where they are receiving community-based treatment. It will be necessary to compare and contrast the differences. Data from prior studies will be collected in order to assess the impact of treatment interventions on recidivism. In addition, statistical data on rates of recidivism will need to be collected from the Bureau of Justice Statistics.

Definition of terms.

Child Molestation- "Is a form of sexual activity in which the offender will hug, kiss, fondle, masturbate, suck, and touch the child victim in some inappropriate manner. Penetration does not occur" (Flora, 2001, p. 99).

Incest or Intra-Family Child Sexual Abuse- "Any attempted or actual sexual behavior with a minor by a related adult (parent, grandparent, step-parent, live-in girlfriend or boyfriend, uncle, etc.); or with any minor by a related minor five or more years older than the victim" (Mullen, 1998, p. 88).

Intervention- "Whatever is done, it is the offender who must come to interalise inhibitors, understand the harm he causes victims and learn about his cycle of offending so that he can intervene before his lapse leads to relapse. The work delivered is thus a programme of intervention" (Spencer, 1999, p. 17).

Paraphilias- "Recurrent, intense sexually arousing fantasies, sexual urges, or behaviors generally involving 1) nonhuman objects, 2) the suffering or humiliation of oneself or one's partner, or 3) children or other nonconsenting persons that occur over a period of at least 6 months" (DSM-IV-TR, 2000, p. 566).

Pedophilia- "An adult is sexually attracted to a child or pre-adolescent youth. The individual may experience recurrent fantasies, have urges to engage in or will participate in some form of sexual activity with a child" (Flora, 2001, p. 92).

Perpetrator or Offender- "A person who commits an offense" (Mullen, 1998, p. 88).

Study may incorporate opinions of mental health experts on how personality affects treatment.

12.1.5 Review of the Literature.

After introducing the topic and purpose and identifying the need for the study, the next major step is to develop a Review of the Literature chapter. Various key points were presented in Chapter 2; however, it is again important to emphasize that key authorities and sources should be presented. Also, *current* means within the last 10 years; however, the Classics (top authorities in the subject) are always useful. Use a variety of sources (Wikipedia is not an acceptable source as it does not authenticate the data). Review Chapter 2 and **Example 12.5** below.

Example 12.5 Review of the Literature

Review of the Literature

Overview.

Academic success depends largely on students' intellectual ability and their motivation to succeed. Although many educators use strategies to foster students' drive to achieve, educators at the same time often fail to analyze the diverse factors influencing this drive. Two factors that have been shown to have an effect on academic achievement and, therefore, deserve more attention are the students' own view of their academic potential and the students' view of how others perceive their academic potential. This complicated interplay of views –of which the students often times are not fully aware—may affect student motivation and behavior in several ways. Whereas most students internalize and accept these perceived expectations as their own personal standard (Bandura, 1991), students who consider themselves ability-stereotyped may not as readily accept those expectations or evaluations and may even disengage psychologically to protect their sense of self-worth. Even students who do not believe the negative stereotype do suffer from stereotype threat, which is defined as increased stress that results from performing under the pressure of potentially validating a negative stereotype (Steele, 1997; Steele & Aronson, 1995). Cohen and Garcia (2006) researched whether a values-affirmation intervention might decrease the psychological availability of the negative stereotype in a sample of seventh-graders from a racially mixed school. They found that the self-affirmation intervention had a significant effect on the grade point averages of low-performing African-American students while the grade point averages of European American students and high-performing African American students remained unaffected. The researchers point to the possibility of using self-affirmation interventions as a supplementary aid in reducing the achievement gap.

Because an achievement gap between students from diverse ethnic groups is already apparent at the elementary-school level, an affirmation intervention administered at this age might result in increased improvements of student grade point averages. Furthermore, elementary-school children generally emphasize their positive characteristics (Phillips & Zimmerman, 1990; Ruble& Dweck, 1995) in comparison to middle-school students, and, therefore, have more domains to self-affirm. Hence, an intervention administered to elementary-school-age children—in contrast to middle-school children—may prove beneficial in breaking the recursive cycle in which stereotype threat contributes to progressively worse performance.

Stereotype threat and performance.

Stereotype threat might be a possible factor contributing to the achievement gap. The psychological process of stereotype threat occurs when people believe that their performance may confirm a negative stereotype about their group. The existence of stereotype threat has been repeatedly shown in controlled experiments and is well documented. For example, in 1995, Steele and Aronson have found that African Americans performed lower than European Americans when a test was introduced as an intellectual ability test. However, when a test was introduced as a problem-solving task, the two groups performed equally well. Merely the act of adding an ethnic identifier on a test sheet induced a stereotype threat, resulting in lower performance of African American students.

Stereotype threat, nonetheless, depends not on ethnicity but on group identification and the beliefs held by members of the group. For instance, when reminded of the common stereotype that women are less capable in solving certain math problems, women overall performed worse than women who were not reminded of the stereotype (Spencer, Steele, & Quinn, 1999). Even groups that usually do not suffer from stereotype threat can be influenced to perform worse. For example, white males who were told that Asians regularly outperformed them on math tasks scored considerably worse than the control group (Aronson et. al., 1999). Stereotype threat can be evoked in almost any type of evaluative situation and can significantly impair performance.

Example 12.5 Review of the Literature

Stereotype threat and psychological disengagement.

Many theorists (Crocker & Major, 1989; Rosenberg, 1979; Tesser, 1988) have asserted that students might use defensive responses to cope with stereotype threat. Students, for instance, can detach their self-esteem from academic outcomes by either discounting or devaluing the outcomes they receive. Discounting occurs when students do not believe in the validity of the administered test or in the accuracy of the feedback they receive; devaluing occurs when students devalue academic success overall. According to Schmader, Major, and Gramzow (2001), both of these forms of psychological disengagement are especially prevalent in ethnic minority students who identify strongly with school achievement. As schooling progresses, these students who are the vanguard of their groups increasingly disidentify from the academic domain. The recursive cycle of increasing disengagement and underperformance take their cumulative toll. Considering the high drop-out rates, the lower performance on standardized tests, and the lower attainment of higher education for students from non-Asian ethnic minorities in comparison to European American students (Steele, 1997), one may conclude that those students' sense of self-integrity in the academic domain decreases significantly through their school career despite several studies' results attesting to the high self-esteem of students from these minorities (Phinney, Cantu, & Kurtz, 1997; Porter & Washington, 1979; and Wylie, 1979). The same may be true for women who strive to succeed in domains where they have been subjected to ability bias. Whereas girls' overall academic self-concept decreases considerably in the middle-school years, their performance remains fairly stable. However, the performance of standardized tests of women pursuing majors in which they have been traditionally underrepresented is lower in comparison to their male counterparts (Spencer, Steele, & Quinn, 1997; Steele & Aronson, 1995). Both groups, women and non-Asian ethnic minorities, appear increasingly affected by stereotype threat as their educational career continues. Finding out whether an intervention at a level of schooling where stereotype threat has not yet contributed to insurmountable achievement gaps between majority and minority groups can produce significant effects is the aim of the proposed study.

Reducing stereotype threat without the use of defensive responses.

Researchers have proposed several ways of reducing stereotype threat. One can directly counter the stereotype by reminding people of the inaccuracy of the stereotype. Female students, for example, can be told that they perform just as well on math tests or that the test is gender-fair (Spencer et al., 1999). One can redefine the testing situation by making the test appear less threatening, or one can emphasize group accomplishments to decrease the perception of threat (McIntyre, Paulson, & Cord, 2006). So far, these methods have shown effects in laboratory experiments; however, their application in the school setting seems unfeasible. Reminding students that they will not be tested on their overall intellectual ability or their ability to compute difficult math problems seems neither ethical nor practical. A continuous emphasis on minority group accomplishments may appear equally problematic.

Self-affirmation as a coping strategy against stereotype threat and psychological disengagement.

A less problematic intervention to reduce stereotype threat and to increase psychological engagement in the academic domain is self-affirmation. By affirming important aspects of their life unrelated to the threatened academic domain, students reduce their experience of psychological threat. Students, for example, are asked to briefly write about a value that they themselves consider important. Because self-affirmation merely alters the students' response to a perceived stereotype threat, the intervention does not distort the students' perceptions of the threat itself and thus cannot be equated with the rather negative defensive responses that lead to distortion and eventually psychological disengagement. Self-affirmation induces positive adaptive behavior instead. In other words, the

Example 12.5 Review of the Literature

intervention boosts the students' "psychological immune system," affirming their sense of overall adequacy and self-integrity without altering their sense of being subjected to a testing situation (Aronson, Cohen, & Nail, 1999; Sherman & Cohen, 2002; Steele, 1988). Self-affirmation interventions remind students that their sense of self-worth does not simply depend on the evaluative outcomes or feedback they receive. One study tested whether self-affirmation could reduce stereotype threat in college women taking a difficult math test. Three groups of women were subjected to the following conditions: One group of women took a test described as "diagnostic" of their math abilities; the second group of women received a test described as a reasoning task developed for future research; the third group of women completed a self-affirmation exercise prior to completing the "diagnostic" test. Women in the diagnostic-test condition performed worse than women in the reasoning-task condition. The comparison of the group's performance shows the stereotype threat women experienced in the first condition. The group of the self-affirmed women, however, performed just as well as women in the reasoning–task condition and equal to male students (Martens, Johns, Greenberg, & Schimel, 2006), confirming not only the existence of stereotype threat but also the effect of self-affirmation interventions on student performance.

Whereas Steele has suggested that students experience stereotype threat only when they identify with the relevant domain, the domain being tested – the female math majors who completed the diagnostic test, for example—Steele also acknowledged that no satisfactory test has yet supported this prediction (1997). Moreover, because stereotype threat affects students whether they are conscious of the stereotype or not (Aronson, Fried, & Good, 2002), it seems reasonable to believe that students do not have to stake a major part of their self-regard in the tested academic domain to experience depressed performance.

Cohen and Garcia's 2006 study has supported this assumption. Their double-blind, randomized field experiment tested whether a psychological intervention would affect students' experience of stereotype threat in the school environment. By having students affirm their sense of self-integrity through a brief writing assignment, the researchers aimed to reduce students' psychological burden of potentially confirming an ability-related, negative stereotype. Participants in their first study, 119 African American and 124 European American suburban middle-school students, came from lower- to middle-class families. The intervention was administered at the beginning of the fall term and repeated four to five times throughout the year. Written instructions directed treatment students to write about their most important value(s) and why those values are important to them whereas control students were directed to write about their least important value(s) and why those values might be important to others. The results of the study showed that African American students who previously performed at or below average showed the greatest gains in grade point average. High-achieving African American students' grade point averages were minimally affected whereas European American students' grade point averages remained unaffected.

Cohen and Garcia's follow-up study (2009) conducted two years after the seminal study showed that the affirmation intervention yielded lasting effects. Although no significant effect could be determined for European Americans or for high-performing African American students, those students already performing at the 75th percentile prior to the intervention, low-performing African American students, performing at the 25th percentile, showed significant, sustained gains of .41 grade points over a two-year period. The gains in grade points for African American students were also reflected in their self-assessment of adequacy in school. A survey measuring students' ability to fit and succeed in school found that African American students in the treatment condition reported having retained their sense of adequacy in school; conversely, African American students in the control condition reported having a lower sense of adequacy at the end of the year.

The self-affirmation intervention, thus, cannot only be linked to improved performance in below-average-achieving African American students but also to students' sense of academic self-concept, to

Example 12.5 Review of the Literature

maintaining their academic engagement and self-integrity. Furthermore, the self-affirmed African American students' improved performance and increased identification with the academic domain can be linked to fewer enrollments in remedial classes and may contribute to a decrease in dropout rates for these students.

Yet because the achievement gap already seems apparent at the elementary-school level, administering an affirmation intervention at an earlier age might prove even more effective. Alexander and Entwistle (1988) and Burton and Jones (1982) have found that although African American students enter elementary school with test scores not too far behind their White counterparts, by sixth grade the disparity in test scores almost amounts to two grade levels (Gerard, 1983). Furthermore, since students are more invested in elementary school yet only start to make social comparisons during the latter grades (Ruble & Frey, 1991), an intervention targeted at fifth-graders might break the recursive cycle and lower the achievement gap at the crucial age before academic disidentification and social comparison start to figure prominently in the students' evaluations of their performance

Cohen and Garcia (2006) expected that a self-affirmation intervention would improve the achievement of all students belonging to groups that are subjected to threats "sufficiently pervasive and intense enough to impede the entire group's average performance" (p. 1307). A replication of the study with a larger sample might show significant results in other stereotyped groups besides African American students.

For instance, in as much as mainstreamed, disabled students feel that they are negatively stereotyped in the regular education classroom and, subsequently, aim to prove themselves against the stereotype, their performance should be positively affected by a self-affirmation intervention. That disabled students often perceive themselves as stereotyped is supported by a number of studies (Fichten, 1989; Smart & Wegner, 1999). That disabled students also do not measure up to the majority of students in test results and average performance is well supported (National Center for Education Statistics, National Assessment of Educational Progress Data Explorer, 2009). Yet whether any part of this achievement gap can be attributed to stereotype threat has so far not been confirmed. Increasing sample size to allow for the examination of self-affirmation interventions on the performance of mainstreamed students will be one of the goals of the proposed study.

Administering the self-affirmation intervention to late-elementary school students might show that only a small number of students work under the increased pressure of potentially fulfilling a negative expectation about their group. It is difficult to determine the degree to which late-elementary school children experience this psychological threat. Studies of Beneson and Dweck (1986), Eshel and Klein (1981), and Pintrich and Blumenfeld (1985) have shown the decline in elementary students' self-assessment of intellectual competence (in Stipek and Mac Iver's, 1989, 521), which leads one to believe that a self-affirmation intervention administered to late-elementary school students might yield significant results. The even steeper decline in student perception of academic competence during the early middle-school years is another reason to test the intervention with younger students. In as much as a lack of identification with the academic domain affects the students' overall sense of self-integrity and self-worth, the middle school student should have fewer domains to self-affirm than the generally more optimistic elementary-school student.

Summary of the literature.

Extensive research has supported the existence of stereotype threat and its potential to undermine performance, especially the academic performance of students from negatively stereotyped groups. Whereas students subjected to stereotype threat usually respond to the evaluative pressure in a number of defensive ways that eventually lead to psychological disengagement, self-affirmation interventions can

Example 12.5 Review of the Literature

increase students' adaptive behavior and academic performance by buffering students' psychological resilience.

Cohen and Garcia's studies (2006, 2009) established that stereotype threat affects middle school students and that self-affirmation interventions can break the recursive cycle of the self-reinforcing poor performance of these students. Finding out whether an intervention at a level of schooling where stereotype threat has not yet contributed to significant achievement gaps between the majority and minority groups can produce significant effects is the aim of the proposed study.

Statement of hypotheses.

The proposed study will be a replication of Cohen and Garcia's 2006 study, which showed that self-affirmation intervention mediated stereotype threat in low-to-average-performing African-American middle school students. Cohen et al. found that these self-affirmed students performed significantly better than their untreated counterparts. The study, thus, established that seventh-grade students perceive a negative ability bias. The aim of the proposed study is to determine whether elementary-school students already experience stereotype threat.

The alternate hypothesis is that below-average-performing fifth-graders in the Kaiserslautern military community (KMC) Department of Defense (DoD) elementary schools treated with six affirmation interventions over the school year will receive higher end-of year grade point averages (GPAs) than below-average-performing students who receive three self-affirmations in the second semester and below-average-performing students in the neutral condition. The null hypothesis states that below-average-performing fifth-graders in the Kaiserslautern military community (KMC) Department of Defense (DoD) elementary schools treated with six affirmation interventions over the school year will not increase end-of year grade point averages (GPAs) than below-average-performing students who receive three self-affirmations in the second semester and below-average-performing students in the neutral condition.

12.1.6 Methodology.

As described in Chapter 2, the Methodology section is critical to any proposal or study. Any reviewer of this part should be able to replicate the study based upon the information presented. The following components were previously presented: (a) Research Approach and Design, (b) Population or Sample(s), (c) Instruments, (d) Procedures, and (e) Assumptions and Limitations. Each component is important; for example, specific actions taken to (a) identify the population or sample, (b) develop a data instrument, and (c) provide a step by step procedure must be in sufficient detail to allow another person to apply the plan. **Example 12.6** below is an exemplar of a Methodology section. After reading it, would you be able to replicate the study? The hypothesis is presented for extra information here. It is not necessary to show the Chi Square table in the report but it can be allowed.

Example 12.6 Methodology

Null hypothesis (H_0): A home with granite countertops does not play a major role in Knob Noster, Missouri, homebuyers' purchasing decisions; therefore, the distribution will be as follows: 65% will be influenced, 30% will not be influenced, and 5% will be undecided

Methodology

Research approach and design.

This will be a quantitative research approach using a descriptive research design. Threats to the validity, or forces that remove the aspect of truth from the study, could be (a) dishonest sample data, (b) misunderstanding the survey question, and (c) a potentially small sample size. Dishonest sample data refer to either a false answer from homebuyers being surveyed, or perhaps the researcher hearing the wrong answer during the verbal survey. Misunderstanding the survey question means that homebuyers do not understand what is being asked, leading to questions about the wording of the survey question (or reliability). Also, the smaller the sample size number, the greater the chance data will deviate from the true population data. These can lead to missing a relationship when there really could be one there (Bluman, 2012).

The opposite can also happen—finding a relationship when no relationship actually exists. This can be done by over analyzing data, or searching for a specific result until it is found (or accidentally made-up). Also, the 95% level of significance used for this tasking leaves a 5% chance of invalidity during the (chi-square) testing process. Other threats that can model either relationship error include the respondent feeling pressured to answer a certain way and a sample that is assumed to be normally distributed when it may not be (Bluman, 2012).

The reliability of the tasking measures whether the instrument will be accurate and will have consistent findings if the survey were to be accomplished again in the future. A threat to accuracy would be the researcher not correctly asking the questions, or trying to ask someone with a different first language the survey questions. Threats to consistency would be the researcher not asking the same question to each homebuyer. These previously identified threats can be lessened with a pilot test of the survey, which would also allow practice for the researcher communicating the survey (Bluman, 2012).

Population and sample.

The target population for the tasking will be the 2,740 person population of Knob Noster, Missouri ("General Housing Characteristics: 2010," 2010). To gain an understanding, as of 2010, the population was made up of 1,863 persons equal to or over the age of 21 years old, as shown in Figure 1 ("General Housing Characteristics: 2010"). In essence, this will be the age group the sample will come from, although age will not be a requirement when choosing the sample. As previously stated, the sample will be a homebuyer: someone who (a) has been approved for financing in the purchase of a home, (b) is within a week of the closing date, (c) has purchased a home in the past week, or (d) is a combination of (a) and (b). The data will be collected by administering a verbal survey to a judgment sample of the target population. The sample number will be as vast as the housing market allows in Knob Noster, Missouri–with a target number being 40.

Example 12.6 Methodology

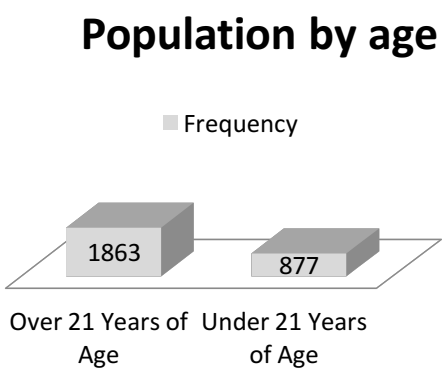

Figure 1. Population by Age in Knob Noster, Missouri.

Instrument.

The instrument used in this tasking will be a two-item verbal survey. The questions will be:

1. Did granite countertops influence the decision to buy your new home?
   Please answer: yes, no, or undecided.
2. Please state your (a) first name, (b) last name, and (c) the address of your new house.

The first question will be used as data for the inferential study. The second item will be used to verify the homebuyer actually bought a new home, and the home is located in Knob Noster, Missouri. The survey is attached in Appendix A. An anticipated pilot study of 10 random adults will reveal zero flaws in the questions and that individuals understand the meaning of key terminology.

Procedures.

This will be a quantitative research approach using discrete variables and a descriptive research design. Measuring central tendency, using the mode, will be chosen because the most common value that occurs in the data set will give the researcher a better approach to analyzing and summarizing the results of the study. The researcher plans to examine the way things are and to use past and present data, in addition to a survey, as the descriptive design. Nominal scale data will be the measurement scale because (a) no ranking system will be used, (b) data will be put into non-overlapping categories, and (c) there will be no in-between variables (Bluman, 2012).

As granite countertops are a luxury item elevated by public opinion, little research on them exists in academic journals. The research was generally based on (a) trade magazines, (b) home and interior design websites, and (c) the latest design news articles. A listing of sources can be found in the references section at the end of the tasking. A review of the literature has been accomplished and will be ongoing throughout the rest of the tasking; see Appendix C for a time plan. Also, a two-question survey has been created in a large font-size to make it legible to the researcher conducting the survey; see Appendix A. The survey will be conducted on a judgmental basis; thus, the researcher, at personal discretion, will visit the three local realty offices in Knob Noster, Missouri; see Appendix B for realty office information. The researcher will visit the offices as many times as preferred over the test period of 30 days. When homebuyers are found in the office, or can be referenced by the real estate agents in the office, the researcher will approach the homebuyer(s) and ask to survey them. A nominal measure of (a) influenced, (b) not influenced, or (c) undecided will be used to collect data.

Example 12.6 Methodology

An inferential chi-square test for goodness-of-fit will be used to determine the connection between homebuyers and granite countertops. The researcher seeks to find whether homebuyers factor granite into their decision-making process so the researcher can plan for future business prospects. After surveying is complete, the sample data will be shown in table format similar to Table 1.

Table 1 Chi-square Distribution of Observed Values

Category	Influenced	Not Influenced	Undecided
Homebuyer (observed)	0	0	0

According to Bluman (2012), the chi-square critical value can be determined at 95% confidence, or, at $\alpha = .05$, and the degrees of freedom (df) = 2 (categories – 1). The critical value will be 5.991, according to the chi-square distribution table. After restating the hypotheses, the chi-square determined value must be calculated using the correct formula. The claim distribution will be as follows: 65% will be influenced, 30% will not be influenced, and 5% will be undecided. The expected values will be calculated for each column using the following formula: $(\text{expected value}_1 * \text{total number surveyed}_1)$. Observed and expected values will be entered into table format for understanding; see Table 2. Once both values are available, they will be inputted into the chi-square formula and an (χ^2) value will be found (Bluman, 2012).

This (χ^2) value will then be compared to the critical value, 5.991. If (χ^2) is greater than 5.991, the null will be rejected. If (χ^2) is less than 5.991, there will not be enough evidence to reject the null. To display these data, a (a) histogram, (b) pie chart, and (c) linear graph will be used. A histogram will represent the mean frequencies of the data to give the viewer an illustrative way to increase their understanding. A pie chart will be used to show the link between the data and how the answers total the sample size. The linear graph will show the relationship between the observed and expected values to show whether the values are a good fit or not (Bluman, 2012).

Table 2 Chi-square Distribution of Observed and Expected Values

Category	Influenced	Not Influenced	Undecided
Homebuyer (observed)	0	0	0
Homebuyer (expected)	0	0	0

Assumptions and limitations.

It will be assumed the sample size will represent the population of Knob Noster, Missouri. It will be assumed homebuyers understand (a) English, (b) the meaning of the questions asked, and (c) the importance of truthful answers. Assumptions about the chi-square goodness-of-fit test will be that the data are from a random sample and the frequency in each column will be more than five. Limitations include (a) lack of specific academic research available, (b) not having enough time to complete an accurate study, and (c) the risk of the researcher's questions bringing the subject of granite countertops to light in the respondents' eyes when they had not thought of it previously. Another limitation will be the lack of homebuyers due to the current recession in the United States. The researcher hopes to reach a large sample of 40 to get an accurate picture of Knob Noster, Missouri; nonetheless, may be limited to the number of homes sold during the test period.

12.1.7 Anticipated Results and Conclusions.

The Research Proposal is just that, a plan of action. The researcher anticipates obtaining valid data and administering an appropriate statistical test for a quantitative study or subjectively assessing the data for a qualitative study. In addition, information gained

during the proposal preparation thusfar is compared to that presented in the Literature Review. For a proposal, a summary of the information should be reviewed and any further actions required recommended. Below in **Example 12.7** is an illustration of this section of the proposal.

Inferential statistics are planned to test a theory. As you write the anticipated results section, you should assume that your reader has a good understanding of statistics. Relate your anticipated findings to your literature and important findings you found earlier. Discuss what you think will occur and why; state whether your hypothesis will be accepted or not and why. Do not review basic concepts such as how the null hypothesis may fail to be accepted (rejected). Just state your expected results.

Example 12.7 Anticipated Results and Conclusions

Anticipated Results and Conclusions

Numerically, the researcher expects $(\chi^2) \geq 5.991$. The chi-square test will produce a result that the observed frequencies will be a good fit of the specific pattern of the claimed values (or percentages). Differences may be due to rounding or sampling error, but the chi-square test will determine values are not significant enough to change the overall result of the tasking.

The study results aim to show the influence granite countertops (above any other countertop type) have on homebuyers' purchasing decisions in Knob Noster, Missouri. Based on source documentation such as Countertops, a 2012 Consumer Reports article, research will support the alternate hypothesis that a home with granite countertops does play a major role in homebuyers' purchasing decisions. Hunt explained a link between granite and opulence in his 2005 article, Building Stones Explained 3. This supports the beauty and extravagance of granite. Coupled with Vermeulen's (2007) claim that granite countertops "continue to be all the rage," the alternative hypothesis would likely be supported (p. 100). The researcher expects the data to closely reflect the hypothesized frequencies: That 65% will be influenced by granite countertops, 30% will not be influenced, and 5% will be undecided. It will then be easy to infer homebuyers in the Knob Noster, Missouri, community are influenced by a home with granite countertops. It will also be assumed that 65 out of every 100 people would lean toward buying a home with granite countertops over a similar home without granite countertops. Consequently, 30 out of every 100 people would not be swayed by the igneous rock countertops.

In conclusion, the anticipated results of the study are that buyers will be swayed by granite countertops. However, if the findings are different, further analysis will be conducted. If findings are as the researcher supposes, further research and a second study will be performed to validate the accuracy of the test results. Also, the researcher can start to plan home renovations with the installation of granite countertops as a high priority on the project listing.

12.2 Research Study.

Components of a Research Proposal were presented above. When a plan is followed, a Research Study is then presented. The Topic and Title do not change; however, some parts of the Proposal must be presented to show what was planned but then added to what was completed. Beginning with the Abstract, the findings are summarized and what data were found. *In the Table of Contents, the Anticipated Results and Conclusions section*

is deleted and three new parts are added: (a) Results, (b) Analysis and Discussion, and (c) Summary and Conclusions (review Chapter 2).

Previously, it was indicated that research shows a helical pattern; in other words, *research begets research*. When findings are presented, more questions or issues may be realized. Qualitative researchers use subjective assessments and present their findings that may or may not be supported by others. Quantitative researchers use statistical inferences and tests that are not 100% certain. There are issues for errors, mainly because sampling is used. Even when 100% of the target population is assessed (mostly when there are small numbers involved), there could be threats to validity and reliability.

Other sections of a study are reviewed and changed as needed. The Review of the Literature may indicate *new or updated* information. Methodology may alter due to different data tests or plans to collect data. Researchers begin with a plan but alter it as new and pertinent information arises. At the end, one usually has limited time and money to pursue continued research efforts. Findings are presented, summarized, and new courses of action may be recommended. By presenting the data collected and analysed, additional Tables and Figures may be used, statistical tests covered, and detailed information summarized—leading to an extensive report. The final part is the presentation of further recommended action. Below **Example 12.8** shows these new sections (in abbreviated fashion) of a study.

This section gives you more of a free hand to engage in conjecture and speculation than any other portion of the research plan and actions. Your data which will be collected from a sample need to be related to the target population. It is here that you draw the bottom line to your study:

1. What will be the overall conclusion?
2. What will be the implications of your results for any theories?
3. How can your results be applied in various settings – the laboratory, the real world, our body of psychological knowledge?
4. What new research should grow out of this study?

Example 12.8 Results, Analysis and Discussion, Summary and Conclusions

Results

The data collected for the Test Group and the Control Group included the raw scores for the two TerraNova tests taken by the participants. The data were evaluated for the groups to determine central tendencies of the two tests and of the difference in scores between the two tests.

TerraNova tests.

Example 12.8 Results, Analysis and Discussion, Summary and Conclusions

The scores on the TerraNova tests taken by the Test Group (n = 34) are shown in Table 1. The scores for the first TerraNova test ranged from the 27th percentile to the 97th percentile, a range of 70. The mean score was 75.1 with a standard deviation of 17.4, and 76.5% of the scores were within one standard deviation of the mean.

The scores on the second TerraNova test taken by the Test Group ranged from the 35th percentile to the 99th percentile, a range of 64. The mean score was 77.0 with a standard deviation of 15.6, and 70.5% of the scores were within one standard deviation of the mean.

Table 1 shows the scores for the two tests and the difference in scores between the two tests for the Test Group. The point differences between the two test scores ranged from –19 to +21, a range of 40 points. The mean point difference for the Test Group was 2.00 points with a standard deviation of 9.24, and 76.47% of the point differences were within one standard deviation of the mean.

The scores on the TerraNova tests taken by the Control Group (n = 37) are shown in Table 2. The first test scores of the Control Group ranged from the 10th percentile to 99th percentile, a range of 89. The mean score was 60.8 with a standard deviation of 18, and 78.3% of the scores were within one standard deviation of the mean.

The scores on second TerraNova test taken by the Control Group (n = 37) ranged from 27th percentile to 99th percentile, a range of 72. The mean score was 63.7 with a standard deviation of 17.7, and 70.27% of the scores were within one standard deviation of the mean.

Table 2 shows the difference in scores between the two tests for the Control Group. The point differences ranged from –13 points to +19 points, a range of 32 points. The mean point difference for the Control Group was 2.92 points with a standard deviation of 7.37, and 72.97% of the point differences were within one standard deviation of the mean.

Table 1 Test Group TerraNova Tests

Test Scores		**Difference**	**Test Scores**		**Difference**
First	Second		First	Second	
27	35	8	80	85	5
35	35	0	81	79	-2
43	57	14	81	82	1
47	64	17	82	76	-6
53	59	6	83	77	-6
64	85	19	84	63	-19
64	61	-3	86	79	-7
67	78	11	86	81	-5
67	88	21	86	96	10
68	56	-12	89	90	1
70	74	4	91	77	-14
70	87	17	91	88	-3
75	77	2	91	92	1
76	76	0	91	93	2
79	74	-5	95	96	1
79	81	2	97	96	-1
79	87	8	97	99	2
n = 34			Mean Score: 75.1	Mean Score: 77.0	Mean Change: 2.03

Example 12.8 Results, Analysis and Discussion, Summary and Conclusions

Table 2 Control Group TerraNova Tests

Test Scores		Difference	Test Scores		Difference
First	Second		First	Second	
10	29	19	62	72	10
30	42	12	65	74	9
33	44	11	65	80	15
38	27	-11	66	68	2
39	42	3	66	69	3
44	31	-13	67	69	2
47	44	-3	69	74	5
48	62	14	70	71	1
49	47	-2	71	73	2
49	58	9	72	76	4
51	58	7	72	78	6
52	49	-3	74	73	-1
53	56	3	76	81	5
56	66	10	77	81	4
58	55	-3	78	67	-11
61	65	4	78	88	10
62	54	-8	83	83	0
62	57	-5	98	96	-2
			99	99	0
n = 37			Mean Score: 60.8	Mean Score: 63.7	Mean Change: 2.92

Inferential statistics.

An unpaired, two-tailed Student's *t*-test was conducted using the means of the score differences of the Test Group and the Control Group to determine if the difference in the mean changes in scores between the two TerraNova tests was significant. The degree of freedom (df) for the test was 69, and the alpha significance level was .05. The determined *t*-value was -0.499, and the critical value was +- 1.995. Comparing the absolute value of the *t*-value of -0.499 with the critical value of +- 1.995 indicated that the results accepted the Null Hypothesis that there will be no difference in the academic achievement of American high school students in Heidelberg, Germany, who have had a parent deployed to Southwest Asia when compared to their academic achievement the school year before the deployment of the parent.

Analysis and Discussion

The results of the Student's two-tailed *t*-test ($t = -0.499$) comparing the mean of the Test Group difference in test scores with the mean of the Control Group difference in scores did not reach the upper critical value of +-1.995 indicating that there was no significant difference in the changes in TerraNova scores for the Test Group and the Control Group.

Comparison to previous research.

After reviewing the literature and considering the circumstances surrounding troop deployments in 2005, the prediction was that parental deployment to Southwest Asia would adversely affect student academic achievement. Huebner and Mancini indicated that a significant number of participants in their study voiced concerns about doing well in school while a parent was deployed. In his study, Lyle found

Example 12.8 Results, Analysis and Discussion, Summary and Conclusions

that students' scores on the math portion of the TAAS went down a small amount if the students had had a parent deployed. Additionally, studies that were more than a decade old indicated that parental separation adversely affected student performance (Huebner & Mancini, 2005). The results of this study were not consistent with previous studies.

Interpretation.

The fact that the mean scores for the Test Group went up on the second TerraNova test appears to call the original prediction into question. Because the scores were higher, a natural conclusion would be that the deployment had no negative effect on academic achievement. However, as Marchant (2004) indicated, teachers tend to teach-to-the-test, and such emphasis by teachers would logically lead to students scoring higher each time they took the TerraNova. Additionally, a common criticism raised about standardized testing was that the more often the students take the tests, the better they do because of familiarity (Lyle, n.d.). The above observations would provide reasonable interpretations of the Test Group Scores going up on the second test.

The Control Group's mean scores for the second test went up more than the Test Group's mean scores for the second test by almost one-third, 2.92 compared to 2.0. Even though the *t*-test results indicated there was no significant difference between the two groups' change in scores, the fact that the students who did not have deployed parents had a greater increase in scores was worth noting. The question raised is whether the Test Group students would have improved their scores more than they did if they had not had deployed parents. If so, then parental deployment to Southwest Asia could to some degree affect student academic achievement.

Heidelberg High School provides a broad range of support services for its students. The school formed Student Support Teams (SSTs) for each grade level in 2002. The SSTs consisted of counselors, teachers, the school psychologist, the school nurse, administrators, and the school alcohol and substance abuse counselor. They reviewed the records of students determined to be at risk based on academic, social, emotional, and family concerns. The teams included students who had deployed parents among those at risk. The SSTs monitored student performance, attendance, disciplinary record, and other areas associated with students succeeding at school (A. Scheuermann, personal communication, November 22, 2005). The effects of the SSTs' involvement in the academic success of at-risk students, including students with deployed parents, could not be discounted in this study. As indicated by Huebner and Mancini, support for students with deployed parents is crucial to the students' success in school.

Because of the questionable worth of standardized tests, perhaps the TerraNova was not the best indicator of academic achievement (Marchant, 2004). With that background, a more informative study would involve comparing student grades in school rather than standardized test scores. It would be easier to gather the data using standardized test scores, but it would be worth the effort to study how children perform in their school courses over a period of time that includes the deployment of a parent to a combat zone.

Summary and Conclusions

The anxiety, fear, and uncertainty experienced by adolescents with parents deployed to a combat zone must be recognized, and support services must be provided for those adolescents. Future studies need to be conducted to determine the effects of parental deployment on adolescents' academic achievement. Studies should use performance in class as a measurement of achievement. They should also compare effects of deployment between schools with support services such as Heidelberg High School's SSTs and schools without support services to gauge the effectiveness of the programs.