DEVELOPMENT OF A SINGLE-FORM SCHOOL SAFETY SURVEY FOR EARLY ADOLESCENTS AND ADULTS

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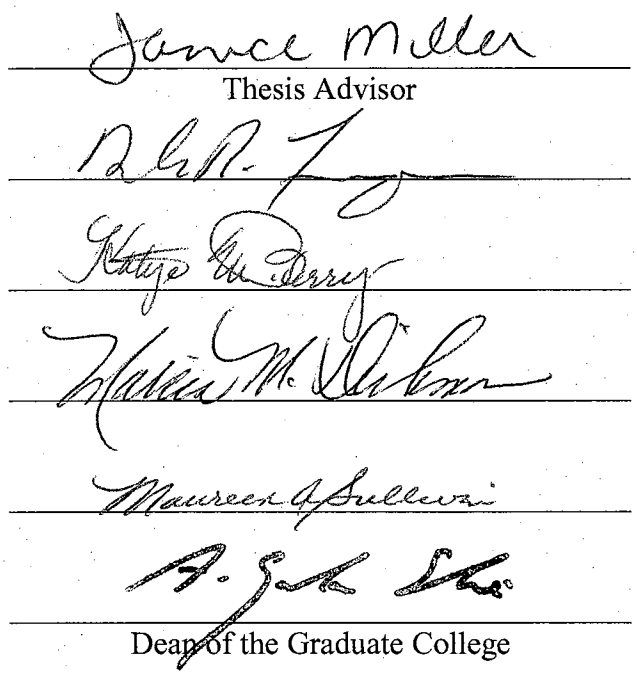

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CHAPTER I

INTRODUCTION

During the mid 1970s, school safety and security issues began to become a concern for lawmakers, school personnel, parents and community members (Muir, 2000). McDermott (1983) noted that during the 1970s, congressional hearings, special conferences, research studies, media coverage and public opinion polls indicated that crime occurring inside schools was becoming an increasing concern. This trend of increasing concern in relation to school safety and security issues appears to have continued up to the present day. St. George & Thomas (1997) referred to the escalating epidemic of youth violence and pointed out that the United States Department of Health and Human Services made "reduction in adolescent violence" a national health objective for the year 2000. Glassman (1993) reported that in a survey of public schools nation wide, that 82% of the schools reported an increase in the number of violent incidents over the previous five years. The trend for concern about safety and security issues appears to be on the increase in the American school environment. The National Association of School Psychologists (NASP) reported in 1997, that more that 3 million students are assaulted each year in school, and that nearly one-quarter million students bring guns to school.

What has brought about this trend of increasing violence in the schools? A look at some of the major social and technological changes that began occurring during the mid twentieth century may help to shed some light on this trend. Included in the major social changes are integration which began with the *Brown v. Board of Education* decision in 1954 (Power, 1970); President Lyndon Johnson's "war on poverty" which led to massive

appropriations of federal funds for educational programs during the sixties as well as the advent of American space exploration which also began in the sixties (Power, 1970); the assassinations of President John Kennedy, Senator Robert Kennedy and civil rights leader Martin Luther King Jr. occurred during the sixties as well. In the seventies, reaction against the war in Vietnam brought about major antiwar protest, radical student movements and clashes between radical students and police as well as the cutting back of graduation requirements, the eliminating of dress codes and easing of disciplinary rules at the high school level (Ravitch, 2000).

During the eighties, the definition and nature of families began to change as indicated by increasing divorce rates, mothers joining the work force and employment patterns, in effect, decreasing the number of adults available to be involved in children's lives (Cobb, 1990). During these decades, major social changes and upheavals began to change the traditional influence of schools and parents upon the children. The comfort of a once treasured concept of consistent and reliable structure of tradition and custom in American schools, homes and politics had been irrevocably altered.

Several events occurred during the 1990s that brought school violence to the forefront of educational concern. In 1999, the Columbine school shootings occurred in Littleton, Colorado. This tragic event along with other school shootings that have occurred across the nation, during the late 1990s into the first years of the twenty-first century, have received intensive media attention and have heightened public awareness of safety and security issues. Volz observed in 1999 that the school shootings have had a large effect on public opinion. The bombing of the Federal Building in Oklahoma City in 1995, the attack on the World Trade Center that occurred in 2001 in New York City, as

well as media coverage of continuing threats of terrorism to the United States may have added more tension and anxiety to the public's perceptions of personal safety and security. In addition to the increase in violence already being experienced in schools, the above mentioned incidents of violent attacks on American society at large may have heightened the public's awareness of the need for protecting their children in the school environment. As observed by Skiba, Ritter, Peterson, Miller, and Forde (2002), "There can be little doubt that the tragic events of recent years have increased our awareness of the need for school violence prevention, as well as the motivation to seek out and implement new programs [that address safety issues]" (pg. 32).

Within the last decade, both federal and local legislative bodies have created mandates that provide funding and technical assistance to help schools and communities develop safe school committees and safe school plans. Stephens (1994) noted that at the federal level, the Safe Schools Act was passed by Congress in 1994 to provide funding and technical assistance to school systems that wished to develop safe school plans. Stephens believes an important part of developing a safety plan is to conduct an initial needs assessment. He views surveys as being one way to facilitate this goal.

Pencil and paper surveys are often used in the school environments as a means of identifying needs assessment goals (Nagle, 1995). Gay (1996) observed that surveys or questionnaires are efficient, can be done quickly, and are a relatively inexpensive way of obtaining information. Accordingly, survey instruments are often the assessment tool of choice and provide good information to those who employ them. Therefore, this study focused on the development of a survey that may be used to assess perceived safety in the school environment. This appears to be crucial to the ongoing process that many schools

are currently employing to meet needs assessment goals in conjunction with safe school plans.

Level of Focus for Use of the Survey Instrument

The literature identifies early adolescent students as often experiencing more incidents of violence in the school environment than elementary or high school students (Bailey, Fleweling, & Wallace 1997, & Fishkin, Rohrbach, & Johnson 1997). Researchers have cited factors such as age, major hormonal and body changes, and developmental stages (Finks, 1990; Papalia & Olds 1992; & Steir, 1973) as critical at the adolescent stage. Further, changing classes hourly (DeRouen, 1998), and larger school populations at the middle school level (Carnegie Council on Adolescent Development, 1989) have been cited as being possible sources of the emotionally volatile and unstable conditions that can be present in a middle school environment. As a result, concern regarding safety and security issues appear to be at its highest levels in the middle school environment. Therefore, early adolescents or middle school level students appear to be a promising target population for safety and security.

Problem Statement - Objectives

Typically, in a school environment, certain elements of the population such as students, teachers, administrators and parents are surveyed with separate forms that utilize different questions, formats and wording for each group (MacDonald, 1997; Mahaffey, 1995; Skiba, Ritter, Peterson, Miller, & Forde, 2002; Stephens, 1995). The different survey forms for a school environment might ask respondents for a combination of qualitative and quantitative information. The student form, for example, might focus only on the actual incidence of stealing, bullying, name calling, assaults, etc., while the

teacher form of the survey might focus on questions about teachers' opinions of school policies, procedures, actual incidents of theft and assault.(Mahaffey, 1995). As a result, useful information might be obtained from the students' or from the teachers' surveys, but it is not possible to statistically compare the groups directly to each other due to the differing styles and content of each form. Nor is it possible to combine the responses from the different forms to provide data that could be analyzed in cohesive, consistent ways. The data tend to be unidimensional with respect to "respondent" and can be analyzed only in relation to the group sampled, i.e. students.

Students, teachers, and administrators have generally been sampled as representative of the school population; however, the total population of a school environment appears to consist of more individuals than just these three groups. Other individuals who inhabit the school environment on a regular basis include janitors, bus drivers, secretaries, cafeteria workers, security officers, librarians, school nurses, speech pathologists, school counselors, school social workers, occupational therapists, physical therapists, classroom aides, school psychologists, and volunteers. If grouped by position and compared with students and teachers, these individuals do not comprise large numbers. Yet each person experiences and perceives the school environment differently and can provide significant feedback in assessing safety perceptions in the school environment. Each of these individual's interactions with each other and their interactions with the physical structure of the school combine to create a school environment. A single-form survey is one approach that can efficiently assess how the inhabitants of a school environment perceive safety and security aspects of their school. The research question then, becomes: Is it possible to develop a quality single form safety survey

appropriate for individuals who inhabit the same middle school environment? Answering this question will provide schools with a useful needs assessment tool in regard to safety and security issues. This is important because a single form safety survey, that assesses levels of concern from the perspectives of students and adults across roles and positions within the school environment, can be compared directly and, as a result, may provide a more complete picture of the safety and security issues within a school environment.

Four main objectives served as a focus for accomplishing the goal of answering the research question: (1) develop a measure appropriate to the early adolescent school environment, (2) obtain data to establish reliability and validity, (3) modify the survey based on obtained data, and (4) present a survey for use in an on-going middle school safety needs assessment program.

The first objective involved defining a target population. The target population for this study was middle school students (sixth, seventh, and eighth graders) aged eleven to fourteen years and the adults associated with these students. The second objective addressed the development of a single form school safety and security instrument that was sound both in terms of reliability and validity. The third objective involved making adjustments to the survey to enhance the psychometric properties of the measure. The fourth objective addressed the development of a survey to provide information useful to needs assessment in a school's safety and security status.

Purpose of the Study

The purpose of this study was to develop a reliable, valid multi-domain single form survey to assess safety and security issues in middle schools. Additionally, this form should be appropriate for middle school students and the adults associated with the

middle school environment. In other words, this study presents the development of a single survey form that allows those who are associated with a school environment to report safety and security concerns and perceptions about pertinent areas and safety aspects of the school environment.

Significance of Developing the Survey

Information useful to needs assessment may add consistent, and meaningful data to the ongoing process of exploring and improving a school's approach to safety and security issues. The single-form survey would allow schools to gain a more complete conceptualization of safety and security issues for their specific site. The resulting survey data may help middle schools establish baseline profiles of the safety and security issues unique to their particular school environment. Instead of establishing a baseline based on only one or two segments of the school environment responding to separately designed instruments, all of the school constituents would be able to respond to a single instrument. This approach could provide very useful information to school administrators and school committees who want to comply with federal and local mandates to develop safe school plans and eliminate problem areas from the school's environment. The possibilities are also numerous for creating subgroups from the survey population and in providing flexibility in extracting or combining information. Finally, giving individuals the opportunity to have input into information gathering from their own unique perspective provides a good first step in alleviating some of the levels of concern and uneasiness regarding safety and security, and can be an empowering experience for all concerned.

Summary

In Chapter one, the background and history of school safety and security issues from the mid 1970s to the present were examined. The use of paper and pencil surveys as a needs assessment tool in regard to safety and security issues was addressed. The need for a single form instrument at the middle school level was explained along with the purpose, objectives and significance of developing such an instrument.

Chapter two will address middle school characteristics, history and development as seen through the lenses of ecological theory and field theory. Development of a school safety survey will also be viewed from these two theoretical perspectives and existing school safety surveys will be reviewed. Chapter three will present the method used in this study. Participants, development of the survey, procedures, reliability, content validity and construct validity will be presented. Chapter four will address the results obtained in the study. Reliability estimates and construct validity will be investigated. Chapter five will present a discussion of the resulting school safety survey along with conclusions and recommendations.

CHAPTER II

REVIEW OF LITERATURE

Four relevant areas in the literature guided by Bronfenbrenner's ecological theory (1979) were examined in relation to developing a single form school safety and security survey instrument. First, safety in the schools as an issue is discussed. Second, the middle school as an educational level is examined. Third, the school environment as perceived through the lenses of ecological theory and field theory is presented. Fourth, elements crucial to the development of the school safety survey are presented.

Safety in the Schools

The mid 1970s are often identified as the starting point for issues of school safety. Major social, cultural and political upheavals occurred during the decades of the 50s, 60s, and 70s that had a profound effect on the schools. A combination of factors led to a loosening of the control structures in the school environments as well as the support from society at large for the disciplinary functions of the school. Hence, an increasing trend in school violence, along with the accompanying concerns for safety and security, began in the mid 70s and has continued up to the present day.

What has transpired in the last thirty years, surrounding school safety and security issues, can be viewed utilizing Bronfenbrenner's theory of ecology (Bronfenbrenner, 1979). It provides a structured means for viewing the "whole picture." Bronfenbrenner's theory of ecology identifies four major structural systems and describes the nature of their interactions (Muuss, 1988). These systems are conceptualized as a set of nested structures, each contained within the next (Tharinger & Lambert, 1990). They include the microsystem which is the interaction between the person and the immediate setting

containing the person. An example of a microsystem relevant to the current study might be home or school. The mesosystem is defined as the interrelations among major settings containing the person. An example of the mesosystem relevant to the current study might be the relations between home and school. The exosystem encompasses and affects the immediate settings containing the person. An example of the exosystem relevant to the current study might be the parent's work setting or actions taken by the school board. Finally, the macrosystem is a structural system which contains the overarching patterns of the culture, such as economic, social, educational, political and legal forces that surround the person.

In terms of the macrosystem posited by Bronfenbrenner (1979), the social, educational, political and legal trends from the mid 1970s up to the current time are examined in this section. The mid 1970s are often identified as the starting point for the school violence that continues to be an issue in American schools (Muir, 2000; McDermott, 1983). In the 1950s and 60s, events occurred that may have set the stage for the emergence of problematic school violence. Integration of the schools, as part of the civil rights movement, began in 1954 with the supreme court decision regarding *Brown versus the Board of Education*. With the advent of space exploration in the early 1960s, school curricula became more orientated toward technology and brought about terms such as "new math" and "new science." President Lyndon Johnson's "war on poverty" led to massive appropriations of federal funds for educational programs (Power, 1970). Schools appear to have been perceived as the spearhead during the 1960s, for righting the social inequalities and lack of opportunity suffered by the poor and the minorities of American culture. Schools were uncertain about how to respond to the civil rights

movement and often found themselves thrust into a political crossfire between white and black communities as well as into conflicts between federal judiciary and local political structures (Ravitch, 2000). Ravitch pointed out that reaction against the Vietnam war in the late '60s and early '70s spawned massive antiwar protests, a radical student movement, a countercultural youth movement, as well as violent clashes between students and police. She goes on to note that at this critical time in history, when the schools were attempting to comply with the demands of the civil rights movement and with court decisions, pressures were exerted from the radical and countercultural movements to change the curriculum and nature of schooling. Ravitch surmised that this confluence of events left the schools reeling and uncertain as to the extent of their authority and control over students' behavior and learning. As a result, she reported that high schools began to cut back on graduation requirements, electives were expanded, dress codes were eliminated and disciplinary rules were eased. Ravitch described the 70s as a time when schools began to withdraw from their responsibility to teach knowledge, good conduct, and appropriate behavior.

The 1980s marked a time of more conservative trends in political and social arenas (Cobb, 1990). The definition and nature of family were changing due to increasing rates of divorce, both parents being employed, and loss of extended family. As noted by Cobb, education had new themes of reform initiatives, such as higher expectations and standards for all students. In addition, there was renewed emphasis on academic subjects and a concern for critical thinking skills. Technological literacy became a concern, as did additional time spent on instruction, longer school days and years, and more emphasis on homework.

During the 60s under Johnson's "war on poverty plan," public education with state and federal support was seen as being able to produce both excellence and equity in its students. But as Lowe (1995) pointed out, during the 1980s such confidence had been seriously eroded in a political climate that identified the state as the cause rather than the cure of social and economic ills. In spite of creating reforms during the 80s to bring education back into its previous role of righting social inequities and producing excellence, school safety concerns continued to rise. Guernsey (1996) referred to an epidemic of youth violence which began during the decade of the 80s and spread from the inner cities to the suburbs and rural areas.

During the 1990s, schools were increasingly blamed for social changes that were beyond their control. According to Ravitz (2000), schools had lost their ability to act in place of parents due to the erosion of adult authority, fear of litigation, the decline of the neighborhood school, the reduction of community cohesion and the reluctance of the schools to teach children the difference between right and wrong. Several events occurred during the decade of the nineties that called attention to school safety and security. The Safe Schools Act was passed by Congress in 1994 to provide funding and technical assistance to school systems that wished to develop safe school plans (Stephens, 1994). Stephens noted that safe school plans were one approach to dealing with the increase in school violence. These plans involved school staff working with parents and community members in devising written plans of action that provided a consistent plan of prevention and response which would enable a school to deal effectively with crises and incidents of violence.

School violence was becoming a major issue, as evidenced by a number of school shootings. In the last seven years, several tragic school shootings have occurred. In 1997, a shooting occurred in Bethel, Alaska. In 1999, the Columbine school shootings occurred in Littleton, Colorado (Jerome, 2001) and a school shooting occurred in Fort Gibson, Oklahoma (Fenton, 2001). In 2001, school shootings in Santana, California and Williamsport, Pennsylvania (Jerome, 2001) occurred. These violent school shootings have received intensive media attention and have heightened public awareness of safety and security issues. Volz (1999) noted that incidents of school shootings, such as those mentioned above, have played a large role in shaping public opinion. The bombing of the Federal Building in Oklahoma City in 1995, as well as the attack on the New York City World Trade Center that occurred in 2001 may have added more tension and anxiety to the public's perceptions of personal safety and security. These events, as well as the increase in violence already being experienced in schools, may have enhanced the public's awareness of the need for protecting children in the school environment. Skiba, et. al. (2002) noted that not only have the tragic events of recent years increased awareness of the need for school violence prevention, but they have also provided the motivation to study violence and implement new programs that address safety issues.

The Middle School Level

Moving from the broad structure of the macrosystem which encompasses the political, social, legal and educational influences of culture on school safety and security issues, the next two structures employed in Bronfenbrenner's theory of ecology (1979) are presented as they relate to school safety and security. First, the exosystem, which is defined as the larger community is discussed. This can have a direct or indirect influence

on the individual. In the current context, a school board which makes decisions affecting a school's curriculum, attendance area and extent of extracurricular activities would be considered as exosystem. Second, the mesosystem, which is characterized as a network of interacting microsystems such as school, sports team, band or peer group (Muuss, 1988) is addressed. In this section, the middle school level in terms of its history and development is viewed as an element of the exosystem, while the characteristics of the middle school level presented at the end of this section are viewed as elements of the mesosystem.

Middle School as Exosystem

As an exosystem, the middle school provides the larger community as context for the current study. Middle schools evolved out of the junior high concept for education. The first junior high schools were established in Columbus, Ohio and Berkley, California around 1910 (Alexander, 1969). The impetus for the junior high concept began with psychologist G. Stanley Hall's theories that the adolescent years seemed to call for a special school with special treatment. Public school educators supported Hall's ideas as a means of "bridging the gap" between elementary and secondary programs (Vars, 1998).

As the twentieth century wore on, criticisms and dissatisfactions with the junior high school model were increasingly voiced. Finks (1990) observed that junior high students were treated too much like high schoolers, and that the junior high school environment was subject oriented rather than student centered. He also made the point that junior high was meant to deal with early adolescence, but that its programs did not consider the individual learner. In an attempt to stem the tide of rising dissatisfaction with the junior high school model, the middle school model was proposed to better meet the

needs of those in early adolescence. Eichhorn (1998) speculated that during the 1950s, three events occurred that hastened the establishment of middle schools. These included (1) the launching of the sputnik satellite by the Russians, (2) the supreme court decision that segregation was illegal, and (3) new medical research that confirmed that biological maturation was occurring at an earlier age and that biological growth clearly impacted learning.

Eichhorn (1998) described sputnik as inspiring a variety of new educational programs, due to the perception that Russia was ahead of the Americans in "the race to space". He made the observation that the event of sputnik, combined with societal changes, brought the realization [to Americans] that the education of young adolescents needed improvement.

On the subject of desegregation, Eichhorn (1998) observed that the supreme court landmark decision had an immense effect on American education. Cuff (1967) concluded from his national survey of middle schools that integration was clearly indicated as a factor in some cities due to the fact that new attendance districts were created in order to cross old neighborhood boundaries and bring a diverse population into the intermediate grades. The final factor that Eichhorn (1998) felt strongly influenced the emergence of middle schools was the new medical research with indicated that young adolescents would benefit intellectually, emotionally, and socially from programs designed specifically for their age characteristics.

These three factors, occurring in the 1950s, appeared to set the stage for the emergence of the middle school as an alternative to the junior high school model in the early 1960s. The junior high school level usually consisted of the seventh, eighth, and

ninth grades. Schools that opted to implement the middle school model reassigned the ninth grade to the high school level, and the middle school often became either a fifth, sixth, seventh, and eight grade grouping or a sixth, seventh, and eighth grade grouping (Bohlinger, 1981). The emphasis in junior high school had been on subject matter and its structure had been very similar to high school (Vars, 1971). On the other hand, Vars noted that the emphasis for middle school was to become student centered to accommodate the stage of early adolescence.

Middle School as Mesosystem

As a mesosystem, the characteristics of the middle school provide the network of interactive microsystems for the current study. The middle school grouping brings together children in unique combinations of ages and stages. Stier (1973) described the middle school level as generally including children who fall in the ten to fourteen year range. Finks (1990) observed that most research scholars and middle school educators support middle schools consisting of grades 6-8. In terms of developmental stages, the age group for grades 6-8 includes children who are experiencing or beginning to experience the stage of early adolescence (11 to 14 years).

Papalia & Olds (1992) described early adolescence as being a time of focusing on the peer group, experiencing puzzling physical yearnings, changing feelings, and experiencing new intellectual abilities. Stier (1973) adds that early adolescents also experience new intellectual and physical drives. Finks (1990) observed that the rapid changes and the inconsistent growth patterns of early adolescence provide a middle school with the most diverse student body of any school level. The middle school environment, already highly charged with the complex and rapid changes that occur in

the physical, emotional, social, and intellectual dimensions of the early adolescent, may become even more unsettled with the addition of today's concerns for safety and security.

When studies are conducted to assess students' fears and concerns, the tendency is for the middle school level to be combined with the senior high level. For example, Kingery, Coggeshall, & Alford (1998) grouped seventh through twelfth grades in their study of violence at school. In other studies, the middle school level may be compared with the elementary grades and viewed as part of the elementary level, such as Astor, Meyer, & Pitner's (2001) study of elementary and middle school students' perceptions of violence-prone subcontexts in school. Rarely is the middle school level the sole focus of a study. Yet it appears that it is a level that deserves more focused scrutiny. Lipsitz characterized early adolescence or the middle school level as being the most overlooked school age population in America (H. Finks , personal communication, 1977).

Data gathered in four national surveys (Youth Risk Behavior Survey [YRBS]; Monitoring the Future Survey [MTF]; National Longitudinal Study of Adolescent Health [NLSAH]; and National Crime Victimization Survey School Crime Supplement [NCVS/ SCS]) in 1995 were analyzed by Kingery, et. al. (1998) to address middle school concerns. Their results indicated that the middle school level seventh graders (boys and girls) had the most fear of attack or harm at school in comparison with the eighth, ninth, tenth, eleventh, and twelfth graders. Nolin & Davies (1995) made the observation that there was significant variation in the number of reported student victimizations according to whether the student attended an elementary, middle, or senior high school. This viewpoint is supported by Bowen & Bowen (1999) who note that the effects of crime and violence vary for children of different ages. In addition, they recommend that future

research should examine the effect of violence separately for elementary, middle, and high school students. Astor, et. al. (2001) also concurred with this view, by observing that students' understanding of school violence is influenced by school type as well as by grade level. Evidently, the middle school level is not always examined as a level separate and defined from other levels. The literature appears to support the study of the middle school as a level separate and unto itself.

If the historical timeline is examined, it appears that the middle school model came into existence almost simultaneously with the sweeping social and technological changes that began occurring during the mid-twentieth century. In fact, the middle school model could be viewed as being inextricably intertwined with the major social and technological changes that occurred during the middle part of the twentieth century. Perhaps no other school level more succinctly represents the microcosm of elements of potential instability, change, and volatility that appear to be increasingly present in our society today. These factors make the middle school or early adolescent level an ideal level of focus for a school safety and security survey.

School Environment as Perceived Through Theory

In the preceding sections of this chapter, Bronfenbrenner's (1979) macrosystem of overarching political, social, and legal influences on school safety and security issues was described. Also described was the middle school model in terms of an exosystem nested within the macrosystem of the larger cultural milieu. The characteristics of the early adolescent population , conceptualized as the mesosystem nested within the history and development of the middle school, was also described. The next and last stage for consideration is the microsystem. According to ecological theory, the microsystem is the

innermost of the four nested levels proposed by Bronfenbrenner (1979). The microsystem is the immediate setting that surrounds the individual. For the purposes of this study, the microsystem is conceptualized as being represented by perceived interactions of individuals within a specific middle school environment. The focus of this study is the development of a survey which assesses the perceptions of early adolescents and adults in interaction with a middle school environment. Another helpful approach to conceptualize the importance of individual perception and environment is provided by Lewin's field theory (1939). Lewin is one of the theorists that Bronfenbrenner (1979) drew on in developing his ecological theory.

Importance of Individual Perception

Kurt Lewin (1939) developed field theory which attempts to encompass all the factors that influence the life space and represents them as a topological map. Field theory focuses on an individual psychologically navigating a life space that fluctuates in terms of psychological regions, transitions and forces. Lewin applied field theory to the school environment as well by focusing on adolescents. He viewed adolescence as being an uncomfortable in-between stage in which the life space is rapidly expanding, drastic changes are occurring in the body, and adolescents are finding themselves in an uncharted, transitory journey between childhood and adulthood. One of his core concepts explains behavior as a function of the person within his perceived environment. This is illustrated by his general equation for behavior: $B = f(P,E)$ (Heckhousen, 1991). Behavior (B) is a function (f) of the person (P) perceiving and interacting with his environment (E). Muuss (1988) observed that this depends on the stage of the person's development, their personality, and knowledge. Lewin's equation (1939) suggests that an

individual's perception of an event may be more important than the objective reality of the event (Muuss, 1988). Bronfenbrenner (1979) adopted this view as well in developing his ecological theory. One of his tenets for ecological theory is that it translates into operational terms. In other words, the thesis that the environment as it is perceived rather than as it may exist in objective reality is what matters for behavior and development. Both theorists appear to agree that perception of the environment is more important that what may actually exist. This implies that in gathering information regarding safety and security issues from those associated with the school environment, the perceptions of safety and security issues may be more important, or at least as important, as the actual incidence of threatening events.

Applications of Field and Ecological Theory in the Literature

Although field or ecological theory has not been directly used in the development of school safety surveys, applications of Lewin's field theory (1939) are noted. Field theory has been used in studies of group development and dynamics in terms of life space and force fields (Agazarian & Gantt, 2003); and as a framework to appraise children's curiosity and exploratory behavior (Chak, 2002). Other uses include identifying stability or change within organizations (Meyer, Bartunek & Lacey, 2002), and studying the effect of different control constructs on psychological adjustment (Conway, Vickers & French, 1992).

Applications of Bronfenbrenner's ecological theory include its use in demonstrating that crime and violence in multiple microsystems (neighborhood and school) affect student performance at school (Bowen & Bowen, 1999). Ecological theory has also been used in explaining the effects of campus peer culture (Renn & Arnold,

2003) and in presenting an ecological model of suicide risk assessment for gay, lesbian and bisexual youth (Morrison & L'Heureux, 2001). Other applications include the use of ecological theory to examine the problem of adolescent diabetic control (Liles, 2002) and to frame the practice, training, and research agendas of school psychology (Sheridan & Gutkin, 2000).

The applications of ecological and field theory are numerous and varied. For this study, field and ecological theory have provided a way to conceptualize the systems that influence individual behaviors both indirectly and directly in interactions with the environment. The school safety survey was developed with the individual perception of safety and security issues within the microsystems and topology of the middle school environment as its focus.

Elements of Survey Development

Theoretical Aspects of Survey Development

One of the cornerstones of the theories used in this study involves the effect of multiple environments on behavior. Lewin (1939) noted that the behavior of a person depends upon his/her momentary position (environment) whether that position be psychological or physical. In fact Lewin's equation for behavior states that behavior is a function of the person and the environment (Muuss, 1988). Bronfenbrenner (1979) made the point that environments are fluid settings that evolve through the processes of interaction with the individual and result in behaviors being instigated, sustained and developed. In the current study, domains have been developed that attempt to assess the various facets of the middle school environment in terms of safety and security issues from the perspectives of associated individuals. Implied in this approach is the belief that

these perceptions of safety and security issues also have influence on the behavior of the individuals associated with the middle school environment.

Another fundamental element of ecological and field theories is that the perception of environmental phenomena has more influence on behavior than the actual incidence of phenomena within the environments. Both Bronfenbrenner (1979) and Lewin (1939) espoused this element as part of their theories. For this study, the perceptions regarding safety and security issues of individuals associated with the school environment provide the means by which the affects of the various microsystems within the school environment are measured. A review of the literature was conducted to determine if school safety surveys might already exist that utilize these theories. Some examples of existing school safety surveys are presented in the following section.

Existing Surveys that Address School Safety

Various journals and publications (*Social Work, School Counselor, and School Psychology Review*) report pencil and paper surveys that assess school safety and security issues along with the accompanying method and results. For example, Cornell and Loper's (1998) single form survey, designed for use with students only, assesses the attitudes of seventh, ninth and eleventh grade students toward aggressive behavior, and "high-risk" behaviors that include weapon carrying, fighting, and substance use. All of the participants (N = 8,273) came from one Mid-Atlantic district. The survey consists of approximately 27 questions that ask the respondent to circle a yes or no response. Cornell and Loper note that limitations in the length of the survey (27 items) precluded the development of specific scales for hypothetical constructs. Therefore, no quantitative estimates of reliability were reported. Validity was addressed in terms of whether or not

survey responses indicated patterns suggestive of exaggerated or careless responding, which would therefore be considered invalid. Exaggeration or over reporting of high-risk behaviors might thus be avoided.

Another example is a mail out survey (Astor et. al 1997) sent to school social workers nation-wide to assess the school social workers' perceptions of violence on school grounds, most violent events, and types of violence. The single form paper and pencil survey, designed specifically for social workers, consisted of thirty-three questions. The survey asked the social workers to use a five-point scale to rate their perceptions of violent events that were actually occurring in their school as well as complete a 23 item checklist as to types of incidents that were occurring in the school. Principal components analysis was performed on the 23 item checklist resulting in the emergence of four categories of violent incidents (N = 614). Each of the four scales was reported to have a reliability score above alpha .70. Validity was not reported.

Another type of instrument described in the literature is one designed to assess the knowledge and skill levels of teachers in relation to school safety. For example, Clark and Blendinger (1996) described a nine question school safety instrument that was designed to be given to elementary through secondary teachers (N = 130), who were enrolled in an educational administration program. The teachers were asked to rate their knowledge of the following areas: knowledge of legal and professional responsibilities with regard to student behavior and school safety; skills for building a safe, positive, and nurturing school climate and for participating in ongoing safe school planning; knowledge and skill in community involvement, crisis prevention and management; and building an effective relationship between the school and each student's home. Only

means (3.8 to 4.2) were reported for each area. Reliability and validity were not addressed.

Further, Carr and Schmidt (1994) describe a pencil and paper survey, designed by Carr in 1994, to provide school counselors with a sense of students' fears and worries. The single form survey was designed to assess the fears and concerns of eighth graders via a five-point Likert type scale. The 40 questions that make up the survey include references to getting old, getting the disease AIDS, lack of money for clothes or college, drug and alcohol concerns, grades, being bullied, sexual concerns, being late for classes, and having belongings stolen. The descriptive statistics of means and standard deviations were provided for comparison of girls with boys (N = 1,330). The average scores ranged from a high of 3.52 (SD = 1.30) to a low of 1.51 (SD = 1.02).A Spearman rank correlation (.92) was also reported and indicated a strong relationship between the ratings of girls and boys. No evidence of reliability or validity were reported.

All of these instruments focus on only one group associated with the school environment (students, school social workers or teachers). Therefore, comparisons across groups is not an option.

There are other studies presenting pencil and paper surveys that address school safety issues currently in use. For example, the nationally administered Youth Risk Behavior Survey (YRBS) (Center for Disease Control, 1999) and Monitoring the Future Survey (MTF) (Institute for Social Research, 1998) are single form instruments given only to high school students. However, these surveys include few questions that directly address school safety and security concerns. The YRBS includes only six out of 92 items that relate to school safety and security issues, while the MTF has only five items out of

281 that relate specifically to school safety and security issues. In other words, safety and security are not the sole focus of these surveys. The main thrust of the YRBS is to gather information regarding the health behavior of America's high school level youth utilizing 92 multiple choice questions. It includes a few questions about carrying weapons, fighting, being threatened, etc. that pertain to safety and security issues (Center for Disease Control, 1999). The MTF, on the other hand, asks middle school, junior high and high school students, via a combination of 281 multiple choice questions and rating scales about work experience, school attendance, amount of television watched, drug use, leisure time activities, attitude toward school, family life, feeling unsafe at school, and frequency of carrying a gun to school, etc. (Institute for Social Research, 1998). Again, only a few items directly address school safety at the middle school level.

Pencil and paper surveys that focus exclusively on school safety are also available. "Manual type" publications that are designed to inform and assist educators about what to include in safety surveys and how to proceed with them are published by educational organizations or corporations associated with education . These publications are published either in hardcopy form or on a computer web site to provide school personnel with examples of school safety surveys for needs assessment purposes. The publications may include information about scoring the results but generally do not provide reliability and validity information. One such instrument is the School Safety Survey that is included in Stephens 1995 book "Safe Schools: A Handbook for Violence Prevention", published by the National Educational Service. The survey consists of several different forms of the instrument for students (grades pre-K through twelfth), parents, teachers and security officers. This measure utilizes a combination of between 13

and 32 questions, depending on the form. The items utilize rating scales, fill in the blanks, checklists, and "yes or no" questions to elicit information.

The student form of this survey inquires about respect displayed between the inhabitants of the school, safety issues that concern the respondent the most, unsafe areas on campus, and any incidence of personal victimization the student has experienced. Students are also asked to rate the seriousness of such things as gangs, drug use, and carrying weapons.

The parent form of the survey asks in general about how safe the parents think their children feel at school. Items that measure incidents of victimization are provided so that parents may note what has happened to their children. Also assessed are whether their children are seeing weapons carried at school, and how well the campus follows up on reports of alleged abuse. Parents also rate the seriousness of gangs, drug use, etc., and they are asked to list the three major safety problems occurring at school currently.

The teacher form of Stephen's (1995) survey asks the teacher to list unsafe places at school, identify any instances of personal victimization, and to indicate whether campus follows up on alleged abuse that occurs. Teachers report incidents of personally seeing weapons carried, they assess the seriousness of gangs, drug use, etc., and they are asked to list the three major safety or crime problems currently existing at the school.

The security officer form of Stephen's (1995) survey asks the officer open ended questions about role, dichotomous format questions about supervision duties, Likert type scale ratings about incidents investigated, and additional open ended questions about difficulties of the job, suggestions and safety level of the school. It should be noted that the four forms of the school safety survey discussed here presents students, teachers,

parents and security officers with different item sets. Even though more groups are addressed by these types of surveys, each group responds to a form that differs in content and format; therefore, comparisons of safety concerns across these groups is not an option.

Another example of the manual type publication includes "Safe Schools: A Handbook for Practitioners" (National Association of Secondary School Principals & DynCorp, 1995). This book is a practical guide addressing school security issues, which was developed in a joint effort by the National Association of Secondary School Principals (NASSP) and DynCorp, a professional consulting firm that provides technical and management services to government and private industry. The surveys included in the handbook consist of a student survey, a school staff survey and a law enforcement survey. The student survey consists of 25 multiple choice and rating scale questions that range from actual incidence of victimization and weapon carrying to rating what is most feared in the school environment. The survey for school staff consists of a combination of 19 multiple choice and rating scale questions that range from actual incidents of victimization to areas of the school environment they feel are unsafe. Instructions to the administrators indicate that the format of the students' survey represents basic questions. Individual school staffs are urged to adapt and alter word use for their specific school and the chosen grade levels.

The law enforcement form of this survey consists of a combination of eight "yes or no" and fill in the blank questions ranging from incidence of various types of crime in the community to describing each type of crime more specifically. Again, given the

different forms of these surveys, comparisons across groups within the school environment are limited.

Yet another version of the instructive approach to school surveys is an ongoing project known as Safe and Responsible Schools. It is a model demonstration and technical assistance project funded by the U. S. Department of Education, and Office of Special Education Programs and is designed to enable schools and school districts to develop a broader perspective on school safety. Skiba, et. al., (2002), oversee the project. A web site is maintained online that, among other things, provides examples school safety surveys that can be downloaded and copied. Scoring methods are also supplied as well as tools for developing a safe and responsive schools plan. Separate forms are available for elementary students, secondary students, staff and parents. Once again, with the different forms of the survey, comparisons across groups is limited.

The instruments described here are meant to be a representative sampling of the kinds of pencil and paper school safety surveys that currently exist. However, some of the instruments survey only one element of the school population, such as students or teachers or school social workers. These measures do not allow for group-to-group comparison across safety issues. The survey in the current study consists of a single form; yet it could be used to gather information from multiple targeted elements of the school population (e.g., students, teachers, administrators, parents, maintenance staff, bus drivers, secretarial staff, cafeteria staff, volunteers, other certified staff).

Some of the surveys described previously utilize different forms of the same survey if more than one element of the school population is assessed. For example Stephens' (1995) safe school survey provides two different forms for students (pre-k

through 12, and 9 through 12), and a separate form for parents, security officers and teachers. Each of these forms have a different number of questions and though each form generally addresses the same overall topics, each topic has questions worded differently from the other forms to fit the targeted element of the school population. The current instrument consists of a single form using the same wording, same number of questions, same style of questions and the same order of questions. This instrument can readily be administered to any element of the school population with none of the concerns about matching the right form with the targeted school element. Additionally, none of the previously described surveys focus exclusively on the early adolescent population of the middle school level. In most of these surveys, the middle school level is either combined with high schools to form a secondary category or the middle school level is considered in conjunction with elementary, high school or junior high level. The school safety survey developed here is designed to focus exclusively on the early adolescent population of the middle school, responding to a call by Bowen and Bowen (1999) that further research is needed that focuses on the middle school as a separate level in and of itself.

The previously described surveys address several different facets of school safety (such as incidence of violence and personal victimization, perceptions of violence, high risk behaviors, student concerns, teachers' knowledge and skills in regard to school safety, school climate, unsafe areas of the school and weapon carrying) but none of them appear to combine a broad range of the facets or domains of school safety into one survey. The survey presented here combines several aspects of school safety derived from the literature into one instrument. With the exception of the YRBS and MTF, none of the previously discussed surveys appear to be constructed with empirically developed

underlying domains. Although the YRBS and MTF appear to have underlying domains, these are broad ranging instruments that devote only a few questions to the subject of school safety. The instrument in the current study focuses solely on middle school safety issues developed around underlying domains. Developed over time, the instrument presented here is based on several iterations with pilot studies used to modify each scale of the measure.

Summary

Chapters 2 has presented the characteristics, development and history of the middle school level. Two theoretical models (field theory and theory of ecology) and their perspective of the school environment were presented as well. Existing safety surveys were reviewed and a case was made of the need to develop a new instrument to assess the safety and security concerns of a middle school environment.

CHAPTER III

METHOD

The development of the safety and security survey has evolved in multiple stages (see Appendix A). The original work began as a site-specific needs assessment in the Fall of 1999. In the second stage, a state department of education became involved and the work was expanded to include middle and high school students, and adults in the school environment. As an on-going safety project, this research continues to be directed by the safe school committee. This committee is currently awaiting the final survey presented in this research.

The safe school committee which serves a medium sized Midwestern community is composed of community members, school staff (administrators and teachers) and parents. The chairperson of the committee is a prominent clergyman in the community, with an interest in safety and security issues at the local middle school. The committee functions as a group to insure that ongoing needs assessment occurs and that the resulting data are used to modify the safe- school program.

Participants

The sample for the current student-based portion of the school safety study (N = 543) came from a Midwestern middle school located in a medium sized Midwestern town. Students who voluntarily agreed to participate in a needs assessment (see Appendix B) and who returned signed parent consent forms (see Appendix C) were invited to participate. All participants were informed of the purpose of the study, its voluntary nature and that their responses would be kept confidential. The total school population was 755 students. Of the 755, a total of 543 participated in the study for a response rate

of 72%. Table 1 provides demographic information for participating students. Of the 543 student participants, 280 were 6th graders and 263 were in 7th grade. Grouped by gender, 264 students were male, while 279 students were female. By race, there were 6% American Indians, 3% Asian-Americans, 4% Blacks, 3% Hispanics, less than 1% Pacific Islanders, 80% Whites, and 3% "other." All the participants were treated in accordance with the ethical guidelines set forth by the American Psychological Association (2002), and the Oklahoma State University's Institutional Review Board (see Appendix D); www.vpr.okstate.edu/irb/).

Table 1

Demographic Information of Participating Students (N=534)

Category	Number	%
Gender		
Female	279	51%
Male	264	49%
Grade		
6th grade	280	52%
7th grade	263	48%
Ethnicity		
American Indian	32	6%
Asian-American	16	3%
Blacks	22	4%
Hispanics	16	3%
Other	16	3%
Pacific Islanders	5	<1%
Whites	427	80%

Note: Percents may not equal 100 due to missing data.

Development of the Safety Survey

The full development of the safety and security survey evolved through three basic stages (see Appendix A). The first stage was the development of an original version, which was pilot tested and administered to middle school one in a medium sized

Midwestern town (for the sake of clarity, numbers will be assigned to the sites, where the survey was administered or pilot-tested, throughout the description of the stages of survey development). The second stage of survey development (see Appendix A) was an expanded and modified version of the original. This expanded and modified version was developed with input from the State Department of Education for a Midwestern state. It was pilot tested in both a middle school and a high school in Midwestern school district two. The final version of the survey (see Appendix E), which utilized information from the prior two versions, was produced as a continuing needs assessment for middle school number one in a return to the medium sized Midwestern town. This measure is a 60-item pencil and paper survey. It consists of four items assessing demographic information. These items include grade, position (student, teacher, other school staff), race, and gender. Additionally, eleven items that make up a checklist assessing awareness of existing safety measures in the school is also part of the demographic section. These items utilize a yes (Y) or no (N) dichotomous format (see Table 2).

Table 2

Awareness of Existing Safety Measures

	Responses			
	Yes		No	
Safety measure	Number	%	Number	%
Stem	Does your school offer the following?			
Handbooks	515	96%	22	4%
Intercom	531	99%	7	1%
Bully training	277	52%	254	48%
Peer mediation	276	53%	247	47%
ID badges (student)	25	5%	511	95%
ID badges (staff)	368	70%	161	30%
Metal detectors	33	6%	499	94%
Security guard	519	98%	12	2%
Fire drills	520	98%	11	2%
Tornado drills	335	63%	193	37%
Crises drills	44	8%	484	91%

(N = 538)

Survey Subscales

Survey scaled items were constructed to fall into various groupings reflective of certain components or domains of the school environment. These groupings became the domains that comprise the instrument. Based on a review of the literature, school environment, a construct emerged as an interactive collage of existing systems of discipline, socialization, communication, and individual concerns of potential and actual hazards within the physical structure of the buildings and its extensions. An example Would be what occurs on buses and school grounds. In terms of Bronfenbrenner's ecological theory (1979), each domain of the survey represents an aspect of the microsystem of the school environment. The microsystem is the innermost environment that interacts with and contains the person. The five measurement domains included in the survey bring together items that represent important facets of safety and security

issues in the middle school environment. According to Mayer & Leone (1999), a common thread among many approaches to dealing with safety and security issues in the schools is that of the individual-environment interaction. The individual-environment interaction in terms of field and ecological theory as it applies to the school environment is the premise underlying each of the domains that make up the multi-perspective single format school survey. Each of the five domains relate to a different aspect of the individual-environment interaction.

All items included within the five domains are based on a Likert type format with values that range from 0 to +10. "Hardly Any" corresponds to scale values 0 through +3, while the anchor "Some" corresponds to +4 through +7, and "A Lot" corresponds to +8 through +10. This rating scale format allows for assessment along a continuum of feeling or opinion from none through weak to strong.

Domains of Measurement

Domain One consists of four items that relate to the existing code of discipline and how well it is enforced. High scores on this Likert scale indicate that the respondent has a strong belief that the existing school rules are communicated and enforced well whereas low scores reflect the belief that school rules are poorly communicated and not well enforced. This domain is titled *Enforcement of Existing Rules* because it attempts to provide some indication of the level of communication between the school and students and between the school and school staff, or the school and parents in regard to enforcing school rules. Domain One focuses on the quality of interpersonal communications occurring between students and school staff, and school staff and parents. In addition, the follow through by school staff when rules are broken is also addressed. Thus domain

one is representative of some of the interactions that exist between microsystems, such as communication between school and parents. Bronfenbrenner (1979) speaks of the principle of interconnectedness that applies to linkages between settings and their influence and effect on the individual. Enforcement of existing rules is important to affecting feelings of security (Mayer & Leone, 1999) in that there is less disorder present in a school that emphasizes awareness of school rules and consequences for rule infractions.

Domain Two consists of eight items designed to assess feelings of safety and security generated by existing safety measures. A Likert type format is used with scale scores ranging from 0 to +10. This allows for an increase in the variability of responses for the respondent to indicate their belief that existing safety measures contribute to feelings of safety and security. High scores in this measure indicate strong perceptions of safety. This domain is titled *Contribution of Existing Safety Measures to Feelings of Safety and Secur*ity because it determines the degree to which existing programs, preparatory drills and practice for potential emergencies contribute to feelings of safety and security. While the checklist noted earlier is concerned with assessing the level of knowledge regarding existing safety and security practices and programs, Domain Two is concerned with the psychological microsystem associated with safe and secure feelings generated by existing safety measures. Bronfenbrenner (1979) noted the importance of the availability of supportive settings as part of the ecological environment. This domain was included to help schools gauge the effectiveness of the safety measures already in place, in terms of each individual's perceptions of safety and security. As Morrison, Furlong, & Morrison (1994) pointed out, the definition of a safe school is not limited to just an environment

free of violence, but also includes the presence of safe and peaceful feelings within the environment.

The Third Domain consists of four items relating to the availability of social and emotional supports within the school. The Likert type format used for this scale ranges from 0 to +10. Scores ranging from +8 to +10 indicate a strong belief in social and emotional supports being present in the school environment. Scores ranging from +4 to +7 indicate a medium strength belief and 0 to +3 indicate a low level of belief. This domain is titled *Contribution of Emotional and Social Supports to Feelings of Safety and Security.* It utilizes items that relate to the emotional and social climate in a school as defined by the respect and level of trust demonstrated between students, or between students and school staff. This domain is representative of some of the social elements that comprise a social microsystem within the school. The complex of interrelations between people in the immediate environment is regarded by Bronfenbrenner (1979) as being central to his concept of the microsystem. This domain attempts to assess if social and emotional supports and programs are perceived to be available to individuals associated with the school environment. In addition, Morrison, et. al.(1994) list the social environment of the school as one of the dimensions that contributes school safety.

The Fourth Domain consists of thirteen items relating to potentially threatening areas of the school. The Likert type format used for this scale ranges from 0 to +10, with higher scores indicating strong concerns that an area of the school may be dangerous. This domain is titled *Areas of the School that Elicit Feelings of Concern* because it assesses the level of concern surrounding physical areas of the school, school grounds, bus stops, and the buses themselves in regard to their potential for danger. This domain is

representative of some of the physical and psychological microsystems that comprise the school environment. Bronfenbrenner (1979) noted that psychological perception changes as a person is exposed to and interacts with the environment. Research (Astor, et. al., 2001) has raised the issue that some school locations are more violence-prone. It appears that unsupervised places, such as hallways and bathrooms, provide settings that allow for violent behaviors (Globus, 2001; Rinaldo, 2001).

The Fifth Domain consists of sixteen items relating to events witnessed or experienced over the school year that left individuals feeling that safety and security had been compromised. A Likert type format was used for this scale which ranged from 0 to +10. Scores ranging from +8 to +10 indicate the reporting of a high number of threatening events. Scores ranging from +4 to +7 indicate a medium level of threatening events, while scores ranging from 0 to +3 indicate a low level of threatening events. Threatening events include reports of actual incidence, and of hearing or seeing violence-prone behaviors. This domain is titled *Actual Incidence of Events that Threatened Feelings of Safety and Security* because it measures events that are perceived to be potentially hazardous to individuals associated with the school environment. Domain Five is representative, perhaps more than any of the other domains, of perception being more important to behavior than the objective reality of that situation. In other words, how an event is interpreted by an individual can have a profound effect upon their functioning within a given microsystem (Bronfenbrenner, 1979). The items in this domain focus on perceptions of actual incidents of stealing, threats, bullying, drug use, weapon carrying, gang behavior, and overt threats.

Viewed in terms of Bronfenbrenner's ecological theory (1979), these five domains attempt to encompass the major social, emotional and physical aspects of the school environment. The domains that comprise the instrument were constructed from input from those associated with the school environment, as well as those that study and research educational concerns. Many microsystems comprise the school environment. They range from the physical environment of buildings, rooms, buses and grounds to the social-emotional aspects of programs, practices and relationships. In this study, the microsystems that comprise a middle school were conceptualized as being nested within the mesosystem of characteristics of the middle schools. In turn, the microsystems and mesosystem are seen as being nested in the exosystem of the history and development of the middle school. Finally the microsystems, mesosystem, and exosystem are conceptualized as being surrounded by the macrosystem of social, cultural, educational, and political factors that have occurred in the last several decades and have contributed to safety and security concerns.

Procedure

The researcher delivered 600 each of parent consent forms, student assent forms and surveys to the safe school committee chairperson at his work site. He, in turn, delivered the materials to the targeted middle school just before a Spring weekly faculty meeting. Along with the principal and assistant principal, the safe school committee chairperson explained the study and the procedures to school staff during a portion of the meeting. All of the homeroom teachers (20) were asked by school administrators to coordinate the project. Homeroom teachers explained to their students that they would have an opportunity to participate in an anonymous school safety survey if they chose to

do so. Parental consent was required of all students volunteering to participate. Home room teachers distributed the consent forms (Appendix C) to their students to be taken home for parent signatures and a due date of two days after the consent forms were given out was specified. Students who returned signed consent forms to their home room teachers by the specified date were then asked to sign assent forms (see Appendix B) by their teachers before being allowed to complete the survey.

On the specified date selected by the principal, the surveys were completed by the students during first hour (homeroom time). The students who did not participate were allowed to work on homework. The completed forms were turned in to the home room teacher at the end of the hour. The home room teacher, in turn, gave the completed surveys, consent and assent forms to the principal who boxed up them up for pickup by the researcher.

Research Design

This study was conducted to determine the psychometric properties of the safety and security measure. Both reliability and validity were addressed. Overall, reliability refers to the assurance that the results could be replicated if the same individuals were tested again under similar circumstances. In other words, the reproducibility or consistency of test scores is the essence of reliability (Crocker & Algina, 1986). The validity of a measure refers to how well it measures what it proposes to measure. Rather than being an all or none property, it is more a matter of degree (Nunally & Bernstein, 1994).

Establishing Reliability

The procedure that examines the consistency of responses is internal consistency reliability. This procedure for estimated reliability for a single survey administration is based on item covariances, and consists of three different forms known collectively as coefficient alpha. The three forms are Kuder Richardson 20, Cronbach's alpha and Hoyt's analysis of variance. They are different in form and procedure, but yield identical results (Crocker & Algina, 1986). In this study, a form of coefficient alpha (Cronbach's alpha) was selected to estimate the reliability for both items and the five sub-scales.

Content Validity

Overall, content validity refers to the adequacy with which a specified domain of content is sampled. In general the goal for accomplishing content validity is to obtain as relevant and as representative items as possible (Nunnally & Bernstein, 1996). Content validity, as indicated by Gay (1996), has no formula for quantitative computation. It is usually determined by expert judgement. Content validity for the school safety and security instrument was determined by university level educational professionals, certified school staff (teachers, administrators, special services staff), state department of education professionals, students (10 to 14 years old), parents, community members and uncertified school staff such as bus drivers, aides, janitors and secretaries (see Appendix A).

Construct Validity

Overall, construct validity relates to psychological constructs. A construct, as defined by Nunnally and Bernstein (1994), is an idea put together from imagination that does not exist as an observable dimension of behavior. As behavior not directly

observable, patterns of item responses formed by item intercorrelations can be extracted to see if the patterns seem appropriate in light of the construct of interest (Crocker & Algina, 1986). In other words, one observes the behavior via the patterns formed by item responses rather than viewing actual behavior. One approach to extracting these patterns is through the use of factor analysis. In this approach, a matrix of item intercorrelations is factored to determine whether item responses cluster together in patterns that are applicable to the construct. In using factor analysis, the important issue is whether subtests, which are supposed to measure the same construct, are empirically identified as measuring a common factor (Crocker & Algina, 1986). For this study, the form of factor analysis used was principal axis factor analysis. The rotation method used was Promax with Kaiser Normalization.

Summary

This chapter has presented the method used in this study of school safety and security. Participants, the development of the survey, and the procedure that was followed were described. Reliability, content validity and construct validity were discussed as well.

CHAPTER IV

RESULTS

This chapter presents the psychometric properties of the current school safety survey. The results of reliability and validity analyses are presented. The psychometric properties are important in building the best possible measure.

Instrument Overview

The safety and security instrument is comprised of 60 items. The survey begins with a demographic section, and then presents a checklist for assessing knowledge of existing safety measures. Five domain-based measurement scales are then presented. The demographic section is used to assess grade, school position, race, and gender of the respondent. The checklist consists of yes or no items where students identify knowledge of existing safety measures at their school. The five scales, which relate to each domain, utilize a Likert type scale with a set of responses that range from 0 to +10 from "none" through "a lot". Results are based on student responses to the 45 item domain-based sub-scales, and include the psychometric findings of the study. A total of 543 students provided data for assessing the psychometric properties of the safety and security scales.

Student Responses Across Items

Descriptive indices are presented for the full student sample in Table 3. As shown there, item means and standard deviations reveal the average student response on these Likert-scaled items, and the variability in the use of the scales across the items.

Table 3

Table of Means and Standard Deviations for All Items

Domain One: *Rule Enforcement*

Item	Mean	Standard Deviation
Q16	5.92	2.11
Q17	6.41	2.41
Q18	6.53	2.16
Q19	5.93	2.26

(N = 524)

Domain Two: *Contribution of Existing Safety Measures*

Item	Mean	Standard Deviation
Q20	4.32	3.15
Q21	5.57	2.70
Q22	6.98	2.39
Q23	3.71	2.90
Q24	3.95	2.67
Q25	4.63	2.58
Q26	5.48	3.46
Q27	6.43	2.63

(N = 516)

Domain Three: *Contribution of Emotional and Social Supports*

Item	Mean	Standard Deviation
Q28	5.57	2.46
Q29	5.13	2.37
Q30	5.97	2.20
Q31	6.70	2.59

(N = 529)

Domain Four: *Areas of the School*

Item	Mean	Standard Deviation
Q32	3.43	2.76
Q33	4.66	2.69
Q34	4.70	2.89
Q35	4.09	2.80
Q36	4.05	2.72
Q37	3.70	2.82
Q38	3.01	2.85
Q39	4.39	2.94
Q40	4.25	2.84
Q41	3.34	2.67
Q42	4.48	2.94
Q43	4.39	2.78
Q44	4.83	3.06

(N = 512)

Domain Five: *Actual Incidence of Threatening Events*

Items	Mean	Standard Deviation
Q45	2.88	3.07
Q46	4.74	3.15
Q47	2.18	2.76
Q48	1.77	2.80
Q49	1.28	2.52
Q50	2.81	3.06
Q51	2.14	2.94
Q52	1.06	2.39
Q53	.90	2.29
Q54	2.74	3.16
Q55	4.20	3.13
Q56	1.97	2.86
Q57	1.02	2.42
Q58	1.35	2.57
Q59	0.84	2.28
Q60	0.78	2.24

(N = 495)

Internal Consistency Reliability

The reliability of each of the five scales was assessed using an internal consistency method as measured by Coefficient alpha. Scales 1, 2, 3, 4 and 5 yielded moderate to very high coefficients of .67, .83, .70, .94, and .93 respectively (Nunnally & Bernstein, 1994).

Domain One, *Enforcement of School Rules*, is comprised of four items. Table 4 presents each survey item and its corresponding variable used in the reliability analysis for domain one. Due to elimination of cases with missing values, only cases with complete data across items were used in determining coefficient alpha (N = 524).

Table 4

Code and Each Item in Domain One of School Safety Survey

Variable code	Actual item
Q16	When school rules are broken at your school, how often are those who break the rules reported to school staff?
Q17	At your school, how much does the school staff remind students of the school rules and what will happen if the rules are broken?
Q18	How much does the school staff follow through with what they said they would do to those who broke the rules?
Q19	At your school, how often do administrators or school staff telephone parents when students break the school rules?

Scale One data yielded a moderately strong reliability index with an overall Cronbach's alpha of .6718 (Nunnally and Bernstein, 1994). However, Table 5 illustrates that every item appeared to have only a relatively low correlation with the total scale. As Table 5 indicates, the *Item-total correlation* ranged from .4041 to .5030. Under a*lpha if item deleted,* the values suggest that all of the 4 items comprising scale one were equally important. Obtaining this information was important to school officials. Further, alpha

would decrease from .672 to an unacceptable coefficient if any of these four items were deleted. Therefore, all four items for Domain One were retained.

Table 5

Item-total Statistics for Domain One

Item	Corrected Item-Total Correlation	Alpha if item Deleted
Q16	.4041	.6332
Q17	.4791	.5880
Q18	.5030	.5732
Q19	.4299	.6207

(N = 524)

Domain Two, *Contributions of Existing Safety Measures to Feelings of Safety and Security*, is comprised of eight items. Table 6 lists variable codes and each item used in the reliability analysis for Domain Two. Again, only cases with complete data across items were used in calculating Cronbach's alpha (N = 516).

Table 6

Code and Each Item in Domain Two of the School Safety Survey

Variable code	Actual item
Stem	How much do you...
Q20	know about the state sponsored safecall line that lets you call 24 hours a day without giving your name to report any dangerous situations at your school?
Q21	think having a safecall line increases students' feelings of safety and security?
Q22	think having a security officer on duty increases students' feelings of safety and security?
Q23	think wearing ID badges increases students' feelings of safety and security?
Q24	think having a student handbook increases students' feelings of safety and security?
Q25	think having peer mediation and conflict resolution programs increases students' feelings of safety and security?
Q26	think having metal detectors at the main doors increases students' feelings of safety and security?
Q27	think fire, tornado and other emergency drills increases students' feelings of safety and security?

Data analysis of Scale Two data yielded an overall Cronbach's alpha of .8430 which is a strong reliability index. Most of the Scale Two items appeared to correlate moderately well with the overall scale, as shown in Table 7. Apparently, this item set provides a reliable scale. As table 7 indicates, the *Item total correlation* ranged from .3811 to .6736. Item 20 had a low correlation of .3811 with Domain Two, but removing item 20 would increase the reliability by only .02. In short, while the low correlation of item 20 is an indication of a weak item, removing it had little effect on the internal consistency of the scale. This item has been considered crucial to middle school administrators and to those at the state department. "Safecall" is a relatively new concept and information regarding

knowledge of this safety measure is currently of great interest. Therefore, this item was retained for the safety and security measure.

Table 7

Item-total Statistics for Domain Two

Item	Corrected Item-Total Correlation	Alpha if item Deleted
Q20	.3811	.8513
Q21	.6173	.8196
Q22	.6153	.8214
Q23	.6359	.8168
Q24	.6736	.8129
Q25	.6615	.8150
Q26	.5289	.8342
Q27	.5816	.8240

(N = 516)

Scale Three, *Emotional and Social Supports that Contribute to Feelings of Safety and Security*, is comprised of four items. Table 8 lists each item used in the reliability analysis for Domain Three. The reliability index was estimated with cases with complete data across all items (N = 529).

Table 8

Code and Each Item in Domain Three of the School Safety Survey

Variable code	Actual item
Q28	How much safety do you think students feel in confiding their troubles and problems to adults such as administrator, teachers, counselors, coaches, etc. at your school?
Q29	How much respect (being friendly, no put downs, caring) do you think students show each other at your school?
Q30	How much respect do you think students show school staff (administrators, teachers, secretaries, cafeteria workers, custodians, etc.) at your school?
Q31	How much respect do you think school staff show to students at your school?

The sample of student data produced an adequate overall Cronbach's alpha of .7029. As table 9 indicates, the *Item total correlation* ranged from .4416 to .5729. Scale Three items appeared to correlate at relatively low rates with the overall scale, based on the item-total correlations. However, the values in the *alpha if item deleted* column of the table suggest that three of the four items appear to be equally important, in that alpha decreases to a fairly consistent low value if items 28, 29 or 31 are eliminated. Further, the deletion of item 30 would result in a substantially lower reliability index for this scale (from .703 to .592). As a result, all four of these items were retained for the final measure.

Table 9

Item-total Statistics for Domain Three

Item	Corrected Item-Total Correlation	Alpha if item Deleted
Q28	.4416	.6686
Q29	.4667	.6522
Q30	.5729	.5923
Q31	.4821	.6444

(N = 529)

Domain Four, *Areas of the School that Elicit Feelings of Concern in Regard to Safety and Security*, contains thirteen items which are shown in table 10. Only cases with complete data across items were used in the reliability analysis for domain four (N = 512).

Table 10

Code and Each Item in Domain Four of the School Safety Survey

Variable code	Code translation
Stem	How concerned are you that students or school staff may find themselves in dangerous situations in the following areas during the school day?
Q32	In the classroom?
Q33	In the hallways?
Q34	On the stairs?
Q35	In the bathrooms?
Q36	In the gym locker rooms?
Q37	In the cafeteria?
Q38	In the auditorium during assemblies?
Q39	At the bus stop while waiting for the bus?
Q40	On the bus while riding to and from school?
Q41	On the bus while riding to and from athletic events/field trips?
Q42	On the playground?
Q43	On the grounds around the school building?
Q44	Unlocked doors (not counting the front door) that might allow strangers to enter the school building unseen?

Scale Four data yielded high reliability, with an overall Cronbach's alpha of .9474. The individual items on scale four appeared to adequately correlate with the overall scale (see table 11) indicating that each question may be appropriate as an item within this scale. As table 11 indicates, the *Item total correlation* ranged from .6190 to .8107. These values suggest that each item correlates moderately well with the scale. Item 44 has the lowest correlation with the scale at .6190. Consideration was given to dropping this item from the scale; however, the descriptive statistics for Scale Four (see Table 3) indicated that students scored, on average, 4.85 on item 44. Item 44 received the highest response rate for Scale Four; therefore it was retained. Alpha if item deleted (see Table 11) revealed that alpha was changed very little if any of the items were deleted (12 of the 13 are about .94). Thus these items were all retained.

Table 11

Item-total Statistics for Domain Four

Item	Corrected Item-Total Correlation	Alpha if item Deleted
Q32	.6827	.9449
Q33	.7762	.9423
Q34	.7033	.9444
Q35	.7545	.9429
Q36	.8107	.7492
Q37	.7826	.9421
Q38	.6768	.9451
Q39	.7229	.9439
Q40	.7390	.9434
Q41	.7920	.9419
Q42	.7981	.9416
Q43	.7916	.9418
Q44	.6190	.9472

(N = 512)

Domain Five, *Actual Incidence of Events this School Year that Threatened Feelings of Safety and Security*, is comprised of 16 items. Table 12 lists the individual items used in the reliability analysis for this domain. Due to elimination of cases with missing values, only cases with complete data across all items were used (N = 495).

Table 12

Code and Each Item in Domain Five of the School Safety Survey

Variable code	Actual item
Stem	How much have any of the following situations actually happened to you during this school year on school property?
Q45	Having your belongings stolen?
Q46	Hearing students say they were going to hurt other students?
Q47	Hearing students say they were going to hurt school staff?
Q48	Hearing students say they were going to kill other students?
Q49	Hearing students say they were going to kill school staff?
Q50	Being threatened verbally yourself by students?
Q51	Being threatened physically yourself by students?
Q52	Seeing students smoking cigarettes, using chewing tobacco or snuff on school property?
Q53	Seeing students use drugs (alcohol, marijuana, downers, uppers, speed, crack, etc.) on school property?
Q54	Seeing students make gang signs or wear gang clothing on school property?
Q55	Seeing students being bullied by other students?
Q56	Being bullied yourself by other students?
Q57	Seeing students bringing guns or knives to school for protection?
Q58	Hearing students talk about bringing guns or knives to school for protection?
Q59	Hearing students talk about setting bombs in the school?
Q60	Hearing students talk about calling in bomb threats to the school?

The internal consistency reliability for scale five was estimated with an overall Cronbach's alpha of .9332. This value is quite high. Most of the scale five items appeared to correlate moderately well with the overall scale (see Table 13), indicating that these questions may be appropriate as items within the scale. As Table 13 indicates, the *Item total correlation* ranged from .4878 to .7609. Two of the items (Q45 and Q46) were associated with fairly low item to total scale correlations, and the overall subscale alpha reliability indices increased, if these items were deleted from Domain Five. However, the alpha if deleted values did not substantially increase and school officials were interested in

student information. In addition, the descriptive statistics for Scale Five (see Table 3) indicate means of 2.88 and 4.74 respectively for these items. Students rated these two situations as fairly threatening. Given these reasons, these two items were included in the final safety and security survey.

Table 13

Item-total Statistics for Domain Five

Item	Corrected Item-Total Correlation	Alpha if item Deleted
Q45	.4878	.9340
Q46	.5003	.9339
Q47	.6935	.9281
Q48	.7328	.9270
Q49	.7609	.9267
Q50	.6922	.9282
Q51	.7434	.9267
Q52	.6891	.9285
Q53	.6674	.9291
Q54	.6219	.9303
Q55	.6049	.9308
Q56	.6401	.9295
Q57	.7315	.9277
Q58	.7581	.9268
Q59	.7261	.9280
Q60	.7043	.9285

(N = 495)

Summary

The estimated overall internal consistency reliability was presented for each of the. five domains of the school safety and security survey. An item analysis was also conducted to identify weak or poor items that might lower the reliability of each individual scale. The decision to retain items for each subscale depended on both statistical and practical considerations.

A single item in domain two (Q20) appeared to be statistically weak, but reliability was not increased to a great degree if deleted, therefore this important item remained in the scale. A single item in domain four (Q 44) was also associated with an overall alpha that was higher if the item was deleted. This item, *How concerned are you about unlocked doors that might allow strangers to enter the building unseen?* was not a physical area around the school, as were the other twelve items on domain four. However, the mean student response to this item suggested students were concerned. Further, school officials requested the inclusion of this item, thus it was retained. Two items in domain five (Q 45, Q 46) indicated low item-to-scale correlations as well as higher alphas if deleted. The two items, *How much have you had belongings stolen?* and *How much have you heard students say they were going to hurt other students?* were retained based on alpha if item deleted values, strong response rates and school needs. The final safety and security measure included five sub-scales with a total of 45 items.

Construct Validity

To investigate the validity of the school safety survey two approaches were considered: A principal components analysis and a principal axis factoring analysis. A correlation matrix developed with the average participant scores for each domain was constructed for this consideration (see Table 14). As shown in the table, these scales tended to be inter-correlated. Overall, the Pearson correlations ranged from .001 to .588, with seven of the ten bivariate indices reaching statistical significance at the .01 level. The strongest correlation (.588) was between Scale Three, *Contribution of Emotional and Social Supports to Feelings of Safety and Security* and Scale Two, *Contribution of Existing Safety Measures to Feelings of Safety and Security*. This value suggests that

these two measures shared about 35% of the response variability. On average, the significantly related subscales shared about 13% of the variability in the measures. Given this pattern of results, principal axis factoring appeared to be appropriate in assessing the construct validity of the scales of the school safety survey.

Table 14

Key: Scale 1 School Rules
Scale 2 Existing Safety Measures
Scale 3 Emotional and Social Supports
Scale 4 Areas of concern
Scale 5 Actual Incidence

Pearson Correlations Between Scales of School Safety Survey

	Scale 1	Scale 2	Scale 3	Scale 4	Scale 5
Scale 1	1				
Scale 2	.426**	1			
Scale 3	.411**	.588**	1		
Scale 4	.076	.204**	.049	1	
Scale 5	-.144**	.001	-.189**	.346**	1

** Correlation is significant at the .01 level (2-tailed). N =541

Principal Axis Factoring

Principal axis factoring is an exploratory approach whose purpose is to identify the factor structure for a set of variables (Stevens, 1996). Given the scale inter-correlations, the 45 items comprising the five scales were analyzed using principal axis factoring extraction. A total of nine factors were extracted with an eigenvalue greater than one (see Table 15). These nine factors accounted for 67.4% of the total variance among the scores.

Table 15

Eigenvalues and Total Variance Explained

	Initial Eigenvalues			Initial Eigenvalues (cont.)			
Factor	Total	% of Variance	Cumulative %	Factor	Total	% of Var.	Cum.%
1	11.286	25.079	25.079	33	.283	.629	95.696
2	6.877	15.283	40.362	34	.259	.575	96.272
3	4.410	9.801	50.163	35	.249	.554	96.826
4	1.885	4.190	54.353	36	.229	.509	97.335
5	1.456	3.236	57.589	37	.192	.427	97.762
6	1.171	2.602	60.191	38	.176	.392	98.153
7	1.137	2.526	62.717	39	.162	.361	98.514
8	1.104	2.454	65.171	40	.150	.334	98.848
9	1.015	2.255	67.426	41	.132	.294	99.142
10	.896	1.991	69.417	42	.125	.278	99.420
11	.813	1.807	71.225	43	.120	.267	99.687
12	.791	1.759	72.983	44	.087	.193	99.880
13	.769	1.709	74.692	45	.054	.120	100.00
14	.700	1.556	76.248				
15	.684	1.521	77.769				
16	.659	1.465	79.235				
17	.623	1.385	80.619				
18	.598	1.329	81.948				
19	.551	1.224	83.172				
20	.523	1.163	84.335				
21	.508	1.128	85.463				
22	.483	1.074	86.537				
23	.473	1.052	87.589				
24	.449	.997	88.586				
25	.429	.953	89.540				
26	.411	.914	90.454				
27	.403	.895	91.348				
28	.392	.871	92.219				
29	.366	.813	93.032				
30	.316	.702	93.734				
31	.308	.685	94.419				
32	.292	.648	95.067				

Despite the fact that the factor analysis revealed nine factors with eigenvalues greater than one, only three of those factors appeared to truly account for the majority of total variance. This conclusion is based on the following two points: (1) The scree plot

(see Figure 1) visually demonstrates that there are only three factors on the vertical axis. Stevens (1996) indicates that it is recommended to retain only the factors with eigenvalues in the sharp descent above where the angle is made on the line where the eigenvalues begin to level off. (2) Retaining factors whose eigenvalues are greater than one generally results in retention of only the most important factors; however, Stevens indicates that blind use of this rule could lead to retaining factors which may have no practical significance in terms of per cent of variance accounted for. This appears to be the case in this instance. The first three factors accounted for just over 50% of the total variance, while it took the remaining 42 factors to account for the remaining 50% of the total variance. Further, none of the remaining 42 factors individually accounted for 4% of the total variance (see Table 15). Based on these two considerations, the scree plot and percent of variance accounted for, three true factors were identified and retained for rotation. Rotation method was promax with Kaiser normalization. The promax rotation method seeks to maximize the spread or variance of pattern elements on a factor (Nunnally & Bernstein, 1994).

Figure 1

Factors and eigenvalues for school safety survey

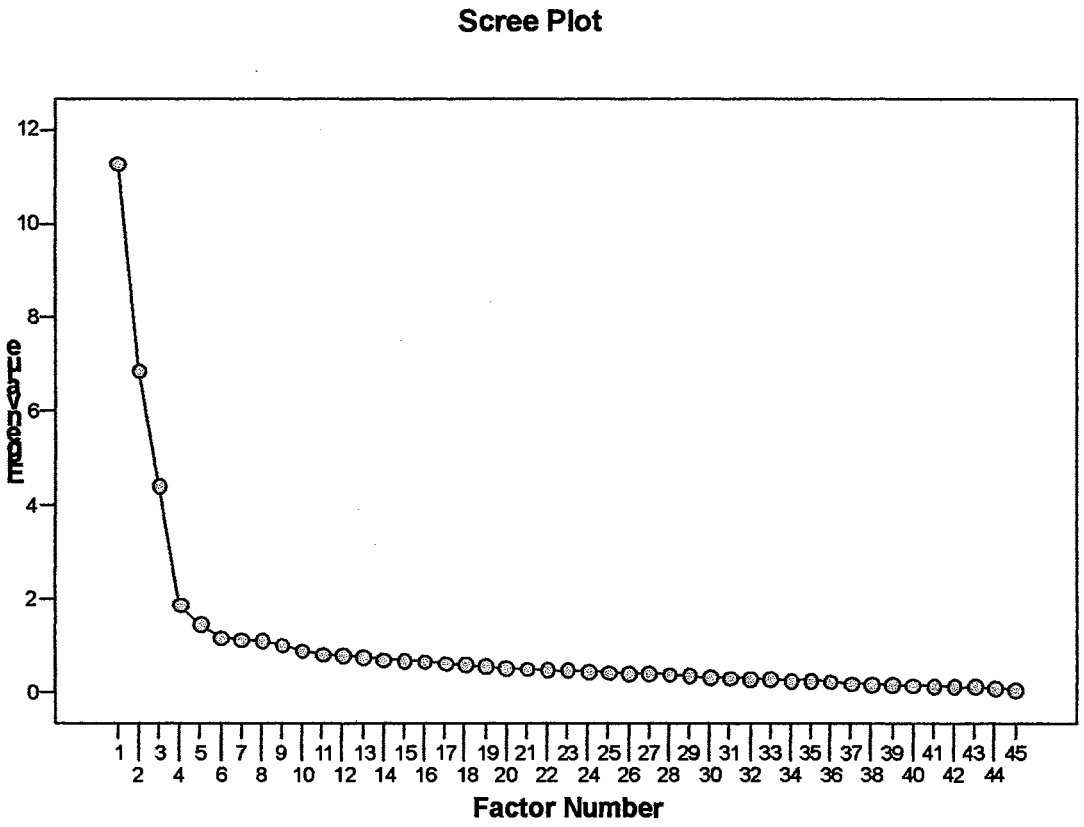

Table 16, the factor structure matrix, lists the variables along with the individual factor loadings. According to Stevens (1996), this amounts to listing the simple correlations of the variables with the factors or, in other words, the factor loadings. Stevens goes on to say that the loading is simply the Pearson correlation between the variable and the factor or linear combination of the variables. He has recommended the use of loadings with values greater than or equal to $\pm$ .40 for interpretational purposes. As shown in the table, 16 items met the criterion and loaded on Factor 1. The values ranged from .822 to .462. These 16 items represent Domain Five, *Actual Incidence of Events*

this School Year that Threatened Feelings of Safety and Security. It should be noted that these sixteen items clearly loaded on Factor1; there were no dual loadings for these items.

A total of 13 items loaded on Factor 2, with values ranging from .817 to .633. These thirteen items represent Domain Four, *Areas of the School that Elicit Feelings of Concern in Regard to Safety and Security.* Again, the thirteen items for this factor all appeared as clear loadings (no dual loadings).

Lastly, 14 items loaded on Factor 3, using the $\pm$ .40 criterion, with values ranging from .718 to .419. Two items, "At your school, how often do administrators or school staff telephone parents when students break the school rules"? and "When school rules are broken at your school, how often are those who break the rules reported to school staff"?, did not significantly load on any factor. Further, these two items were associated with low item-total correlations (.430 and .404, respectively) on the item analysis results as shown in Table 5. Domain One was identified as a rather weak scale. Taken together, these results suggest that these two items should be deleted from the final survey. The fourteen remaining items represent a combination of the domains *Enforcement of School Rules, Contributions of Existing safety Measures to Feelings of Safety and Security*, and *Emotional and Social Supports that Contribute to Feelings of Safety and Security.* The size of the loadings for this factor indicated that these items represented the combination of the three domains. Items with the strongest loadings were noted and the underlying construct for this factor was labeled *Existing Safety Measures, Supports and Rules.*

Overall, the factor analysis presented here suggests that the school safety measure assesses three underlying constructs, (1) *Actual Incidence of Events that Threatened Feelings of Safety and Security,* (2) *Areas of the School that Elicit Feelings of Concern*

and (3) *Contribution of Existing, Safety Measures, Supports and Rules.* The correlation between factor 1 and 2 was .357. The correlation between factor 1 and 3 was -.095 and the correlation between factor 2 and 3 was .149. These were fairly low values; indicating that the factors are independent. The constructs, reflecting the three factors, appear important in measuring middle school students' feelings of safety and security at school. Thus the final measure to be presented to the middle school includes the three domains, listed above, as well as the demographic section and checklist items (see Appendix E).

Table 16

Structure Matrix of Factor Loadings

	Factor				Factor		
Item Domain	1	2	3	Item Dom.	1	2	3
Q59 - 5	.822	.161	-.017	Q40 - 4	.288	.747	.068
Q57 - 5	.813	.226	-.102	Q39 - 4	.201	.743	.107
Q49 - 5	.803	.285	-.061	Q34 - 4	.242	.716	.198
Q58 - 5	.802	.248	-.054	Q32 - 4	.257	.685	.202
Q60 - 5	.797	.180	-.003	Q38 - 4	.274	.684	.092
Q48 - 5	.743	.292	-.104	Q44 - 4	.263	.633	.150
Q52 - 5	.742	.164	-.016	Q25 - 2	.033	.184	.718
Q53 - 5	.740	.113	-.012	Q24 - 2	.047	.220	.711
Q51 - 5	.726	.347	-.139	Q27 - 2	.042	.209	.665
Q47 - 5	.676	.353	-.119	Q28 - 3	.021	.217	.662
Q50 - 5	.671	.350	-.149	Q22 - 2	-.122	.076	.654
Q56 - 5	.635	.317	-.085	Q23 - 2	.042	.193	.641
Q54 - 5	.621	.276	-.094	Q21 - 2	-.005	.188	.619
Q55 - 5	.559	.415	-.118	Q31 - 3	-.285	-.029	.565
Q45 - 5	.476	.286	-.068	Q26 - 2	-.011	.223	.561
Q46 - 5	.462	.369	-.149	Q30 - 3	-.080	-.092	.511
Q36 - 4	.232	.817	.125	Q18 - 1	-.156	-.032	.459
Q43 - 4	.298	.812	.125	Q29 - 3	-.095	-.077	.447
Q42 - 4	.274	.810	.094	Q17 - 1	-.174	.023	.427
Q33 - 4	.270	.805	.153	Q20 - 2	-.081	-.014	.419
Q37 - 4	.241	.799	.110	Q19 - 1	-.002	.147	.392
Q41 - 4	.291	.796	.146	Q16 - 1	-.135	.031	.364
Q35 - 4	.273	.781	.113				

Summary

In this chapter, reliability estimates were calculated for each of the five subscales of the school safety survey. All these scales reflected moderate to high levels of reliability. Construct validity was investigated using the exploratory approach of principal axis factoring. According to the factor loading pattern that emerged, three factors or dimensions appeared to underlie the school safety survey. The strongest factor, *Actual Incidence of Events that Threatened Feelings of Safety and Security*, consists of sixteen items that comprised Domain Five. The second factor, representing Domain Four, consists of thirteen items that assess the construct, *Areas of the School that Elicit Feelings of Concern.* Finally, Factor Three, with fourteen items, assesses the construct, *Existing Safety Measures, Supports and Rules.* Low correlation scores between the three factors indicate that they are independent of each other. The final school safety measure therefore consists of demographic items, a knowledge checklist, and three domain-based subscales with a total of 43 items.

CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Problem Statement - Objectives

The goal of this study was to develop a single form school safety survey to assess levels of concern and apprehension of those associated with the middle school environment in regard to safety and security issues. Has the research question presented in Chapter One been answered? The research question was as follows: Is it possible to develop a quality single form safety survey appropriate for individuals who inhabit the same middle school environment? Addressing the objectives, also presented in Chapter One, may provide an answer to that question. Objective (1), develop a measure appropriate to the early adolescent school environment, was met by administering the survey to middle school students in each of the stages of the survey development. Content validity (see Appendix A for a complete description) was also established for the middle school level. Objective (2), obtain data to establish reliability and validity, has been met. The psychometric properties of the school safety survey include indicators of reliability and validity, which indicated that the school safety survey has good internal consistency and strong construct validity (see Chapter Four). Objective (3), modify the survey based on obtained data, has also been met. See Appendix A for a complete description of the stages and modifications which led to the final version of the survey. Objective (4), present a survey for use in an on-going middle school safety needs assessment program has been met as well. The final version of the survey (see Appendix E) will be utilized in an ongoing school safety needs assessment program in a medium sized Midwestern city.

Theoretical Subscales

The domains comprising the school safety survey were based on Bronfenbrenner's theory of ecology (1979). Each domain of the survey represents a microsystem of the school environment. An important tenet of ecological theory is the concept that in terms of affecting behavior, perception is more important than objective reality (Bronfenbrenner, 1979). The school safety survey assesses the perceptions of the inhabitants of the school environment across some of the physical, social and emotional microsystems that comprise the school environment. Factor analysis of the data indicates that the 43 items, which utilize a Likert scale format, all load on three factors or scales. The three scales are: (1) *Actual Events that Threatened Feelings of Safety and Security,* (2) *Areas of the School that Elicit Feelings of Concern,* (3) *Contribution of Existing Safety Measures, Supports, and Rules.* In terms of microsystems, Scale One focuses on elements of the school microsystem that are perceived by the constituents as being threatening. Scale Two focuses on some of elements of the physical microsystems comprising the physical structure of the school that are perceived as potentially threatening. Scale Three combines supportive aspects, as well as social and interactive microsystems that engender feelings of safety and security for the individual in the school environment. As discussed in chapter two, the microsystems of the middle school environment were conceptualized as being nested in the mesosystem of early adolescent or middle school characteristics. Surrounding these two systems is the exosystem of the history and development of the middle school and finally encompassing all of these systems, one within the other, is the macrosystem of social, cultural, educational and political factors.

Application of ecological theory to the assessment of the school environment in relation to safety and security issues provides a more complete picture of the school environment as seen from multiple perspectives (teacher, administrator, student, parent, teacher's aide, janitor, bus driver, school counselor, cafeteria worker, secretary, librarian, school psychologist, speech pathologist, school nurse, maintenance worker, school social worker and so forth). Ecological theory includes not only the elements of the physical environment, but the interpersonal aspects of the environment as well. The interactions between students, between students and adults, and between adults occurring in the midst of the human beings simultaneously interacting with the physical environment of the school provide an example of the immediate setting surrounding an individual that Bronfenbrenner refers to as the microsystem. Bronfenbrenner (1979) and Lewin (1939), developer of field theory, agree that the environment as it is perceived, rather than how it may exist in objective reality, is what matters for behavior and development. Inclusion of all the adults who are associated with the school environment on a regular basis, as part of the group sampled by a single form of the safety survey developed in this study is one characteristic that sets this survey apart from other existing school safety and security surveys. The use of a single form to sample all the constituents of a school environment allows the school environment to be seen in terms of ecological theory. In other words, because the survey enables an assessment of multiple perspectives that can then be compared directly to each other in numerous ways, statistical information emerges that allows the school environment to be seen in terms of each individuals safety and security concerns, knowledge and supports, whether they be student or adult . The survey is capable of providing multiple perspectives not only as seen through the eyes of students

and adults, but also as seen from the perspective of the roles and habitual paths each individual assumes in the school environment. The other existing school safety surveys described in this study all utilize multiple forms (one for students, one for teachers, one for parents and so on) that differ in content and style of question. These surveys can reflect only one dimension of a school environment at a time because the responses from the different groups cannot be combined for comparison and analysis. Because ecological theory is a multi-dimensional concept with individual perspective as one of its core tenets, a single form instrument that can statistically portray the multiple perspectives of a school's constituents is essential to applying ecological theory to the assessment of safety and security concerns.

Limitations

Random assignment of subjects was not part of this design; therefore the sample may not be completely representative of all the elements available for sampling. The study was accomplished using a voluntary sample. There is likely some bias present by the very fact that completing the survey was accomplished on a voluntary basis. The school required that students return a signed consent form by parents before being allowed to complete a survey of this nature. It is possible that those students who returned permission slips generally live in families that are more conscientious, responsible and stable than non-responding families. Therefore, the majority of students who completed the survey may not be representative of all of the elements that were available in the survey population.

A second limitation relates to the lack of consistency available in the environment when the surveys were completed. The individual middle school home rooms, where the survey was administered, varied by level of noise and distractions that were present as well

as the style of presentation and management by each teacher in regard to the administration of the survey.

Another limitation of this study was the use of a fixed item pool. The items were constructed by the researcher based on the literature and professional requests; then judged by a group of responsible and reliable individuals associated with education as being worthy of inclusion in the instrument. Because the items were not randomly drawn from a universe of items, the ability to generalize these results to similar items is unknown.

An additional limitation has to do with the nature of a self-report instrument to evoke careless or exaggerated responses from some students. Cornell and Loper (1998) referred to this phenomenon as individuals providing intentionally invalid responses. Cornell and Loper also made the point that the inclusion of items to detect this tendency among respondents may help eliminate invalid instruments from the results.

Still another limitation of the study is the fact that the results are based on a predominantly Caucasian sample taken from only one middle school in one medium sized Midwestern town. While the generalizability of the results may be in question, the potential use of this instrument is encouraging.

Although preliminary data from the pilot study using the expanded version (see Appendix A) suggested that the survey is equally applicable with adults, the instrument has yet to be validated with adults. Again, the potential use of the instrument in this regard appears very encouraging.

Practical Applications

In today's atmosphere of fear and concern regarding school safety and security, perceptions of the inhabitants of the school environment can serve as a useful needs

assessment tool for guiding school staff in developing appropriate interventions and procedures to deal with safety and security issues. The early adolescent or middle school level is a focus of the study because of the lack of studies that have focused on this level, as well as the unparalleled physical and emotional changes that are characteristic of the age group. Used as a needs assessment tool, the school safety survey can assist school officials in three ways: (1) by identifying events that appear threatening not only from the perspective of adults and students, but by gender, grade, position as well as race; (2) by identifying physical areas of the school that appear potentially threatening as perceived by the same groupings mentioned in application one; (3) by indicating the levels of effectiveness of existing safety measures and available supports, again from the perspective of the previous mentioned groupings.

Three dimensions or factors that the 43 items of the survey loaded on, emerged as underlying constructs of the school safety survey. Factor 1, *Actual Events that Threatened Feelings of Safety and Security,* can provide school officials with a statistical representation of the incidents of stealing, threats, bullying, drug use, weapon carrying, gang behavior and overt threats that are perceived to occur in the school environment. Factor 2, *Areas of the School that Elicit Feelings of Concern,* provides school officials with an opinion rating of the most potentially dangerous areas of the physical school environment. Astor, et. al. (2001), Globus (2001) and Rinaldo (2001) noted that some school locations are more violence prone and that unsupervised places appear to provide settings that allow for violent behaviors. Factor 2 assists school administrators and teachers in identifying areas that may be violence prone. Factor 3, *Contribution of Existing Safety Measures, Supports and Rules,* can assist school officials in determining if

safe and peaceful feelings are generated by existing safety measures in the school environment, if social and emotional supports are perceived as being available in the school environment and if rules are appropriately enforced and communicated.

General Implications

The survey can assist teachers and administrators in identifying school problem areas, incidents of personal victimization and effectiveness of school social and emotional supports. In addition, the survey could potentially be used to develop interventions for dealing with safety and security concerns. For example, if the school safety survey indicated high levels of concern among 6th grade girls about the locker room being a threatening area of the school, intervention actions (i.e. increased supervision or reassignment of gym lockers) could be taken to alleviate the problem. Use of the survey could also assist in enhancing the educational environment as well. Employing the survey to assess safety and security concerns on a regular basis as part of an ongoing school safety program could help improve the perceptions of the school's constituents that their individual input (responses to the survey) is important to the school administrators. The perception that safety and security concerns are being heard can serve as an empowering experience to the individuals associated with a school environment.

The aim of the resulting survey is to provide a tool for assessing levels of concern involving safety and security in the school environment. The single form instrument can be used across all groups associated with the school environment. This includes students, certified and non-certified personnel as well as parents and community members. Since the survey is a single form, it is possible to directly compare the fears and concerns of one group with another. For instance, it is possible to group by gender, grade, adult, student,

by position such as teacher, administrator, teacher aides, cafeteria workers or extract any groups by response rates to examine characteristics the respondents may have in common. Thus the instrument is an invaluable tool for enabling survey users to gain a multi-perspective view of the school environment.

Conclusions

This study has been an attempt to develop a single form safety survey that can be used across all groups associated with a middle school environment. Few, if any, existing school safety surveys utilize only one form across multiple groups, focus exclusively on the middle school level or establish adequate reliability and validity. Relatively high internal consistency reliability coefficients coupled with strong evidence of construct validity indicates that the school safety survey developed in this study has the necessary psychometric properties to begin exploration with other populations.

Strengths of the Study

The final version of the school safety survey, developed in this study, has several strengths which distinguish it from existing school safety surveys. (1) given that the survey is based on Bronfenbrenner's theory of ecology (1979) and Lewin's field theory (1939), the survey is theory driven; (2) in addition, given that the development of the survey adhered to the scientific approach by identifying a problem, reviewing theories and past research, generating a research question, designing and conducting a study and interpreting data, it is empirically driven; (3) further, the survey consists of only one form, yet it can be administered with equal ease to any group associated with the middle school environment; (4) additionally, the survey is easy to administer, given that the item format normally takes only 15 to 20 minutes to complete; and (5) lastly, the survey may be given

multiple times to assist schools in meeting needs assessment goals in relation to safety and security.

Recommendations

Throughout the process of the ongoing study, adjustments have been made based on analysis of results from gathered data. Based on what has been experienced and learned in the process, some recommendations are offered here in regard to use of the survey. It is recommended that the school safety survey be used as a needs assessment tool to aid schools in developing plans that address safety and security issues. It is also recommended that the survey be administered in a more consistent fashion, especially in use with students. Perhaps it could be given in a large area such as the cafeteria in future administrations, where instructions could be given in a consistent fashion and all the participants would be in the same environment. It is further recommended that one or two items be added to the instrument to detect intentionally invalid responses. Items such as, "I never lie" may help detect careless or exaggerated responses and help eliminate invalid responses from the sample.

In addition, it is recommended that items addressing sexual harassment be added to the instrument. Items of this nature were removed from the school safety survey at the request of school officials to avoid offending parents or creating controversy. However, the researcher believes sexual harassment is a phenomenon that can have a profound effect on feelings of school safety and, as such, should be addressed in a needs assessment survey. Finally, it is recommended that the instrument be validated with a sufficient sample of adults associated with the school environment as well as diverse populations of middle schools from other regions of the country.

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APPENDIX A

STAGES OF INSTRUMENT DEVELOPMENT

Stage 1: Original Version

In the Fall of 1999, the researcher of this study was invited to participate in designing a survey instrument to meet the needs of a medium sized community's "safe school committee". The safe school committee was seeking consultation at the time with school of educational studies staff within the large Midwestern land-grant university that was also located in the committee's community. The researcher was associated with the school of educational studies as a graduate student at this time and, as a result, was asked to play a part in meeting the committee's needs. The committee consisted of middle school administrators, parents, teachers and community members. The committee was created to look into ways of assessing safety and security concerns at the middle school in their community. The committee chair was a prominent clergyman in the community and, possessing a Ph.D. degree, was very interested in research studies. It was the committee chair's idea to seek consultation with school of educational studies staff. In searching for an instrument to assess safety and security issues, the committee had been unable to find an existing instrument to meet their needs. Their desire was to have an instrument that was specifically designed to meet their needs; hence they sought out school of educational studies staff for consultation.

The researcher was invited to work with the safe school committee in developing a school safety and security survey. The researcher included many items that the committee specifically requested. In addition, ideas for portions of the survey also came from Safe Schools: A Handbook for Practitioners (Mahaffey, 1995). The original survey consisted of a three-item demographic section along with five sections relating to level of concern regarding areas and situations in the school environment, level of confidence in school

staff and incidence of stealing, threats, weapons, drug use or sexually inappropriate behavior.

Sample

The participants in the May 2000 study (N = 409) were middle school students ranging in age from eleven to fourteen years old (this is middle school one as alluded to in chapter three). According to gender, 250 girls completed the original survey, while 159 boys participated. In terms of grade, 223 sixth graders participated, along with 186 seventh graders. The racial breakdown consisted of 5% African-American, 7% American Indian, 3% Asian American, 79% White, 3% Hispanic and 2% other.

Procedure

In early April of 2000, the researcher pilot tested the original instrument before administering the survey to middle school one which was associated with the safe school committee. A district similar in size and characteristics, located about fifty miles from the target site was chosen by the researcher because of its similarities to the target site and its proximity to the researcher's work. The principal at the pilot test middle school asked five of his homeroom teachers to administer the surveys and collect them. The principal drafted letters of parent permission and the seventy boys and girls who brought back signed parent permission slips to their home room teachers, completed the survey. A total of 39 girls and 31 boys for a total of 70 students participated. All were seventh graders. Sorted by race, there were 74% Caucasian, 14% African American, 6% Hispanic, 4% Asian and 2% American Indian students who participated in the pilot study.

A look at the answers given on the completed surveys revealed the need for changes in wording as well as rearrangement of some of the items. For example, the positioning of three of the items on the instrument resulted in them being completely overlooked by

some of the students and these items remained unanswered. These items were repositioned in a portion of the instrument where they were more likely to be seen. An example of changes in the wording is given by the item, "How often do you see your teachers on duty?" Several students interpreted the word "duty" to mean the teacher was in the classroom teaching as expected. The item was changed to read, "How often do you see your teachers patrolling and supervising the hallways, cafeteria and school grounds?" The results of data analysis were given to the "safe school committee" who used the data in collaboration with school staff in designing the school's safety and security plans.

After the revisions had been made as a result of the pilot study, the original instrument was determined by the researcher to be fit for administration at middle school one which was associated with the "safe school committee." In early May of 2000, the researcher presented the middle school committee with the revised instrument and plans were made to administer the survey at the committee's middle school. Because the administration of the survey was a part of the consultative services provided by the university, staff from school of educational studies coordinated the delivery and administration of the surveys. The researcher was in charge of inputting resulting data into the computer. Analysis of the data (see Instrument section, this appendix) was performed by school of educational studies staff and shared with the safe school committee.

Instrument

The original instrument developed for middle school one contained a three-item section for demographic data and five sections of five-point Likert-type agreement items with values ranging from "never" to "a lot". Scale values ranged from +1 to +5 respectively.

Section one consisted of nine items that related to level of concern for potential incidents of personal victimization in the school environment. Cronbach's alpha yielded an internal consistency reliability estimate of .91, a value which is high. Section two consisted of ten items relating to level of concern for personal safety in various areas of the school environment. Cronbach's alpha was .92, also quite high. Section three consisted of seven items relating to levels of concern about potential harm from other students, school staff and strangers. Cronbach's alpha for this subscale was good (alpha = .84). Section four consisted of five items relating to level of confidence students had in school staff's ability to protect them as well as frequency of seeing school staff on duty. Cronbach's alpha was .75. This value reflects a moderate reliability. Section five consisted of 13 two-part items relating to actual incidence of personal victimization in the school environment as well as outside of the school environment. Cronbach's alpha yielded a reliability estimate of .84 for incidents occurring within the school environment and a reliability estimate of .88 for incidents occurring outside of the school environment. These values reflect a high level of internal consistency.

This survey (see original version at the end of this appendix) was developed for use with a single middle school. It was developed to meet the specific needs of a safe school committee seeking to deal with safety and security issues in their building. The original form was designed to be administered to students only. The data gathered from the administration of the instrument provided baseline data for school staff to use in program development and initiated an ongoing safety and security needs-assessment.

Stage 2: Expanded Version of the Instrument

After the completion of data analysis for the safe school committee, the researcher of this study was invited to work with a "school safety task force" at the state level in the

fall of 2000. A state department of education task force was convened for the purpose of addressing safety and security issues. For example, the task force was interested in determining perceptions of unsupervised entry points into school buildings, safe call hotlines, drug use, gang activity, sexual harassment, bullying behavior, prevalence of safety and security drills, school handbooks, identification badges, areas of danger in the school environment, and incidence of victimization in schools statewide. The state department task force was also interested in surveying high school students in addition to middle school students. Meeting with the state department task force gave the researcher an expanded concept of the issues and concerns that could be addressed in a school safety survey. Exposure to the differing viewpoints and opinions of the task force members, and reviewing the current literature available on school safety and security issues led the researcher to re-conceptualize the safety and security measure. State department needs, in combination with Bronfenbrenner's theory of ecology (1979), led the researcher to develop a single form safety instrument. A single form survey was developed to address numerous aspects of school safety and security while also being appropriate to give to adults associated with a school environment, in addition to the students.

In order to establish content validity, a group of school professionals, students, parents community members and school support staff were assembled by the researcher to provide feedback on instrument format and items. To keep the size of the group manageable and convenient, one to three individuals from each segment of the judgement group were solicited. These individuals were chosen by the researcher from work related environments associated with the researcher. One factor in choosing the adults was amount of experience in relation to the school environment. All of the adults associated with the school had a minimum of three years experience in the school environment.

Those adults who had indirect association with the school, such as parents and community members, were active on school committees or involved in PTA for a minimum of two years. Another factor was dependability and conscientiousness of individuals as demonstrated by their consistency, effectiveness, and reliability in performing their duties as noted by the researcher. Most of the adults were directly observed by the researcher on a regular basis in the school environment or observed by the researcher demonstrating knowledge of the school environment. Others, such as the community members, parents and students, were recommended to the researcher through professional contacts for being reliable and effective. All of the individuals who took part came from two large-sized urban public school districts in the Midwest. These districts were chosen because the researcher is employed by one district and has professional contacts with the other nearby district.

The individuals comprising the judgement group were given copies of the survey. They were then asked to complete the survey at their convenience and provide feedback to the researcher both verbally and in writing with regard to the appropriateness of items, wording and reading level. Written comments were made on the surveys and verbal feedback was provided to the researcher when the completed surveys were returned. Varied perspectives were sought by the researcher in gathering feedback from those who were associated in some fashion with the school environment. A total of ten females and five males ranging in age from ten to 57 years took part in examining the content of the instrument. Table A1 presents the demographic characteristics of the judgement group.

Table A1

Expert Judgement Group Characteristics

Segment	Number	Gender		Ethnicity		
		M	F	Asian	Black	White
University level professionals	2	-	2	-	-	2
Certified staff	3	1	2	-	1	2
State department of ed. profs.	2	-	2	-	-	2
Students	3	1	2	-	1	2
Parents	2	1	1	-	1	1
Non-certified staff	2	1	1	1	-	1
Community members	1	1	-	-	-	1
Totals	15	5	10	1	3	11

Modifications to the Instrument

Several items from the original version were retained and new items were developed by the researcher. These items included theory-based items and items focused on the issues raised by the state department of education. All items were then grouped into several domains (see expanded version of survey at end of this appendix). In the expanded survey, the demographic section consisted of six items which addressed school district, county, grade, position, race and gender. An 11 item checklist assessing awareness of existing safety measures was also included as part of the demographic section. A format of Yes (Y), No (N), Don't Know (DK) was used to allow individuals associated with the school to identify areas of awareness of existing practices, programs and procedures.

The remaining four subscales focused on feelings; therefore a Likert type format was used to assess these items. Domain One was a reconstruction of section four from the original version. Originally, section four assessed levels of confidence in the ability of school staff to protect students from harm. This section also addressed how often school staff were seen supervising and patrolling areas of the school. In becoming Domain One in the expanded version, the emphasis shifted from perceived ability of staff to protect

students to how well school rules were enforced and communicated. This change reflects an attempt to reflect the construct (enforcement and communication of existing school rules) underlying observable student levels of confidence in the ability of school staff to protect students. In terms of ecological theory, this scale is representative of some of the interactions that occur between microsystems such as communication between school and parents. Domain One was titled *Enforcement of Existing Rules.*

In the expanded version, the focus of Domain Two was to focus on the contribution of existing safety measures to feelings of safety and security rather than focus on the amount of fear and concern associated with potential hazards, as had been the intent of section one in the original version. This reflected a more positive shift in the approach of the expanded version. In terms of ecological theory, Scale Two is concerned with the psychological microsystem associated with safe and secure feelings generated by existing safety measures. Domain Two was titled *Contributions of Existing Safety Measures to Feelings of Safety and Security.*

In the expanded version, Domain Three was kept essentially the same as it had been in the original version, when it was section two. A few items, such as unlocked doors, grounds around the building, and the playground were added to this grouping as requested by the state department. In addition, hallway and stairs were separated into two items, while the two items locker rooms and gym in the original version became one item (gym locker rooms). In terms of ecological theory this domain is representative of some of the physical and psychological microsystems that comprise the school environment. Domain Three was titled, *Areas of the School.*

Domain Four, in the expanded version, remained much the same as it had been in the original version when it was section five. In the original version, section five had

consisted of 13 two part items, with one part being concern with the actual incidence of threatening events occurring in the school environment and the second part being concern with the incidence of threatening events occurring anywhere else besides the school environment. In the expanded version, the "anywhere else" portion of this grouping was dropped from consideration because it had been specifically added to the original version to meet the needs of the school safety committee. The actual incidence of threatening events in the original version of the safety survey had been focused on what the participant had actually had happen to them. In the expanded version more items related to actual incidents the participant had seen and heard. This change was due to the fact that the groups being assessed had broadened from students to include adults, such as teachers, bus drivers and parents, associated with the school environment as well. Because the same form was to be administered to the different groups, emphasis shifted from the participant being the target of threatening events to the participant being an observer of threatening events. In other words, rather than depending only on the student's viewpoint of actual incidence of threatening events in the school environment, shifting the wording to reflect observed, threatening events from other viewpoints helped give a more complete picture of existing actual incidence of threatening events. In terms of ecological theory, perceptions of the actual events occurring in the microsystem of the school may have an effect on the individual's feelings (and, in turn, behavior) about safety and security in the school environment. Domain Four was titled *Actual Incidence of Threatening Events that Compromised Feelings of Safety and Security*.

A Likert type scale continued to be used with the expanded version, but was enlarged, from the +1 to +5 format of the original instrument, to a range of 0 to +10 on the expanded version. This decision was made to increase the response variability.

Directional arrows were added beneath the Likert scales on the expanded version as well to emphasize to the participant that the larger the number, the stronger the expressed response.

The wording throughout the expanded version was also changed to accommodate the age differences, roles, job positions and different perspectives of the potential respondents. Regardless of whether the respondent was a student or an adult, school employee, community member or parent, the wording was designed so that each participant could respond with equal ease to each item.

Procedure

By May of 2001, the expanded instrument was ready to be pilot tested. For purposes of the pilot study, a site was needed with access to both a middle school and high school. The location selected for the pilot study appeared rural but was a school district (this is site two as alluded to in chapter three) located only two miles outside the city limits of a large Midwestern city. This circumstance allowed for a unique blending of urban, rural and suburban characteristics in one location. The racial and socio-economic population was diverse as well. The single form of the expanded version of the survey was administered to students in grades 6 through 12, as well as to teachers, administrators, non-certified school staff, parents and community members.

Sample

The convenience sample (N = 102) for the pilot test of this instrument came from the inhabitants of a middle and high school from a site in the Midwest. A total of 24 middle school students participated. In addition, 21 high school students, 21parents, two administrators, 28 teachers, three other certified school staff, and three support school staff took part in the pilot study. Out of the 45 students who participated, 28 were female and

17 were male. For the students, the racial makeup was 90% white, 2% American Indian, 1% Asians, 5% Blacks, 1% Hispanic, 1% other and 0% Pacific Islander. Out of the 57 adults who participated, 21 were females and sixteen were males. Racial makeup for the adults was 82% White and 18% Blacks. All the pilot participants provided informed consent and were treated in accordance with the ethical guidelines set forth by the American Psychological Association (2002), and the Oklahoma State University's Institutional Review Board (see Appendix F; www.vpr.okstate.edu/irb/).

Results Based on Pilot Study

The data obtained from the pilot study using the expanded version of the instrument was analyzed. Reliability of the expanded instrument was assessed with the pilot data using Cronbach's alpha. The internal consistency reliability of the domains (one through four) enforcement of rules, contribution of existing safety measures, areas of the school, and actual incidence of events were found to be .71, .87, .95 and .90 respectively (see Table A2). These values appeared to be indicative of moderate to high internal consistency reliability for these scales (Nunnally & Bernstein, 1994).

Table A2

Expanded Version Pilot Study
Scale Reliabilities

Scale	Cronbach's Alpha
Enforce	.71
Contribution	.87
Areas	.95
Actual	.90

(N = 102)

Modifications that Led to the Final Version of the Instrument

Changes were made to the instrument based on the results of the pilot study. Some of the items were deleted from the instrument. Based on concerns expressed by parents and administrators, two items which asked about the occurrence of sexual harassment at school were removed from the actual incidents domain. Two new items pertaining to bullying were added to the actual incidents scale or Domain Five, as it was determined the already existing items about threatening others were not sufficient to pertain to bullying specifically. The wording was also simplified for several of the items that some of the participants left blank and additional words or phrases were selected throughout the instrument to be italicized, boxed in or boldfaced in order to clarify and emphasize meaning.

Descriptive indices (means and standard deviations) were calculated with the pilot data. Lower means were obtained in each domain for the high school students in comparison with the means for the middle school students. The lower high school means appeared to indicate lower levels of concern in regard to safety and security issues. Conversely, the higher means obtained for the middle school students appeared to indicate higher levels of concern in regard to safety and security issues. The decision to drop the high school students from the population to be sampled was due to results obtained on the pilot study and related to indications in the literature (as referred to in chapter two) that middle or junior high school students are more likely than high school students to be victimized in the school setting. The fact that early adolescence or middle school age students are noted in the literature as possibly the most overlooked population in terms of research also played a part in the researcher's decision to focus solely on the middle school population.

Although Domain Three on the expanded version had an overall reliability estimate of .87, the 15 items comprising it appeared to include some items that would benefit from regrouping. After running an exploratory factor analysis of the items using a principal components analysis with Domain Three only (see Table A3), it appeared that some of the items that were grouped under *Contribution of existing safety measures to feelings of safety and security* formed a separate domain. Four items pertaining to emotional and social supports within the school environment became an additional domain, *Contribution of emotional and social supports to feelings of safety and security*, for a total of five domains on the final version (see Appendix E). The four items pertaining to drills in Domain Three on the expanded version seemed repetitive and tedious; therefore, the four items were combined into one item on the final version (see Appendix E). Two additional items relating to the safecall hotline in Domain Three on the expanded version also seemed repetitive and tedious and were combined into one item as well. The item that related to how much safety and security helped a student earn good grades was deleted from Domain Three on the expanded version because the researcher felt the item did not contribute useful information to a needs assessment, since it was always answered positively. In other words, this information seemed to be a "given" and did not require the use of a survey item to validate its existence. As a result of these changes to Domain Three in the expanded version, the domain shrank from 15 items to eight items which became Domain Two on the final version. However, four of the 15 items also survived as Domain Three in the final version.

Table A3

Factor Matrix for Domain Three in Expanded Version

Item	1	2	3	4
Q34	.863	-	-	-.104
Q33	.833	-	.205	-.131
Q32	.752	.146	.322	-.152
Q22	.647	.134	.145	.165
Q35	.583	.367	.196	.323
Q25	-	.787	-	-
Q26	.255	.760	.144	.246
Q31	-	.690	.259	-
Q36	.101	.675	.229	-.177
Q29	.212	-	.836	-
Q28	.263	.210	.721	-
Q30	.162	.424	.688	.134
Q27	.171	.480	.595	-
Q24	-	-	.179	.794
Q23	.129	.457	.267	-.643

(N = 102)

A change was also made in the response choices for the eleven item existing safety measures checklist included in the demographic section. It was also determined that "Don't Know (DK)" should be dropped from the response choices. Only "Yes (Y) and No (N)" were retained as response options. The DK option was chosen very infrequently in the pilot study; therefore it was viewed as redundant with the N response. This change created a dichotomous scoring format for the eleven item checklist.

Summary

Appendix A has presented the details of the stages of development that preceded the final version of the safety and security instrument. Procedure, sample, instrument information and psychometric properties were presented along with specific descriptions of the evolving changes made to the instrument throughout the development process. The original version of the survey as well as the expanded version of the instrument are included next. The changes, as noted, appear as modifications across the two instruments.

The final version, as referenced in the method chapter, served as the instrument used to access the psychometric properties of the safety and security measure.

Your school is conducting this survey to get your opinion about your school's safety, over all security, and how you generally feel.. Your opinions on these issues are very important and will be kept entirely confidential. Therefore, do not put your name anywhere on this survey. If you do not understand the directions, or if you have questions, your teacher will be able to assist you. Thank you for your help.

STUDENT INFORMATION

Directions: Circle the appropriate letter

Race:
a. African-American
b. American Indian
c. Asian American
d. White
e. Hispanic
f. Other _____

Gender
a. Female
b. Male

Grade Level
a. 6th
b. 7th
c. 8th
d. 9th
e. 10th
f. 11th
g. 12th

SCHOOL SAFETY SURVEY

Directions: On a scale of 1 to 5, please rate your level of concern regarding incidents that could occur at your school by circling the appropriate number from 1 to 5.

How concerned are you that someone may take your money or belongings at school using physical force, weapons, or threats?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that someone will steal from your desk, locker, book bag/backpack, etc. at school?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that someone will threaten you or try to hurt you?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that someone will touch you in a sexually inappropriate way?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that someone will say something sexually inappropriate to you or make sexually inappropriate hand or body gestures aimed at you?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you about others using or selling drugs/cigarettes/alcohol at school?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that you may have to try drugs/cigarettes/alcohol to fit in with friends?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that there may be gang members attending your school?

Not Concerned **Very Concerned**
1 2 3 4 5

How concerned are you that others may be brings weapons such as guns, knives, spiked jewelry, mace, brass knuckles, etc. to school?

Not Concerned **Very Concerned**
1 2 3 4 5

How much have you felt concern in the following areas:

In the classroom?

Not Concerned **Very Concerned**
1 2 3 4 5

In the hallways/stairwells?

Not Concerned **Very Concerned**
1 2 3 4 5

In the bathrooms?

Not Concerned **Very Concerned**
1 2 3 4 5

In the locker rooms?

Not Concerned **Very Concerned**
1 2 3 4 5

In the gym?

Not Concerned **Very Concerned**
1 2 3 4 5

In the cafeteria?

Not Concerned				Very Concerned
1	2	3	4	5

In the auditorium?

Not Concerned				Very Concerned
1	2	3	4	5

On the bus to and from school?

Not Concerned				Very Concerned
1	2	3	4	5

On the bus for field trips or sporting events?

Not Concerned				Very Concerned
1	2	3	4	5

At the bus stop waiting for or getting off the bus?

Not Concerned				Very Concerned
1	2	3	4	5

How concerned are you that physical harm, or inappropriate behavior may occur from the following:

Other students?

Never			A	Lot
1	2	3	4	5

Teachers?

Never			A	Lot
1	2	3	4	5

Custodians?

Never			A	Lot
1	2	3	4	5

Cafeteria workers?

Never			A	Lot
1	2	3	4	5

Administrators (principals, assistant principals)?

Never			A	Lot
1	2	3	4	5

Bus drivers?

Never				**A Lot**
1	2	3	4	5

Strangers who come onto the school grounds or into the building without permission?

Never				**A Lot**
1	2	3	4	5

How often do you see the principal or the assistant principal on duty around the building or on the school grounds?

Hardly Any				**A Lot**
1	2	3	4	5

How often do you see teachers or school staff patrolling the halls between classes or supervising in the cafeteria or outside before or after school?

Hardly Any				**A Lot**
1	2	3	4	5

How much confidence do you have that the principal or assistant principal can keep you safe from physical or verbal attacks from other individuals?

Hardly Any				**A Lot**
1	2	3	4	5

How much confidence do you have that your teachers or school staff can keep you safe from verbal or physical attacks?

Hardly Any				**A Lot**
1	2	3	4	5

How much confidence do you have in the ability of your bus drivers to keep you safe from physical and verbal attacks?

Hardly Any				**A Lot**
1	2	3	4	5

THE FOLLOWING QUESTIONS <u>EACH HAVE 2 PARTS TO BE CIRCLED.</u>
Circle a number for At School and circle a number for Anywhere Else. Anywhere Else refers to your neighborhood, home, movies, shopping, restaurants, etc.

This school year, how often have you had money or belongings stolen from you by someone using force, weapons or threats?

At School				
Not at All				A Lot
1	2	3	4	5

Anywhere Else				
Not at All				A Lot
1	2	3	4	5

This school year, how often have you had money or belongings stolen from your desk, locker, book bag/backpack, etc.?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you been threatened by a bully?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often has someone physically attacked you to try to hurt you?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often did you stay at home because you were worried that someone might try to hurt you?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often did someone touch you in a sexually inappropriate way?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often did others say something, or use hand and body gestures in a sexually inappropriate way that made you uncomfortable?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you seen other students using or selling drugs/cigarettes/alcohol?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often did you use drugs/cigarettes/alcohol to fit in or get along with others?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you seen gang members doing inappropriate things?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you considered yourself to be part of a gang?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you seen others carrying weapons such as knives, guns, brass knuckles, spiked jewelry, etc.?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

This school year, how often have you carried a weapon for protection?

At School					**Anywhere Else**				
Not at All				A Lot	Not at All				A Lot
1	2	3	4	5	1	2	3	4	5

SCHOOL SAFETY SURVEY

Please answer the following questions. **Do not put your name on this paper,** as your identify will be kept confidential. If you are a student, and you find a question you don't understand, it is alright to ask a teacher or parent to help you.

District _____

County _____

Grade _____ (If you are a student)

Position – circle the term that best describes your position:

Student Parent Administrator Teacher Other Certified School Staff

Race:

American Indian Asian Black Hispanic Pacific Islander White

Other _____

Gender:

Female Male

DIRECTIONS

Please Circle **Y** for *yes* **N** for *no* or **DK** for *don't know* for the following questions

Did your school have a student handbook that explains school rules, policies and procedures that was given to each child and their family this school year? **Y N DK**

Does your school have an intercom speaker or similar system that connects the rest of the school building with the principals' office? **Y N DK**

Did your school offer training to students about how to deal appropriately with bullies this school year? **Y N DK**

Did your school offer ongoing peer mediation or conflict resolution programs during this school year? **Y N DK**

Did your school require students to wear identity (ID) badges while attending school this school year? **Y N DK**

Did your school require school staff such as teachers, administrators, cafeteria workers, custodial staff, etc. to wear ID badges while they're working in school this school year? **Y N DK**

Did your school have metal detectors at the doors for people to walk through at the beginning of each day this school year? **Y N DK**

Did your school have a security guard or off duty police officer in your building during the day this school year? **Y N DK**

Did your school hold practice drills for what to do in case of fire this school year? **Y N DK**

Did your school hold practice drills for what to do in case of a tornado this school year? **Y N DK**

Did your school have practice drills for what to do in case a bombing or a shooting should ever happen at you school? **Y N DK**

DIRECTIONS
Circle the number under each of the following questions that best answers the question.
If you feel that the answer to the question is **Hardly Any**, circle **0, 1, 2,** or **3**.
If you feel that the answer to the question is **Some,** circle **4, 5,** or **6.**
If you feel that the answer to the question is **A Lot,** circle **7, 8, 9,** or **10.**
10 in the maximum or strongest amount you can circle.
The arrow ----------> serves as a reminder of the direction to go to show the strongest answer.
Examples:

How often do you think cows are seen on the roof of your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think people enjoy eating their favorite food?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

When school rules are broken at your school, ***how often are those who break the rules reported*** to school staff?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

At your school, ***how much*** does the school staff ***remind students*** of the school rules and what will happen if the rules are broken?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much does the school staff ***follow through with what they said they would do*** to those who broke the rules?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

At your school, ***how much*** do administrators or school staff ***call parents*** when ***students break the school rules***?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you ***know about the state sponsored "SAFECALL" line*** that lets you call 24 hours a day without giving your name to report any dangerous situation that concerns you about your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you ***like the idea of having a "SAFECALL" line*** this school year?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How many times have you actually used the ***"SAFECALL" line*** this school year?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think ID badges ***increase student's feelings of safety and security***?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think a student handbook ***helps students with feelings of safety and security***?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much safety do you think students ***feel in confiding their troubles and problems to adults*** such as administrators, teachers, counselors, coaches, etc. At your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect (being friendly, no putdowns, caring) do you think ***students show each other*** at your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect do you think ***students show school staff*** (administrators, teachers, secretaries, cafeteria workers, custodians, etc.) at your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect do you think ***school staff show to students*** at your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much safer do you think ***peer mediation and conflict resolution programs help students feel***?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How confident do you feel that you ***know what to do*** if a real ***fire*** happened in your building while you are at school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How confident do you feel that ***you know what to do*** if your building were about to be hit by a ***tornado***?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How confident do you feel that ***you know what to do*** if someone began ***shooting at people*** at your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How confident do you feel that you know ***what to do*** if someone set off a bomb at your school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think ***feeling safe and secure affects*** a student's ability to make good grades?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How concerned are you that students or school staff ***may find themselves in dangerous situations in the following area*** during the school day?

In the classroom?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

In the hallway?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

On the stairs?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

In the bathrooms?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

In the gym locker rooms?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

In the Cafeteria?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

In the auditorium during assemblies?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

At the bus stop while waiting for the bus?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

On the bus while riding to and from school?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

On the playground?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

On the grounds around the school building?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

About unlocked doors (not counting the front door) that might allow strangers to enter the building unseen?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

How much have any of the following situations ***ACTUALLY HAPPENED*** to you during this school year ***on school property***?

Having belongings stolen?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to hurt students or staff?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to kill students or school staff?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Being threatened verbally by students?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Being threatened physically by students?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students smoking cigarettes, using chewing tobacco or snuff on school property?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students using drugs (alcohol, marijuana, downers, uppers, speed, crack, etc.) on school property?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students make gang signs or wear gang clothing on school property?

Hardly Any Some A Lot
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students being bullied by other students?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

Being bullied yourself by students?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

Seeing students bringing guns or knives to school for protection?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

Hearing students talk about bring guns or knives to school for protection?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

Hearing students talk about setting off bombs in the school?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

Hearing students talk about calling in bomb threats to the school?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

APPENDIX B

CHILD ASSENT FORM

CHILD ASSENT FORM

DEVELOPMENT of SCHOOL SAFETY SURVEY

Dear Student:

You are being asked if you would like to take part in a project that is gathering information to help make schools safer for everyone who is either a student in school or an adult who works in schools. It is called the School Safety Survey. The person in charge of this project is, Linda Nickell who is a graduate student working on earning her Ph.D. degree at Oklahoma State University. Ms. Nickell is the project director and is working under the supervision of Dr. Janice Miller, who is an Associate Professor at Oklahoma State University. In order to earn her degree, Ms. Nickell is required to do special projects or assignments as part of her training. The school safety survey is one of those special projects she has chosen to do in partially fulfilling the requirements needed for the Ph.D. degree. The survey will ask people to answer questions by circling a letter or a number and it should take somewhere between 15 and 20 minutes for each person to finish. The questions will ask about things your school does to make everyone feel safer, school rules, things that school staff do to make individuals feel safer and more comfortable at your school, areas of the school that people might think are unsafe and things that have actually happened during the school year that may have made people feel unsafe or insecure.

Whether or not you decide to take part in this project is completely your choice. Some sections of the survey might cause a few people to remember unpleasant experiences that they may have had at school. For example one section of the survey asks about things that may have actually happened this school year that may have made people feel unsafe or uncomfortable. Another section of the survey asks people to rate areas of the school that they think might be dangerous. It is not likely that you will find the questions to be any more upsetting than other routine events in your daily life, but you can stop at any time if some of the questions make you feel uncomfortable with no negative consequences. Also, as always, teachers and school counselors will be available to talk with anyone who experiences feelings of uneasiness or anxiety. You will not be asked to put your name on the survey so that the answers you put on the survey cannot be identified with you, or in other words, your answers will be kept confidential. The answers you put on your survey will, however, be combined with the answers from other students' surveys to give the project director the information she needs to help make the School Safety Survey a useful tool for all schools. If you have further questions, you may contact, at any time, Linda Nickell or Dr. Janice Miller at Willard Hall, School of Educational Studies, Oklahoma State University (405)744-9611. You may also contact Sharon Bacher, Executive Secretary to the OSU Institutional Review Board, at (405)744-5700.

I have read and fully understand the assent form. I sign it freely and voluntarily. A copy has been given to me.
Date_____

_____

Student's Name (**Please Print**) Student Signature

I certify that I have personally explained all elements of this form to the subject or her/his representative before requesting the subject or his/her representative to sign it.

Signed _____
Project Director or his/her authorized representative

APPENDIX C

PARENT CONSENT FORM

PARENT CONSENT FORM

DEVELOPMENT of SCHOOL SAFETY SURVEY

Dear Parent:

We are asking you to allow your child to participate in a study that will result in the development of a school safety survey. Ms. Linda Nickell, a candidate for the Doctorate of Philosophy at Oklahoma State University is conducting the study as part of her dissertation requirements under the supervision of Dr. Janice Miller, Associate Professor in the School of Educational Studies at OSU. The survey is designed to be given to middle school students and the associated school staff. The survey asks questions about existing safety measures in the school, enforcement of existing rules, contribution of existing safety measures to feelings of safety and security, contribution of emotional and social supports to feelings of safety and security, areas of the school that elicit feelings of concern in regard to safety and security and actual incidence of events this school year that threatened feelings of safety and security. The results of the study will assist your district in gathering as much information as possible about safety and security concerns from the multiple perspectives of a variety of people associated with your school system. This information will be helpful to your district in determining strengths, weaknesses and needs in formulating safety and security measures.

Your child will be asked to complete a pencil and paper survey comprised of items that ask her/him to circle letters or numbers in response to the questions. Your child will be asked to take the survey only once and it will take approximately 15 to 20 minutes to complete. Individual results will be kept confidential. A few individuals may find that some sections of the survey could elicit unpleasant memories or feelings. For example one section of the survey deals with actual incidence of events in the school environment that threatened feelings of safety and security. Another section asks the subject to rate areas of the school for potential danger. The items are not believed to be any more of a stimulus for remembering unpleasant events than other routine, everyday occurrences in the participant's life, but the participant will always have the option of not participating if they so choose. Also, as part of normal school procedure, teachers as well as school counselors will be available to deal with any expressed feelings of uneasiness or anxieties if they should arise. Your child's participation is strictly voluntary and you and/or your child may withdraw at any time with no negative consequences. You may contact me, Linda Nickell or Dr. Janice Miller at Willard Hall, School of Educational Studies, Oklahoma State University (405) 744-9611 at any time if you have additional questions. You may also contact Sharon Bacher, Executive Secretary to the OSU Institutional Review Board, at (405)744-5700.

By signing below, I indicate that I have read and fully understand this consent form. I sign it freely and voluntarily and a copy has been given to me. I am in agreement with allowing my child to receive information about the study as described above as part of the child assent form process and I am in agreement with my child *choosing to participate* or *choosing not to participate* in the study. If my child chooses to participate, I give Linda Nickell or her authorized representatives permission to collect the information described above from my child.

Signed _____ Date _____
(Parent signature)

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Signed_____
Project Director or his/her authorized representative

APPENDIX D

IRB APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 4/15/03

Date : Tuesday, April 16, 2002 IRB Application No: ED01115

Proposal Title: DEVELOPMENT OF SCHOOL SAFETY SURVEY

Principal
Investigator(s) :

Linda K. Nickell Janice Williams

Reviewed and
Processed as: Expedited (Spec Pop) **Continuation**

Approval Status Recommended by Reviewer(s) : Approved

Signature : Carol Olson

Carol Olson, Director of University Research Compliance

Tuesday, April 16, 2002
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX E

FINAL VERSION OF INSTRUMENT

SCHOOL SAFETY SURVEY

Do *not* write your name on this paper. Your identity will be kept confidential. If you are a student and you do not understand a question, you may ask school staff or parents for help.

Grade _____ (If you are a student)

Position -- circle the term that best describes your position:

Student Certified School Staff Non-certified school staff Parent

Race:

American Indian Asian-American Black Hispanic Pacific Islander White

Other _____

Gender:

Female Male

DIRECTIONS

Please *circle* **Y** for *yes* or **N** for *no* for the following questions.

Did your school ***have a student handbook*** that explains school rules, policies and procedures that was given to each child and their family this school year? **Y N**

Does your school ***have an intercom speaker*** or similar system that connects the rest of the school building with the principal's office? **Y N**

Did your school ***offer training to students*** about how to deal appropriately with ***bullies*** this school year? **Y N**

Did your school ***offer ongoing peer mediation*** or ***conflict resolution*** programs during this school year? **Y N**

Did your school require ***students*** to ***wear identity (ID) badges*** while attending school this school year? **Y N**

Did your school require ***school staff*** such as teachers, administrators, cafeteria workers, etc. to ***wear ID badges*** while they're working in school this school year? **Y N**

Did your school ***have metal detectors*** at the doors for people to walk through at the beginning of each day this school year? **Y N**

Did your school ***have a security guard*** or an ***off duty police officer*** in your building during the day this school year? **Y N**

Did your school ***hold practice drills*** for what to do in case of ***fire*** this school year?
Y N

Did your school ***hold practice drills*** for what to do in case of a ***tornado*** this school year?
Y N

Did your school ***hold practice drills*** for what to do in case a ***bombing*** or a ***shooting*** should ever happen at your school this school year? **Y N**

DIRECTIONS
Circle the number under each of the following questions that best answers the question.
If you feel that the answer to the question is **Hardly Any**, circle **0, 1, 2 or 3**.
If you feel that the answer to the question is **Some**, circle **4, 5 or 6**.
If you feel that the answer to the question is **A Lot**, circle **7, 8, 9 or 10**.
10 is the maximum or strongest amount you can circle.
The arrow ----------> serves as a reminder of the direction to go to show the strongest answer.

Examples:

How often do you think cows are seen on the roof of your school?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

How much do you think people enjoy eating their favorite food?

Hardly Any **Some** **A Lot**

0 1 2 3 4 5 6 7 8 9 10

---------->

At your school, **how much** does the school staff **remind students** of the school rules and what will happen if the rules are broken?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much does the school staff **follow through with what they said they would do** to those who broke the rules?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you **know about the state sponsored "SAFECALL" line** that lets you call 24 hours a day without giving your name to report any dangerous situation that concerns you about your school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think having a SAFECALL line **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think having a security officer duty **increases students' feelings of safety and security?**

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think wearing ID badges **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think having a student handbook **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think having peer mediation and conflict resolution programs **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think having at the main metal detectors doors **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much do you think fire, tornado and other emergency drills **increases students' feelings of safety and security**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much safety do think students **feel in confiding their troubles and problems to** adults such as administrators, teachers, counselors, coaches, etc. at your school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect (being friendly, no putdowns, caring) do you think **students show each other** at your school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect do you think **students show school staff** (administrators, teachers, secretaries, cafeteria workers, custodians, etc.) at your school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much respect do you think **school staff show to students** at your school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How concerned are you that students or school staff ***may find themselves in dangerous situations in the following areas*** during the school day?

In the classroom?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

In the hallways?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

On the stairs?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

In the bathrooms?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

In the gym locker rooms?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

In the cafeteria?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

In the auditorium during assemblies?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

At the bus stop while waiting for the bus?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

On the bus while riding to and from school?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

On the bus while riding to and from athletic events/field trips?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

On the playground?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

On the grounds around the school building

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Unlocked doors (*not counting the front door) that* might allow strangers to enter the school building unseen?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

How much have any of the following situations ***ACTUALLY HAPPENED*** to you during this school year ***on school property***?

Having **your** belongings **stolen**?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to **hurt** other **students**? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to **hurt school staff**? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to **kill** other **students**? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students say they were going to **kill school staff** **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Being **threatened verbally yourself** by students? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Being **threatened physically yourself** by students? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students **smoking cigarettes, using chewing tobacco or snuff** on school property? **Hardly Any** **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students **using drugs (alcohol, marijuana, downers, uppers, speed, crack, etc.)** on school property?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students **make gang signs or wear gang clothing** on school property?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students being **bullied** by other students?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Being **bullied yourself** by students?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Seeing students **bringing guns or knives to school** for protection

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students **talk about bringing guns or knives to school** for protection?

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students ***talk about setting off bombs*** in the school

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

Hearing students **talk about calling in bomb threats** to the school

Hardly Any **Some** **A Lot**
0 1 2 3 4 5 6 7 8 9 10
---------->

APPENDIX F

IRB APPROVAL FORM - PILOT STUDY

Oklahoma State University
Institutional Review Board

Protocol Expires: 5/1/02

Date: Wednesday, May 02, 2001 IRB Application No ED01115

Proposal Title: DEVELOPMENT OF SCHOOL SAFETY SURVEY

Principal Investigator(s):

Linda K. Nickell Janice Williams

Reviewed and Processed as: Expedited (Spec Pop)

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

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

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson

Carol Olson, Chair
Institutional Review Board

VITA #2

Linda K. Nickell

Candidate for the Degree of

Doctor of Philosophy

Thesis: DEVELOPMENT OF A SINGLE-FORM SCHOOL SAFETY SURVEY FOR EARLY ADOLESCENTS AND ADULTS

Major Field: Educational Psychology

Biographical:

Education: Received Bachelor of Science degree in Education from Southwestern Oklahoma State University, Weatherford, Oklahoma in December 1968; received Master of Education degree in Education from the University of Oklahoma in May 1970; received Master of Education in Guidance and Counseling from the University of Central Oklahoma in May 1986; completed the requirements for Doctor of Philosophy degree in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in December 2004.

Experience: Physical Education Teacher, Basketball and Volleyball Coach, Casady Episcopalian Day School, September 1969 - May 1972; Physical Education Teacher, Volleyball, Basketball and Track and Field Coach, Oklahoma City Public Schools, September 1972 - May 1974; Social Studies Teacher, Oklahoma City Public Schools, September 1974 - May 1975; Physical Education Teacher, Oklahoma City Public Schools, August 1975 - May 1982; Acting Assistant Principal, Oklahoma City Public Schools, August 1982 - May 1983; Physical Education teacher, Oklahoma City Public Schools, September 1983 - May 1990; School Psychologist, Oklahoma City Public Schools, August 1990 - present.

Professional Organizations: Oklahoma School Psychological Association; National Association of School Psychologists; American Psychological Association.