# AN INVESTIGATION INTO SOURCES OF TEACHER STRESS IN RURAL SECONDARY SCHOOLS

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## ABSTRACT

Teaching is generally regarded as a stressful occupation and perhaps more so in South Africa during this phase of transformation. This dissertation reports on an investigation into the incidence and sources of teacher stress in rural, secondary schools in the Northern Province.

Data has been collected through forty-two interviews with individual teachers (each interview schedule containing ten semi-structured question items); and a fifty-five item self-report questionnaire survey. A total of hundred and seventy-seven teachers, drawn from twenty-two government secondary schools over the course of an academic year (1996) participated in the study.

Results reveal five major sources of teacher stress: the learning-teaching situation, factors related to the school and community, and professional and personal factors. Analyses of the different stress factors also show that certain biographical characteristics are significant mediators in teachers' perception of sources of stress, that is to say, these contribute to teachers' assessment of their emotional, physical and psychological well-being. Teachers have also reported on various coping strategies.

Teacher stress is a problem in rural areas in South Africa. It warrants the attention of all those involved in this profession.

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the first time for the degree of Master of Education in the University of Cape Town. It has not been submitted before for any degree or examination at any other University.

Signed by candidate on the 10th October 1997

Signature Removed

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# CHAPTER 1 : INTRODUCTION

Stress is not a new problem facing teachers. It seems however that the conditions in the South African education system have caused it to be an even more acute problem, especially in rural areas. Some possible contributory factors in this regard are:

* the history of the educational system(s) under the Apartheid regime;
* aspects of the traditional and community life style;
* job insecurity resulting from changes in technology, economic recessions and changes in the system of government;
* bureaucratic and administrative problems;
* the rate at which changes are taking place in education;
* competition amongst teachers and pupils; and
* the poor training of teachers and their availability in rural areas.

The present study is a contribution towards addressing the problem of stress in the rural areas of the Northern Province of South Africa. I am not aware of any similar study that has been done in these areas.

For a long time, there have been inequalities in the South African education system. Under the apartheid legislation, schools were given unequal preference in terms of funding, resources, equipment, and teachers. This left the rural schools in the most disadvantaged position. Education authorities may not be aware of the impact this unequal supply of resources has had on teachers. This study will establish the very impact of these inequalities on teachers and more particularly, the way in which these and other factors are sources of stress for teachers.

School environments vary according to the socio-economic status of the area. It is quite conceivable that the type of school and the area in which it is situated

may be related to levels of stress teachers experience. Rural areas are still underdeveloped, and the schools are not as equipped with resources as those in the urban areas. Most teachers teaching in these schools come from distant areas, and have to travel long distances daily to school or stay somewhere near their place of work during the week to be able to arrive at school on time. The schools in the rural areas are situated where they are thought to be within reach of all pupils in the surrounding villages - which are sparsely situated and sparsely populated. Most pupils, like their teachers, have to travel long distances to and from school every day.

There is a great shortage of classrooms and other buildings, for example, offices and staff rooms. The principal and teachers sit under trees when they have free periods and do administrative work. Some lessons also have to be held under the trees. Some classes are crowded due to the problem of accommodation (more pupils are accommodated in a classroom to reduce the number of class groups and avoid having other class groups to attend lessons under trees). Most schools still have pupils who are over-age, as a result of having started school late or due to breaks in their education.

Toilet facilities are often inadequate or unavailable. There is no electricity supply in these rural areas. The roads leading to the areas where these schools are situated, are not tarred and are poorly maintained. Further, most members of the community are illiterate and know very little about what actually happens in the schools.

Given the situation as briefly introduced above, this study attempts to determine the extent of work stress on teachers in rural secondary schools. There are a number of writings on to the problem to be found in the media, in books and journal articles which have been published on the subject, and in a number of unpublished studies some of which which have identified a range of situations which teachers perceive as stressful.

The purpose of the study is to investigate:

a. The proportion of teachers who regard their work as stressful.

b. The extent to which teachers find working in rural areas stressful.

c. The association between the extent of overall work stress reported by teachers and the following characteristics of teachers:

   * sex of the teacher

   * length of teaching experience

   * travel distance between home and the school

d. Aspects of their work that teachers perceive to be the most important source of stress.

e. Coping strategies used by teachers.

f. The uniqueness of the sources of stress reported by teachers in secondary schools in the rural areas of the Northern Province of South Africa as compared to other areas in the country.

The main purpose of this study is to provide rural secondary school teachers and educational administrators with an understanding of stress as a potential problem confronting teachers. As a result, teachers and administrators would probably be in a better position to cope with the effects of stress in the teaching situation. The study is organized as follows:

In Chapter 2, a review of literature is presented. This provides a theoretical foundation for the empirical investigation. The concept of stress is explored by examining various definitions of stress, with emphasis on the interactional definitions which form the basis of the empirical investigation on the stress reported by rural secondary school teachers (see Appendix F). Eight models of stress are discussed in this chapter. The sources of teacher stress, stress reactions and coping strategies are also explored.

Chapter 3 presents an overview of the methodology used in this empirical investigation. The study involves interviews with a sample of forty-two teachers and a questionnaire administered to 177 teachers. (The interviews provided the base for the compilation of the questionnaire).

In this regard, I have attached the following appendices:

* Appendix C: Interview schedule.

* Appendix D: Data from interview.

* Appendix E: Questionnaire

* Appendix F: Statistical data from the questionnaire.

In Chapter 4, the results of the investigation are presented, explained and analysed under two sections: the interviews are discussed in the first section and the questionnaires are discussed in the second section.

Chapter 5 analyses the results of the investigation together with evidence from literature. In the first section of the Chapter, findings from the interviews are explored. The findings from questionnaires are discussed in the second section. The relationship between the two bodies of data is also indicated. The interactional model of stress which forms the basis of the investigation is discussed.

Chapter 6 provides a summary of the main findings of this study. A discussion of the implications of important stress factors for future policy making and teacher training is given. Suggestions for further research are also made.

# CHAPTER 2 : LITERATURE REVIEW

## INTRODUCTION

In this chapter the definitions of stress and teacher stress are outlined, after which an attempt is made to describe more fully the different models of stress used by writers in this field.

One of the striking features in the literature on stress is the difficulty in defining 'stress'. A search of the literature on stress reveals that there is no consistent definition provided by experts in the field. The exact meaning of stress seems ambiguous because the definitions are many and varied, ranging from simple one-word statements, such as 'tension' or 'pressure' to complex medical explanations of the physiological responses of the body to certain stimuli. Stress seems to mean different things to different people, largely due to the different ways in which it is responded to.

Stress is perceived by an individual in a very personal way. It is difficult to measure stress because it is in the eyes of the beholder - it is the way an individual reacts to the world. Individual characterics such as needs, values, and personality play a role in its definition. Stress can be positive or negative, desirable or undesirable, a good or a bad reaction to a real or perceived imbalance which could be psychological, physiological, behavioral or social, between the demands of the environment and the individual's capability of responding appropriately to those demands. While some demands may constitute a threat to one teacher, they may not constitute a threat to another.

The stress may be due to physical exertion of a stimulus from the environment. It may be an emotional difficulty that produces distorted perceptions of ordinary circumstances or the psychological impact of significant life events. Psychological stressors may be presented by one's status and role in the family and in the community, or arise out of the individual's work situation and the interpersonal relationships it involves

A study of the definitions of 'stress' as an all-inclusive term (covering all types of jobs), and 'teacher stress', which places emphasis on the stress experienced by teachers in their job-situation is presented in this chapter.

## 2.1. DEFINING STRESS

Dobson (1982) states that in spite of the abundance of available material, it would be difficult to present an adequate definition of stress - one which would be acceptable to all. He found over 300 definitions of 'stress' and words that are semantically akin to it. Goss (1985) confirms Dobson's view in that it is difficult to define 'stress', partly because of the use of the concept in the media and its use in a variety of disciplines such as physiology, psychology, sociology, management, psychiatry and pharmacology. The word 'stress' may be regarded as a situation-specific word, i.e. a word which assumes various meanings according to the particular situation or context in which it is used. Stress means many different things to different people as influenced by their past experience (Cooper and Marshall, 1978; Matteson and Ivancevich, 1982).

The word 'stress' is derived from Latin 'Stingere' (strictus) which means to draw tightly or bind. It was certainly used in Old French (estre'ce) and in Middle English where it appeared as 'stres', 'straisse', or with other similar spellings. According to both Cooper and Marshall, (1978) and Dobson, (1982), this definition of 'stress' dates back to 1843. It is related to the term 'strain'- 'strain upon a bodily organ, or a mental power', an idea which is to be found in the Shorter Oxford English Dictionary (1933) meaning 'to subject to stress or strain'. According to Dobson (1982), and Matteson and Ivancevich (1982), the word 'stress' was introduced into the physical sciences where it referred to the external force or pressure applied to an object. The introduction of the term 'stress' into physics and also engineering was a result of its use during the eighteenth and nineteenth centuries denoting 'force, pressure, strain or strong effort' (Cooper and Marshall, 1978).

Matteson and Ivancevich (1982) provide a distinction between the types of stress that an individual may find challenging or satisfying. They call stress which produces a positive outcome 'eustress' - a word coined from the Greek *'eu'* meaning good; and the type of stress that has negative outcomes on the individual which they called distress. Both types of stress tax the individual's resources and adjustments, although distress typically has the potential to do more harm than good (Carson et al. 1988; Burrage and Stewart, 1990; Manteiro, 1990). Calabrese (1987) observes that stress is often viewed only in a negative sense.

Cox and Mackay (1981) have advanced three main types of definitions or models of stress. The first type of definition regards stress as a response pattern. Here, stress is treated as a dependent variable. The second approach treats stress as an independent variable in that it represents a stimulus in the environment external to the person. The third approach regards stress as a dynamic psychophysiological process, intervening between stimulus and response.

Each writer, therefore, tends to use their own definition. Further examples of this in the literature are as follows:

* According to Coleman et al. (1980), the term 'stress' has historically been used to refer both to adjustive demands (stressors) placed on an organism and to the organism's internal responses to such demands.

* Litt and Turk (1985) in their study 'Sources of stress and dissatisfaction in experienced high school teachers,' characterize stress in terms of a global construct. They argue that over the years, some strong correlates of this global construct have been found, which have included job dissatisfaction, absenteeism, intention to leave the teaching profession, and physical and psychological distress.

* Kyriacou and Sutcliffe (1978) define stress as the result of some appraisal mechanism, either the perception of threat from the environment or the endangerment of well-being, or the perception that there is an imbalance or discrepancy between the demands made upon the individual and the individual's ability to meet or cope with the demands, where failure to meet or cope with these demands has important consequences for the individual.

* Brown and Ralph (1992), in their study 'Towards the identification of stress in teachers', indicate that stress is person specific, what is stressful to one person may not necessarily be stressful to another.

* According to Swart (1987), 'stres kan gedefineer word as teenstrydigheid tussen behoeftes en waarde' (1987, p. 163). (Stress can be defined as a contradiction between needs and values).

In summary, there is therefore a configuring lack of consistence in the use of the term. There is a general consensus, however, that stress is a physical, mental and/ or emotional reaction resulting from an individual's response to environmental tensions, conflicts, pressures, and other stimuli. Events in and of themselves are neutral, whether a particular stressor will produce difficulty or modify the individual's susceptibility to the effects of stressors depends on the individual and the context or circumstances in which the stressor and its magnitude or intensity, the vulnerability of the individual to its effects at the time, and the context or circumstances in which the stressor and the vulnerability are interacting.

For the purposes of this study, 'stress' will be understood as a reaction (physical and/or emotional) in the individual as a result of factors (internal/external) perceived by the individual to be threatening to themselves and their ability to cope. Moreover, stress is regarded as an unavoidable part of human experience because all people face demands, threatening situations, challenges and adjustments which call for coping behavior. Much of the time, a person's reactions to these experiences are so mild that they are not even aware of them; sometimes however, they involve stress.

## 2.2. TEACHER STRESS.

Teacher stress is used here to refer to the effects or symptoms that occur in individuals in their jobs as teachers. These are likely to be different for every individual teacher. According to Dobson (1982), teacher stress has become a major problem not only in Britain, but also in other countries.

The teaching profession, including the administrative side, is seen as a highly stressful one. According to Pithers (1995), teaching is seen as stressful because of the massive interpersonal demands of the job and its attendant roles as well as its large task demands and expectations. Furthermore, there is research evidence that indicates that work-related stress among teachers has various implications for work performance, the health and psychological status of these professionals which, in turn, impacts on their students.

There are several definitions of 'teacher stress', as used by several researchers

who view teacher stress as a negative feeling resulting from aspects of the teacher's job constituting a threat to their well-being (see for example, Forman, 1982; Tunnecliffe, Leach, Tunnecliffe, 1986; Kyriacou, 1989; Pithers and Forgarty, 1995).

According to Manthei and Gilmore (1994), two key features of occupational stress, are the characteristics of the individual and the sources of stress in the workplace. It is the interaction between these features that determine whether a person's response will be coping or maladaptive. Definitions of stress in teaching have tended to include features such as

* the subjective nature of a teacher's perception of stress;

* the variability among teachers to cope successfully with demands of teaching; and

* the generally negative reaction when job demands are perceived to exceed a teacher's ability to cope.

A frequently-used definition of teacher stress - and one adopted in this thesis, is that offered by Kyriacou and Sutcliffe (1978), who define teacher stress as a response syndrome of negative affects (such as anger or depression) usually accompanied by potential pathogenic physiological changes (such as increased heart rate) resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his or her self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat. This conceptualization of teacher stress places emphasis on the subjective experience of his or her affective state and as such, this research employs a self-reported measure of teacher stress.

## 2.3. THEORETICAL MODELS OF STRESS

Before research on teacher stress can be carried out, a clear model of teacher stress needs to be developed. In the section above, an attempt has been made to define stress. In the section that follows, a review will be made of various models of stress that have been put forward by researchers in an attempt to

develop a model of teacher stress that would be relevant to that experienced especially by teachers in rural areas in Northern Province.

### 2.3.1. The response-based model of stress

A simple response-based approach to stress, taken from Cox and Mackay (1981: p.95) is shown in Figure 1. In this model, alternative terms for the environmental stress-producing stimuli are shown in the left-hand box. This type of model was originally given impetus by Hans Selye. He defines stress as the non-specific response of the body to any demand, a state manifested by a specific syndrome which consists of all the nonspecifically induced changes within a biologic system (Selye, 1976). Selye emphasizes the non-selectivity and non-specificity of the (physiological) response.

On encountering a 'stressor' or 'environmental demand', the organism exhibits a triphasic response, which Selye termed the 'General Adaptation Syndrome' (GAS). The term 'general' is used because the consequences of stressors affect many different areas of the body; 'Adaption' refers to its stimulation of defenses designed to help the body adjust or adapt to the stressor, and 'Syndrome' indicates that individual pieces of the reaction occur more or less together and are, in fact, at least partially interdependent (Matteson and Ivancevich, 1982). So, this approach to stress focuses on the person's response pattern to disturbing elements of his environment (loads, demands, psychological stimuli, threats. etc). The person's response pattern is viewed as stress.

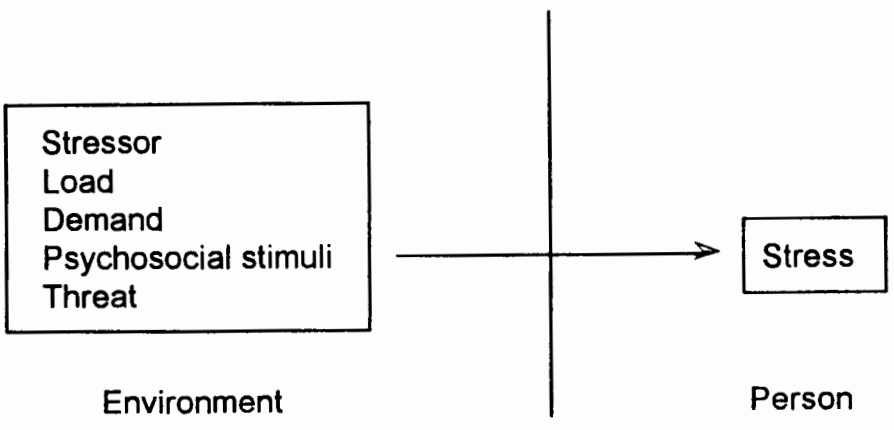


*Figure 1. A response-based approach to stress (Cox and Mackay, 1981)*

Matteson and Ivancevich (1982) in their discussion on stress as the response to a stimuli, conclude that stress is the physiological or psychological response an individual makes to an external event or condition, called 'a stressor'. This approach, illustrated in Figure 1 above, focuses on the individual's responses to potential stressors, demands, and threats in the environment. Stress is therefore regarded as an internal response which may show itself in a variety of different ways.

### 2.3.2 The stimulus-based model of stress

According to Cox and Mackay (1981), the stimulus-based approach (as shown in Figure 2 below), views stress as an independent variable for study, that is, as an objective property of the external environment. In this sense, stress is viewed in terms of the stimulus characteristics which are perceived as disturbing in the environment.

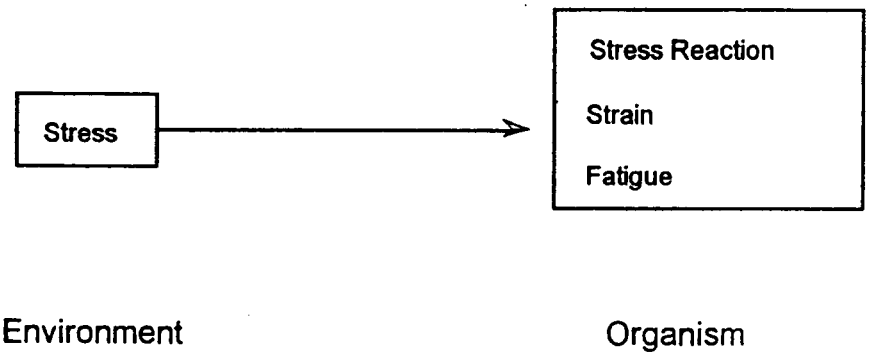


*Figure 2. A stimulus-based approach to stress (Cox and Mackay, 1981: p 97)*

Cox and Mackay inform us that a particular type of stimulus-based approach has been referred to as the 'engineering analogy'. This engineering analogy has been borrowed here in considering 'Hookes law' which describes how the impact of loads produce deformation in metals. A load placed on a metal results in a deformation due to internal strain. If the strain produced within the structure of the metal is within the 'elastic limit' of the material, when the load is removed the metal will (eventually) return to its original condition. If, however, the strain passes beyond the elastic limit, then permanent damage will

result. The analogy that can be drawn is that just as metals have different properties, such as different elastic limits, so individuals have different built-in resistance or 'breaking points'. Up to a point, stress can be tolerated, but thereafter, permanent damage, either physiological or psychological, results.

An almost similar stimulus-based approach has been put forward by both Matteson and Ivancevich (1982) and Allen et al. (1982). They suggest that stress is the force acting on a person that causes him or her discomfort or strain. This suggests that stress is the stimulus or force which acts on an individual, affecting him or her in some way. According to this stimulus definition, stress is an external event. If the stress acting on an individual exceeds personal limit, the individual may collapse and permanent damage may be caused. According to Goss (1985), this type of definition emphasizes the stimulus characteristics of the environment that give rise to strain within the person. Stress is seen as an independent variable, something external to the person, impinging on him or her and acting as a disruptive force. This stimulus-based approach is represented diagrammatically in Figure 3. Individuals are able to tolerate a certain amount of stress, but suffer harm when that level is exceeded. Individuals resistance to stress varies.

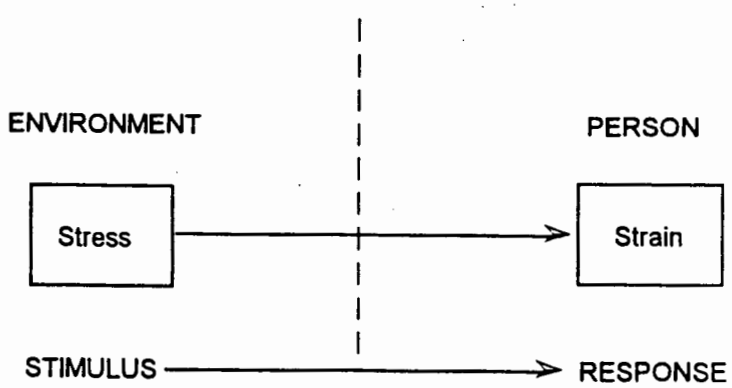


*Figure 3. Stimulus-based model of stress (Goss, 1985)*

According to Goss (1985), stress is viewed in terms of demand and focuses attention on the conditions that can be accepted as stressful. Conditions that are stressful to some people are not stressful to others.

### 2.3.3. The interactional models of stress

According to interactional models, stress is the result of a particular relationship between an individual and his or her environment (Goss, 1985). Cox and Mackay (1981) earlier referred to this approach to the definition of stress as the 'psychological approach'. According to this approach, the roles of perceptual and cognitive characteristics are thought to be crucial in determining individual differences.

Lazarus (1976), has articulated this viewpoint well in that he claims that stress is concerned with an individual in the context of his or her environment, and provides an interactional definition of stress which refers to a very broad class of problems differentiated from other problem areas because it deals with any demands which tax the system, together with the responses of that system. Lazarus states that stress occurs when there are demands on the person that tax or exceed their adjustive resources, which is reiterated by Miller (1995), one of the most recent researchers.

According to Phillips and Lee (1980), the teacher and the school environment are in continuous interaction, resulting in adaptive demands on the teacher that can produce stress. There is an interaction between external demands, the constitutional vulnerability of the person and the adequacy of their defense mechanisms. Reaction depends on how the person interprets or appraises (consciously or unconsciously) the significance of a harmful, threatening or challenging event. Appraisal refers to the process of assessing or evaluating the various elements of the person's situation against each other which, according to Lazarus (1976), depends on, among other things, learning and past experience.

Cox and Mackay (1981) argue that apart from the appraisal of its physical characteristics, the intensity of the threat will depend on how capable the person feels of dealing with the danger or preventing the harm from occurring. If the person does feel capable, then the threat and thus the stress is minimal. If, however, the person feels helpless and totally unable to master the situation, then both the threat and the stress endured could be very severe. Individuals define for themselves which situations they find stressful. Many individuals endure great amounts of stress without any obvious noticeable affects on their

health or performance. Just as people differ in their pain thresholds, they also differ in their abilities to tolerate stress, and there is therefore no predictable pattern of reaction to demands both environmental and internal. Because of these individual differences, one person may be seriously affected by stress levels which would hardly be noticed by someone else.

According to Matteson and Ivancevich, (1982), little or no effort is required by the body to maintain the balance if the environment remains constant; in other words, when demands and resources are well balanced, there is minimal stress, but when this balance is destroyed, stress develops, causing the person to take coping action to restore the balance and remedy the situation. Stress, therefore, occurs when there is an imbalance between environmental demand and the response capability of the individual. Drawing from the work of Lazarus (1976), it is clear that this is an imbalance between the individual's perceived demand and perceived capability rather than between objective levels of these variables.

Marshall and Cooper (1979) also emphasize that the concept of stress makes sense only when seen as imbalance in the context of an organism-environment transaction. They claim that most writers endorse this 'person-environment fit model' which is shown in Figure 4. According to this model, both the environmental stimulus and the reacting individual are vital elements (one cannot refer to a stimulus as such unless it is part of a reactive situation). Reaction depends on how the person interprets or appraises (consciously or unconsciously) the significance of a harmful, threatening or challenging event. Cognitive appraisal is an essentially individual-based affair: the appraisal of a threat is not a simple perception of elements of the situation, but a judgement, an interference in which the data are assembled to a constellation of ideas and expectations. Change in any one element - e.g. the background situation against which the stimulus is perceived - can radically alter the perceiver's interpretation. If coping is successful, stress is not experienced, but if it is unsuccessful, it could have long term effects.

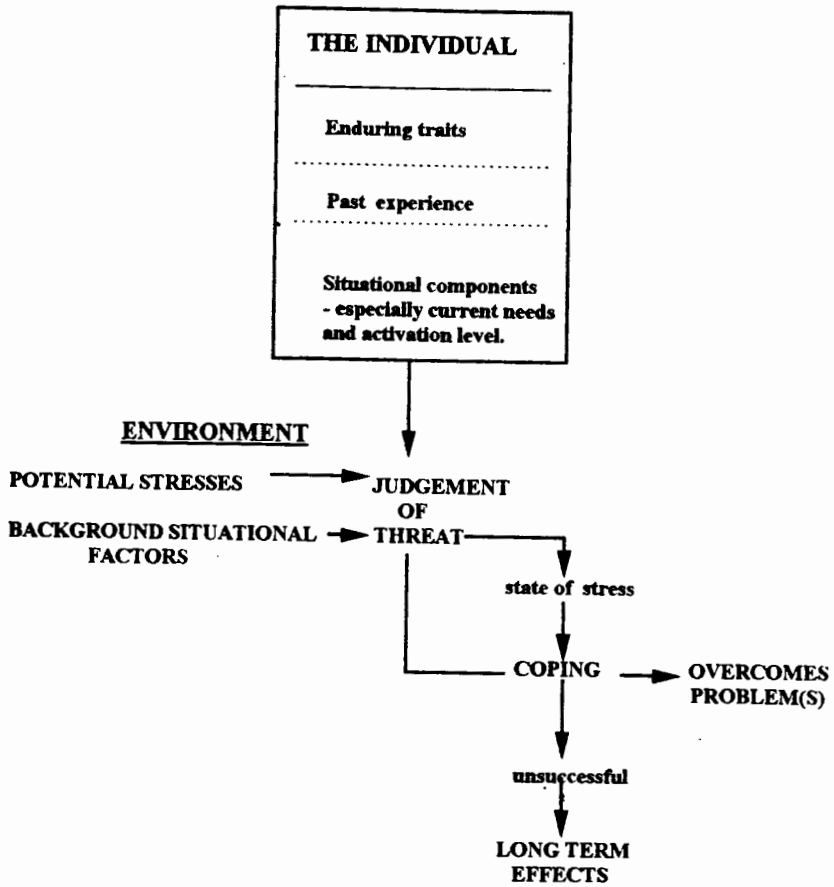


*Figure 4. The stress reaction: The person - environment fit model (Marshall and Cooper, 1979)*

According to the diagram above, stress is the result of a particular relationship between the individual and their environment. Each person defines for themselves those situations that they find to be stressful. These perceptions could be influenced by the individual's past experience, needs or enduring traits. There is no predictable pattern of reaction to stressors - both environmental and internal. Environmental demands are neutral, but may become stressful for an individual when they are perceived to constitute a threat. When demands and resources are well balanced, there is minimal stress, but when this balance is destroyed, stress develops, causing the person to take coping action to restore the balance and remedy the situation. When coping is successful, problems will be overcome, but if coping is unsuccessful, harmful consequences to the individual may result. These may be in the form of brief negative reactions, or more long-term effects - which could be physical, psychological or behavioral.

According to French, Caplan, and Van Harrison, (1982), a number of studies and theories suggest that the fit between personality and job environment may be an important predictor of stress. Strain would result from discrepancies either between environmental demands and an individual's abilities to meet them or between an individual's needs and environmental supplies to meet those needs.

There are several kinds of the person-environment fit models which are referred to by researchers. Dobson (1982) refers to two kinds of person-environment fit models:

* the degree to which a person's attitudes and skills meet with the requirements of the job, and

* the degree to which the job environment matches the worker's requirements; and states that stress is likely to ensue when a person's well-being is affected by a mismatch occurring with either the first or the second.

2.3.4. Cox and Mackay's transactional model of stress

While the interactional models emphasize the importance of the individual person's perception of demands (stimuli) and their capability of coping successfully with those demands, the integral part of the transactional model is the interaction within and between its different stages. Furthermore, each of these interactions relies on the concept of feedback.

Stress is an individual phenomenon; it is the result of a transaction between the person and their situation. The word 'transaction', according to Cox and Mackay (1981) is used to emphasize the active and adaptive nature of the process. The model as presented by Cox and Mackay has earlier been mentioned by several authors, for example: According to Kyriacou and Sutcliffe (1978), definitions that conceptualize stress as the result of an imbalance or discrepancy between demands and ability have been labeled 'transactional models of stress', since they focus on the interaction between the individual and the environment to determine whether stress will occur or not.

In reviewing Cox and Mackay (1981)'s transactional model of stress, Meichenbaum (1983), emphasizes the idea of viewing stress as an individual phenomenon and defines stress as the individual's perception of the stressfulness of the event, and their ability to cope with it. From this definition, the following points are noted:

* it is not the nature of the stress event itself but the psychological perception of the implied threat that influences how individuals react;

* stress resides neither in the situation nor in the person, but depends on the transaction of the individual in the situation;

* it is resilience or ability to cope with stress, and not the stress individuals experience that plays an important role in determining how they respond to stressful events;

* stress is a by-product of the transaction between the individual and the environment;

* the person experiencing stress may feel overwhelmed, anxious, unhappy, depressed, hopeless and helpless. Such feelings arise from comparing perceived demands and the individual's ability to cope.

Cox and Mackay (1981) believe that stress should be seen as a cognitively-mediated relational concept where not only the characteristics of the person and the job vary from time to time, but where there is also a particular dynamic relationship where the person and the environment act on each other. The basis for the model is the relationship between four aspects of the individual and the environment. These are shown schematically in Figure 5.

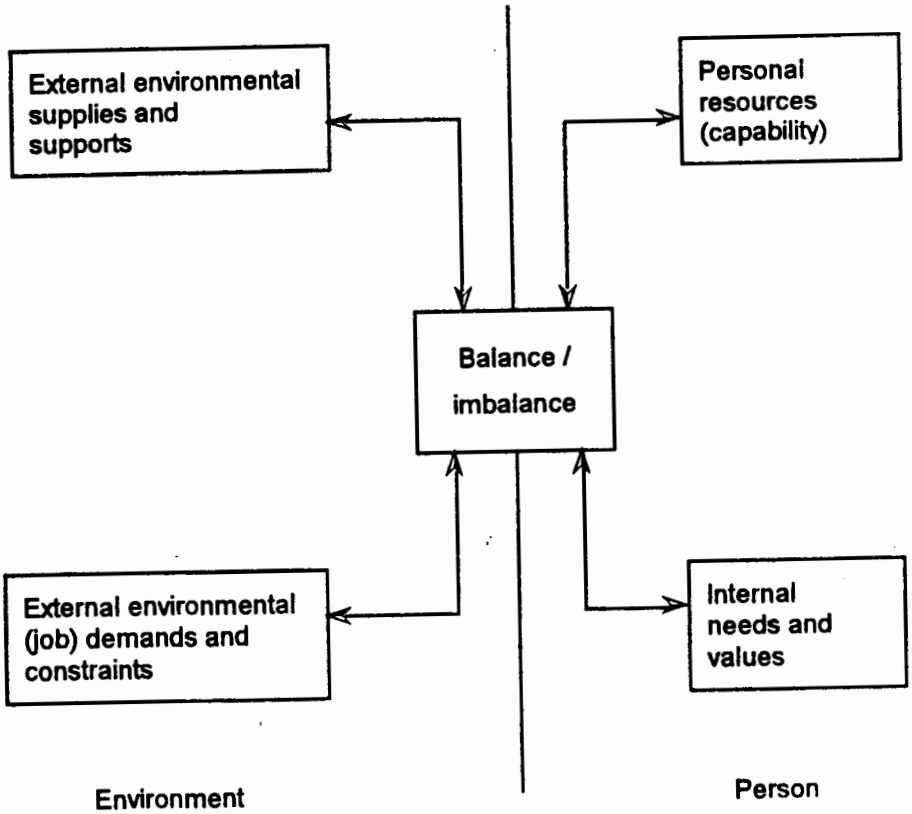


*Figure 5. The basic components of the transactional model (Cox and Mackay, 1981 p. 102)*

According to Downton, (1987), there is a potential for experiencing stress when a situation is seen to present a demand which threatens to exceed a person's capabilities and resources for meeting it, and when it is important that the person meets that demand. The person is continually appraising the demands being made on them by their situation and their ability to meet those demands. The individual's environment may or may not provide the opportunity for them to satisfy their needs, which are viewed as internally generated demands. Cox and Mackay (1981) state that the constraints placed on the individual by their own value systems on one hand and by support from others on the other hand, are further aspects of appraisal and subsequent action. In order to meet or satisfy individual needs, an imbalance between demand and capability may be tolerated. In order to earn money to satisfy individual

physiological needs, the individual may accept alternative forms of employment. Only when the stress arising from this imbalance is experienced, may the other demands - more basic needs - go unfulfilled. The person may resign and subsequently be unemployed. The way an individual interprets a situation determines whether it will produce a stress response or not, and the way they behave can create, maintain or escalate the stress.

According to Meichenbaum (1883), there are two important points about the transactional model. First, what is threatening and stressful for one person is not necessarily so for another. Some of us endure severe stressful events with style and grace and seem to become stronger with each diversity. Second, we are not victims of stress. We often behave in ways that help to create, maintain or escalate the stress we experience. There is a dynamic relationship, a transaction, between the individual and the environment which determines what is stressful and how the individual responds; this relationship changes over time.

Several authors, for example, Needle et. al. (1981) and Milstein, et. al. (1984) point out another aspect of this definition, in that stress occurs when there is a perceived excess of environmental demands over an individual's perceived capability to meet them and when failure to meet these demands has important perceived consequences.

Goss modified Cox and Mackay's transactional model of stress as shown in Figure 6 (1985: p.26). The model has five stages, with feedback at various points. The model represents a dynamic, cyclical process of transaction between the individual and their environment. The first stage consists of the actual, objective internal and environmental demands and the person's actual capability of meeting the demands. During the second stage there is a cognitive appraisal of the perceived demand and the person's perceived capability of meeting that demand. If there is an imbalance, it gives rise to the emotional experience of stress. The third stage is the stress response which is both physiological - in the form of bodily changes and psychological - in the form of behavioral and cognitive attempts to cope with the stress.

The fourth stage represents the consequences - both perceived and actual - of the coping responses. Feedback to the cognitive appraisal process of the

successful or unsuccessful consequences of coping form the fifth stage. Successful coping leads to a favorable secondary cognitive appraisal and the consequent reduction or elimination of stress. If coping is unsuccessful, unfavorable conditions of stress result and stress may increase. Feedback also occur when a physiological response affects the individual's perception of the demand, or when a behavioral response changes the actual demand.

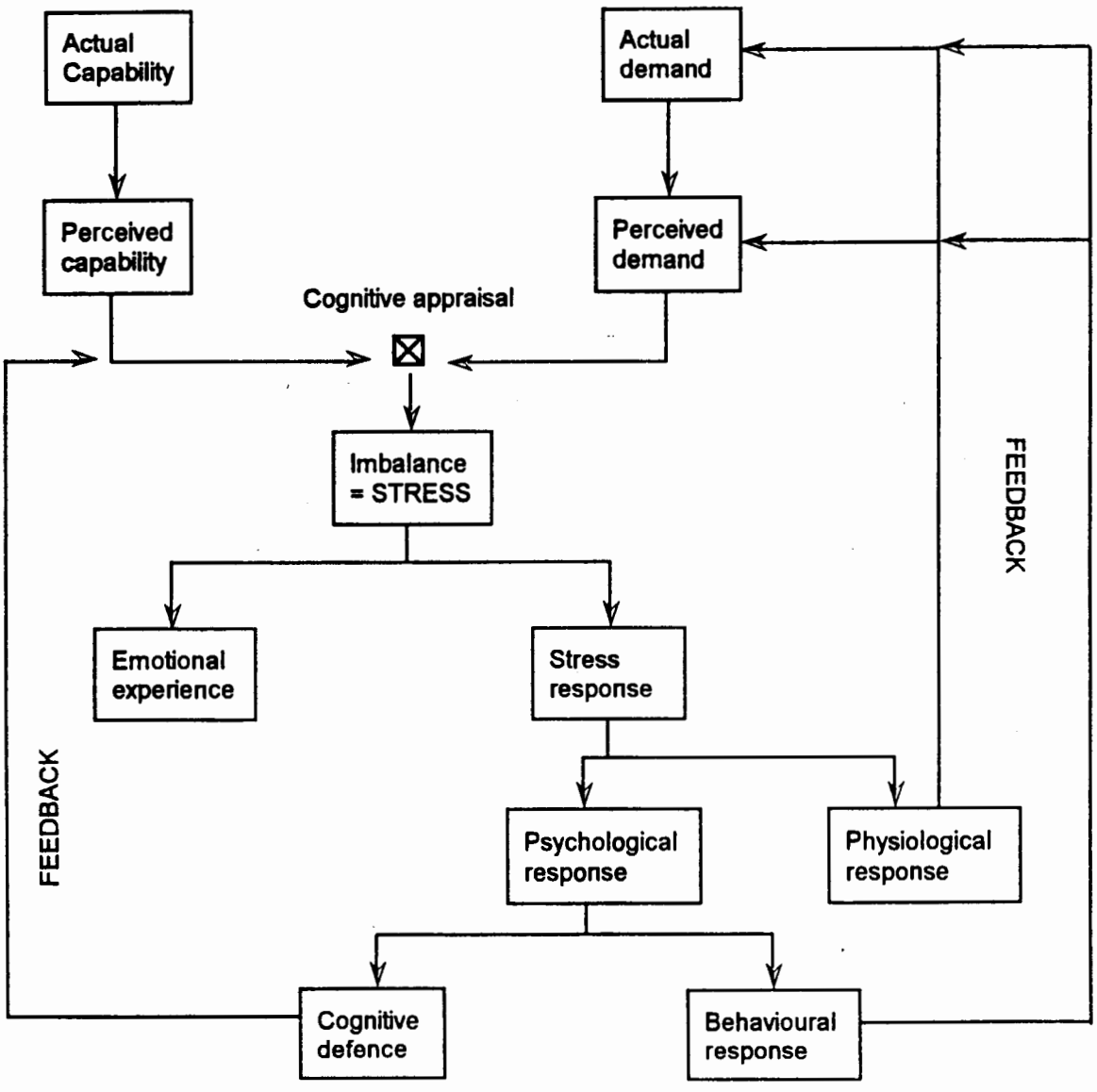


*Figure 6. The transactional model of stress (Goss, 1985 p. 26)*

Following this model, Milstein et al. (1984) modified the categorical scheme developed by Cooper and Marshall, based on French and Caplan's person-environment fit model (The P-e Fit), which indicates that stress is directly related to an individual's ability to cope with environmental conditions, particularly with conditions in the work environment, which includes five environmental categories; those of:

* Interpersonal relationships in the work environment.

  This is the extent and tenor of adult interactions on the job. A number of behavioral scientists ( for example, Argyris, 1964; Cooper, 1993) suggest that good relationships between members of a work group are a central factor in individual and organizational health.

* Structure and climate in the organizational environment.

  Stress-related issues in this category include the extent to which members participate in decision-making which promotes a sense of belonging, and a clear and sufficient communication as opposed to the threat to an individual's freedom, autonomy and identity this poses.

* Factors intrinsic to the job.

  These include the extent, type, and pace of work; the physical effort required; the total number of hours involved and the specific hours of the day or night spent at the work place; the physical environment factors, such as space, lightning, noise levels, and availability of private space and excessive travel all of which are potential sources of pressure.

* The individual's role in the organization.

  Several role-related factors can be stress-inducing, for example, role ambiguity and role conflict, that is, being pulled in different directions by incompatible demands.

* Career development.

  Lack of job security (fear of redundancy), early retirement, and opportunity for advancement (under or over promotion), can lead to manifestations of stress.

2.3.5. Moss's model of the stress process.

According to Moss (1981), stress reflects the ordinary pressures of day-to-day living as well as the extraordinary pressures that confront every individual from time to time. Some degree of stress tends to keep us mentally and physically alert and stable, but too much stress leads to exhaustion, incompetency and even death.

Moss presents what he calls 'the modern concept of stress' which links stressors and the reactions that follow in a dynamic sequence of conditions as shown here and illustrated in Figure 7.

* The impact of environmental stress from all sources (stressors) poses a threat to the individual.

* Mediating factors such as social support system (context) influence the individual's perception of stressors and so serve to modify their impact.

* The individual adaptive coping capacity and other characteristics (vulnerability) influence how the individual deals with the perceived threat.

* Stress responses (strain, stress reactions) that accompany the coping process are experienced as distressing and may trigger illness.

* The consequences of this process (confidence, sense of mastery, illness, maladjustment) become evident over time.

According to this model, different stressors require different actions to cope with these consequences.

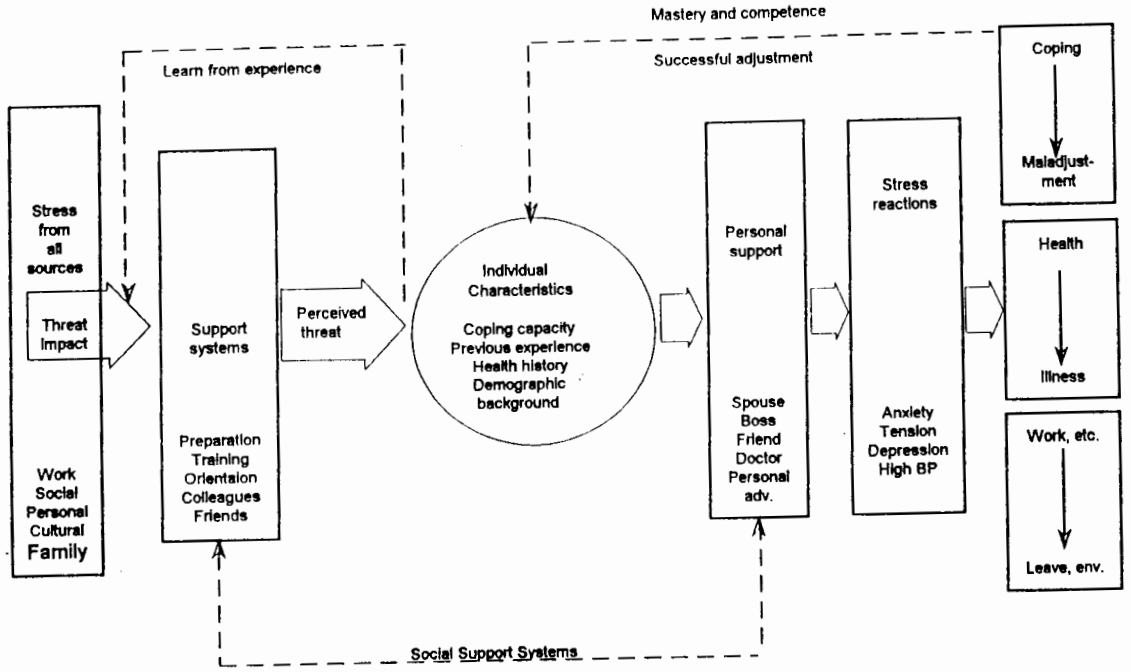


*Figure 7. Model of the stress process (Moss, 1981 p. 5)*

2.3.6. Gmelch's interactional model.

According to Gmelch (1982) the sources of stress come from a myriad of environmental, external, interpersonal, and organizational conditions. An individual's personality plays an important role in determining how stressful these conditions are. If no overlap exists between personal and any of the other four spheres, no stress will be created. But the spheres are in constant motion and sometimes collide and overlap with personal stressors. When this occurs, stress develops from the interaction of the individual's personality with other stressors. Figure 8 below is a model taken from Gmelch (1982 p. 85) which gives the sources as independent spheres of stress.

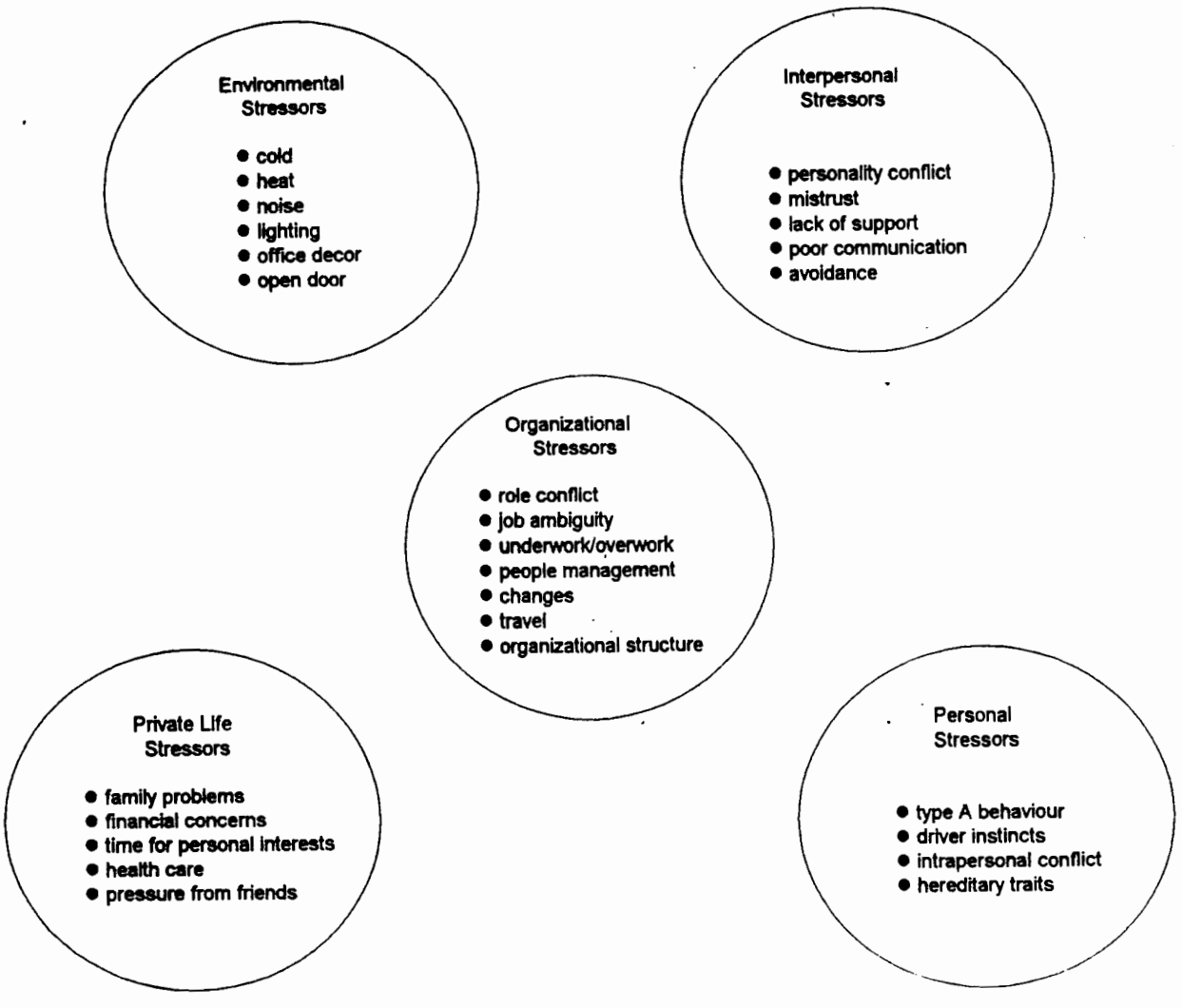


*Figure 8. Stressors acting independently without perceived stress*

In this model, stressors act independently without perceived stress. If no overlap exists between the individual and any of the four spheres, no stress will be created.

Interaction between the individual's personality and stressors may cause stress to develop. A set of objective demands can only become subjectively stressful

when individuals perceive them to be stressful. Perceptions then become the key to whether stress in our jobs is received or denied. Depending on the approach or the coping mechanism, positive or negative stress may occur. If coping mechanisms are good, little or no stress will occur. If the coping mechanisms are poor, the result may be negative consequences of mental or physical illness. When overlap exists between the personal and any of the four spheres described above, individuals perceive events to be stressful. This stressor interaction with perceived stress is illustrated in Figure 9.

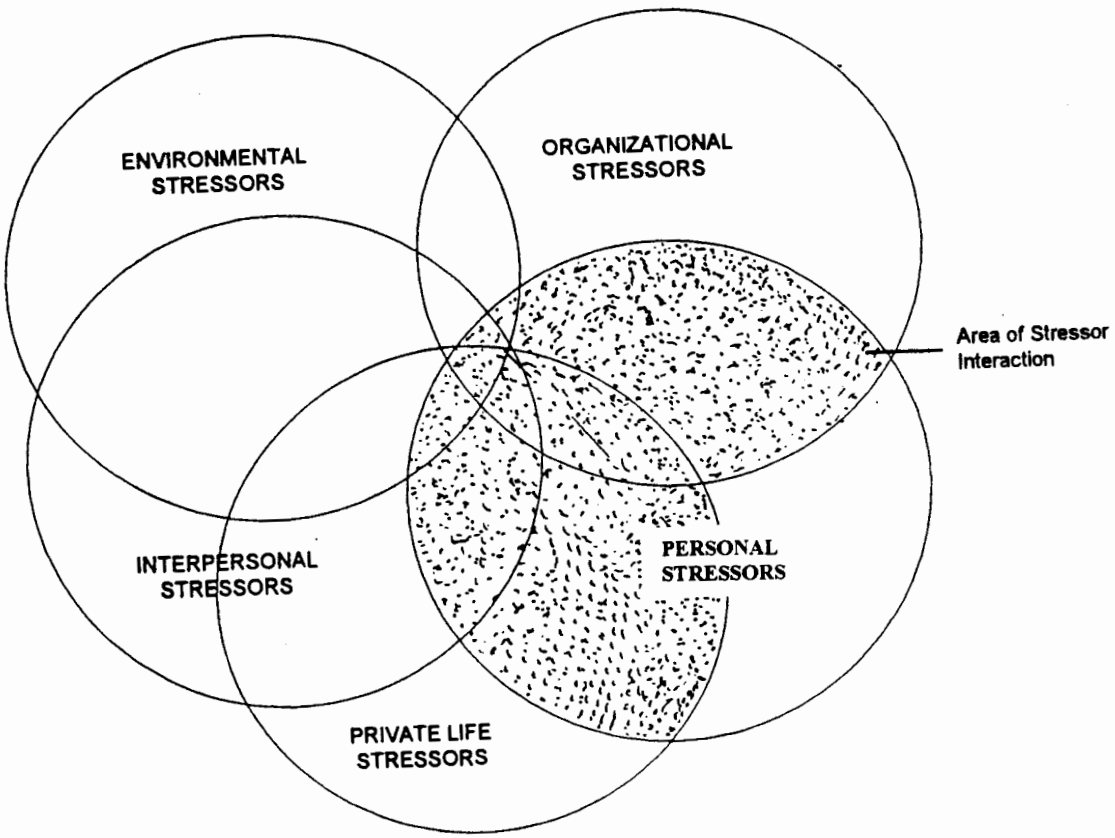


*Figure 9. Stressor interaction with perceived stress (Gmelch, 1982 p. 85)*

2.3.7. McGrath's stress cycle

McGrath (1976) presents a four stage, four-link stress cycle model which also represents an interactional approach to stress. He places emphasis on the

cognitive appraisal process in subjectively interpreting a situation as stressful. The coping response of the individual is based on their appraisal of the situation or stressor and past experience which leads to particular coping behaviors, the outcomes of which may either have desired effects in dealing with the stressor, or may be ineffective and even generate new stresses. Figure 10 illustrates this.

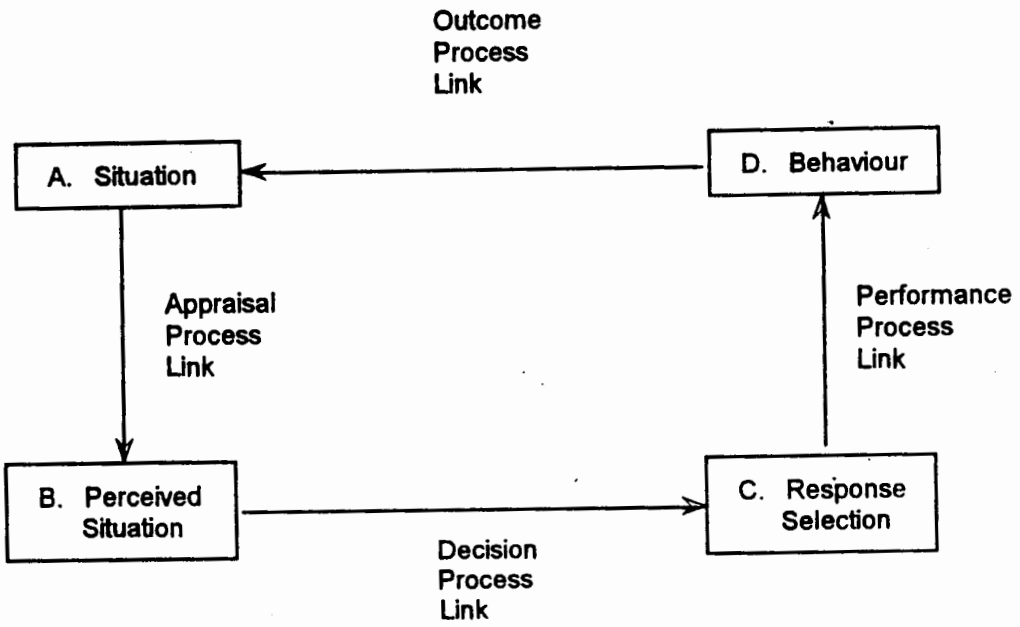


*Figure 10. McGrath's stress cycle (1976)*

The models of stress presented above give insufficient representation of the teacher's experiences of stress. Following is the model which gives a more satisfactory representation of the stress experienced by teachers.

2.3.8. Kyriacou and Sutcliffe' stress model.

Kyriacou and Sutcliffe (1978), in comparing and contrasting the models of stress that are in use, conclude that it is readily apparent that although terms may be used differently, the underlying models are very similar, and may be reducible to each other mutatis mutandis.

This model refers particularly to stress as experienced by teachers, which is the focus of this thesis. In their attempt to present a model that incorporates the different approaches to the understanding of stress in teaching, they present the following:

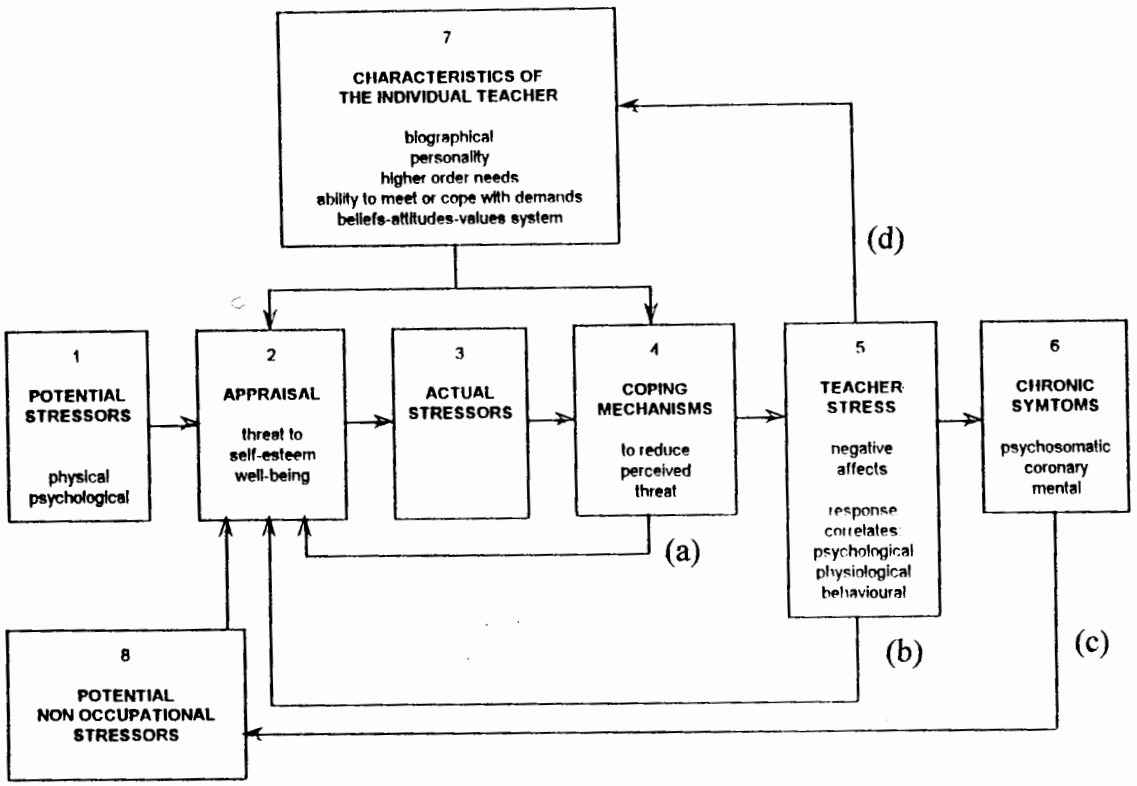


*Figure 11. Kyriacou and Sutcliffe's model of teacher stress (1978 p. 3)*

This model distinguishes between potential occupational stressors (box 1) and actual occupational stressors (box 3). Potential occupational stressors are objective aspects of a teacher's job (such as too much work or high noise levels) which may result in teacher stress (box 5). Potential occupational stressors will only result in teacher stress if they are first perceived by the teachers to constitute a threat to their self-esteem or well-being (box 2). Such an appraisal may occur in two ways; Firstly, the teachers my feel they are unable to meet or cope with the demands made on them, and that such failure

has important consequences for them, or the demands made on the teachers conflict with their higher needs.

The appraisal made by a teacher of the demands made on them will depend on the interaction between the teacher's individual characteristics (box 7) and the teacher's perception of their own ability to meet or cope with the demands made on their rate of actual ability that will partly determine their appraisal.

A distinction is also made between potential occupational stressors that are essentially psychological (e.g. demands for high-quality work, poor relationship with colleagues) and those which are essentially physical (e.g. dashing between classes, high noise levels), whilst recognizing that some potential occupational stressors (e.g. marking numerous examination papers) may be a mixture of the two. However, potential physical stressors, as well as potential psychological stressors, may only lead to teacher stress when the individual teacher perceives a threat to their self-esteem or well-being.

Coping mechanisms (box 4) are introduced to deal with actual occupational stressors by the individual i.e. to deal with that sub-set of potential occupational stressors that constitute a threat to the teacher's self-esteem or well-being. Coping mechanism are also partly determined by the teacher's individual characteristics.

In summary, the environment poses a threat to an individual who is influenced by their perception of the stressors, which in turn determine the stress the individual experiences. There is interaction between the environment and the individual. Emphasis is also given on the cognitive appraisal process in interpreting the situation as stressful.

When the individual perceives a threat, such a threat must be reduced by available coping mechanism. Coping responses of the individual are based on their appraisal and past experience. If coping is successful, no stress will occur.

Kyriacou and Sutcliffe (1978)'s model is similar to other interactional models in that it also emphasizes interaction between the individual teacher and the environment, and that appraisal is determined by the perception of their own

ability to meet the demands made on them. Potential psychological and physical stressors may therefore only lead to teacher stress when the individual teacher perceives a threat to their self-esteem or well-being.

Although there is no agreement in literature on the model most appropriate in defining stress, there is some agreement in current research (e.g. Blix, Cruise, Mitchell, and Blix, 1994; O'Connor and Clarke, 1990). The models agreed on in current research lead to defining stress as a lack of fit between the following factors:

* the external demands of the situation (e.g. role expectations);

* the external resources and constraints (e.g. material resources, time, information, social support, control over situation);

* the internal demands of the individual (e.g. expectations, ideals arising from needs and values); and

* the internal resources and constraints perceived by the individual (e.g. skill, coping resources).

Thus the experience of stress occurs when aspects of one's work or life situation are perceived as frustrating, worrying, excessively or insufficiently demanding, or threatening to one's security, confidence or desired self-image.

The interactional models of stress are more satisfactory representations of the stress phenomenon, they account more fully for the individual differences in reacting to situations than the rather mechanistic earlier stimulus-response models. This conceptualization of teacher stress places emphasis on the teacher's subjective experience of his or her affective state. The experience of stress results from the teachers's perceptions that demands are being made on them, and that they are unable to meet these demands, and further, that failure to do so threatens their mental and/ or physical well-being. The other element in these models is the teacher's perception of threat to their well-being, which, if not adequately coped with, would have harmful consequences for them.

## 2.4. SOURCES OF TEACHER STRESS

Teaching is often experienced as stressful and has been a subject of research interest, usually with the conclusion that it is an increasingly apparent phenomenon. Individual teachers' perceptions of situations differ considerably, sometimes greatly. It is, however, possible to identify common stressors to teachers on the basis of numerous research studies and observations.

### 2.4.1. The learning-teaching situation

The situation in which teachers find themselves i.e. actual teaching in the classroom, and the manner in which pupils behave, has been identified by several researchers as a major source of stress. Dunham (1981) found that teachers identified a number of stress situations in their work with disruptive children in the school environment, and that they also experienced insecurity because of the unpredictability of the children's behaviour in class or at the school.

According to Dunham (1978), teachers' interaction with pupils may be stressful. Poor relations between learners and educators can cause a lot of strain in teachers. This is confirmed by other researchers, such as Sorenson (1968) and Fimian (1982). Other reports indicate that women tend to report greater stress than men for problems associated with pupil-teacher interaction in the classroom (for example, Payne and Furnham, 1987; Okebukola and Jedege, 1989).

Discipline in schools is often regarded as fundamental to the smooth running of the learning and teaching processes. Lack of discipline as perceived by both male and female teachers is identified as one of the major sources of stress for teachers by a number of researchers, (Pithers and Molloy, 1990; Boyle et. al. 1995). Pithers (1995), writes that there is a great deal of published research evidence that pupil misbehavior is indeed stressful for some teachers. Lack of discipline disrupts the normal day-to-day activities in the school thereby causing undue stress to teachers.

According to Woodhouse, Hall and Wooster (1985), maintaining discipline is an aspect of the teachers' role that generates high levels of stress. Tuettemann

and Punch (1992) found that almost a third of teachers in their sample reported frequent student misbehavior. Research done by Borg and Falzon (1991), indicates that, although being one of the least stressful factors, maintaining class discipline seems to be more stressful to those teachers with the least experience than to their more experienced colleagues. Disruptive behaviour of pupils is reported as one of the main sources of stress by Prinsloo (1990). Kyriacou and Sutcliffe (1978), report that female teachers appeared to find several items regarding pupil misbehavior as greater sources of stress than their male colleagues. They further reported that younger and less experienced teachers differed from their colleagues on a range of items which included reporting greater stress on maintaining class discipline and poor promotion abilities.

Teachers enjoy the success of their students. Those students who are perceived to be problematic are a constant source of stress to teachers. McEnany (1989) states that successful teachers commented that their reward in teaching is in the area of seeing the students succeed; and that most responses were concentrated in the area of seeing the students learning, making progress, and not engaged in acts of misbehaviour.

Pupils who are not self-motivated are regarded by some teachers as problematic, they find it difficult to work with such pupils. This is confirmed by Payne and Furnham (1987) who report that teachers have difficulty in motivating pupils who do not ask or answer questions in class, who do not talk actively in class or groups, or take part in extramural activities. Thus this is also seen as a constant source of stress.

One of the factors often reported by teachers as a source of stress in the learning-teaching situation is the attitude pupils have towards their school work. Pupils do not like writing tests often, they stay away from school to avoid writing a test, or grumble when the date of a test is announced. McCormick and Solman (1992) confirm these earlier findings and report further that poor work attitudes have been found to be the major source of stress in their study.

Pupil absenteeism is one of the factors identified by teachers as a source of stress. Fimian (1982), in writing about pupils' absence as a source of stress to

teachers, asserts that student absenteeism often increases the stress level of teachers. According to Blase (1986), teachers consider student absence as a stressful factor. Students miss lessons and thus fail to achieve learning goals. Teachers blame parents for not insisting that students attend school.

Students' noise in the classroom is also reported as a source of stress. One of the earliest studies, by Rudd and Wiseman (1962), reports that none of the women teachers who took part in their research, mentioned students' noise as a source of stress, while only two of the men teachers who took part mentioned it as a source of stress. Later, Gmelch (1982) argue that not all noise causes adverse consequences, but it is generally disturbing when inappropriate or unpredictable. Other literature indicates that high noise levels by pupils is identified as a remarkable source of stress by teachers (Kyriacou and Sutcliffe, 1978; 1979; Pierce and Molloy, 1990; Borg and Falzon, 1991; Dunham, 1992)

Secondary school teachers are trained to teach pupils whose ages range between thirteen and seventeen. According to Pratt (1978), the age of children attending school can be a potential source of stress for teachers. This finding is confirmed by Payne and Furnham (1987) who report that teachers find it stressful having to teach an age range for which they have not been trained. Pupils who are over the age of seventeen, and are supposed to be at university or tertiary level, are difficult to teach if they are still in secondary schools.

Changes in education occur regularly and these affect curriculum. This is pointed out by Paulet (1989), who reports that changes in technology add a new and exciting dimension to professional development. This finding is confirmed by Lyons (1990) who indicated that liberals and conservatives alike have stepped up their efforts to have their agendas reflected in curriculum decisions, for example, Aids and sex education, drug education, vocational guidance which resultantly increases the situation. Adjustment to these changes in curriculum are difficult for teachers to implement. These frequent changes, in curriculum, according to Fimian (1982), and Trendall (1989), can easily raise levels of stress. Several writers have produced comprehensive literature reviews on implementing curriculum change and reported that such unrealistic frequent changes and syllabus requirements for children may be frustrating for teachers as they have to re-adjust to each new change (Dewe, 1986; Biggs, 1988; Pierce and Molloy, 1990). The editor of The Journal of Educational

Administration (1990), commenting on the research carried out around the danger facing teachers under stress, mentions that older and more experienced teachers were more stressed by the demands of a changing curriculum than the younger and less experienced. In another study, McCormick and Solman (1992), state that excessive curriculum demands are a considerable source of stress in teachers.

Time demands, as a source of stress have also come under the spotlight. Blase (1986), in his research, reports that most phenomena experienced as stressful by teachers are those that deprive them of time. Teachers have a lot of work to do and the time they have is reported to be insufficient. Hodge, Jupp and Taylor (1994), in one of the most recent research reports, also indicate that time pressures are regarded as stressful by teachers. O'Connor and Clarke, in their study on the 'Determinants of teacher stress' (1990), report that within the teaching job, the highest level of stress occurred with time and work-load pressure. Other reports by Williamson and Campbell (1987), Biggs (1988), and Lyons (1990), indicate that senior teachers are often hard-pressed to find time to carry out their other responsibilities, resulting in frustration which, itself, is a cause of stress.

Lack of time is also an issue in dealing with teaching pupils with learning difficulties. In rural schools, these pupils are in the same classes as their peers. Class sizes are large and it is difficult to give them attention. Pupils with learning difficulties need special attention in order to be on a level with those without learning difficulties. According to Pierce and Molloy (1990) this factor is reported to be a source of stress. Boyle et al. (1995), report that insufficient time available for individual tuition was reported by a very small percentage of the sample, but is nevertheless a source of stress for teachers.

Preparation of lessons and marking are other factors reported as causing stress to teachers. According to Bowers (1995), a sense of having too much to do in terms of preparation, marking and record keeping, may generate stress. Marking is reported as a notable source of stress in teaching by a number of researchers e.g. (Dunham, 1980; Gmelch, 1982; Dewe, 1986). In a more recent study, Abouserie (1996) reports that academic staff in the UK rate work as the most significant cause of stress (the majority of this study sample), and that this has serious implications for their professional lives.

The number of pupils attending lessons in one classroom has an effect on the way in which teachers conduct their lessons. If the class is too large, it affects teachers in that it is difficult to control and maintain discipline. According to Manthei and Solman (1988), about a third of teachers in their sample reported experiencing stress due to excessive class sizes. Rudd and Wiseman (1962) in their study on dissatisfaction among teachers, report that women teachers rated 'large classes'(many pupils in one classroom) as the major source of stress whereas the same factor is ranked eighth with men teachers. Contrary to the report by Rudd and Wiseman (1962), Borg and Falzon (1991) report that the most stressful factor for male teachers is having large classes, (about a third of the male teachers reported stress due to excessive class size) but this is ranked fourth with female teachers in their study. Needle et al. (1981) state that overcrowded classrooms is one of the factors that can lead to teacher frustration, disillusion and eventual incapacitation.

Another notable source of stress for teachers is the age of the teacher. Most teachers enter the teaching field when they are still young (twenty to twenty five years old). Dunham (1992) points out that these new teachers are going through a stress-producing period of considerable change in their lives anyway; which is stressful in itself. For example, they are confronted with finding a place to live, and seeking a partner for a possible life-time commitment. This research has found that teachers often end up in intimate relationships with students they teach which creates further unnecessary stress for themselves and other teachers.

### 2.4.2. The school environment

The area where the school is located may have an effect on the conditions in which teachers work, and has thus been reported as a source of stress for teachers. One factor identified as a source of stress is the distance teachers travel to and from school. According to Gmelch (1982), and Trendall (1989), once the distance becomes greater and more frequent, it becomes an irritant to the stable daily routine, and produces physical complications, such as fatigue.

Another source of stress frequently reported is poor communication with the external environment. Dunham (1980), for example, states that contact with the

world outside the school is beneficial to the teacher and school itself. Lack of such contact results in numerous problems for teachers. According to Hayward, (1992), rural-based school teachers experience stress involved in making contact with other schools for sporting and cultural activities and interchange of professional ideas amongst colleagues, due to a lack of adequate systems of communication.

Physical resources are important to schools, in order for learning to take place smoothly. In South Africa the supply of these resources is lowest in rural communities. According to the NEPI-Educational Planning document, (1993b), the rural areas of South Africa have been seriously discriminated against in terms of finance, buildings and resources for schools. This is a potential source of stress for teachers. Shortages of resources as a source of stress have been reported by Galloway et al. (1985), who stated that unsatisfactory school buildings and playground space were associated with low satisfaction among teachers. Tuettemann and Punch (1992), state that about half of the teachers in their sample report high levels of stress due to inadequate access to facilities. On the contrary, Downton (1987), highlighted the fact that the main source of job-related stress appears to concern people rather than resources.

Teaching is also negatively affected if the conditions of the buildings are poor. According to Dunham (1992), unsatisfactory conditions of the school can have a negative effect on teachers working in that school. Poor infrastructure is also a cause for concern by teachers. Trendall (1989), for example, reports that lack of facilities is one of the notable stressful factors in teaching. These are facilities such as electricity and photocopiers. According to Okebukola and Jegede (1989), few schools in Nigeria use electricity for education purposes, therefore a lack of power or constant power cuts would trouble only a few schools. As technology is advancing every day, use of electricity is becoming a necessity, and lack of electricity has become a source of stress for those teachers who aspire to use modern equipments which need electricity.

A review of literature indicates that lack of resources for teaching is a very stressful factor to teachers. (Kyriacou and Sutcliffe, 1978; Okebukola and Jegede, 1989; Trendall, 1989). Further evidence in support of this is found in a recent report by Tuettemann and Punch (1992), in which they indicate that about half of all teachers who took part in their study reported that inadequate

access to resources result in psychological distress.

2.4.3. The community environment

There are several factors related to the community which have been identified as sources of stress for teachers. Pupils who go to school not dressed in a school uniform have been reported as causing stress to teachers. Several writers confirm this, for example, Woodhouse et al. (1985), report that one of the most frequently recorded sources of stress is pupils wearing wrong uniform or inappropriate clothing.

Reports on the sources of teacher stress indicate that negative community attitudes towards teachers cause a lot of stress in teachers (O'Connor and Clarke, 1990 and Pierce and Molloy, 1990). According to Goss (1985), relationships with parents sometimes produce difficult situations as is the case with some misunderstandings and complaints which may be complicated by fundamental differences in values between the people concerned. This finding is confirmed by Hayward (1992), who states that parental pressure can be a threat to current ways of running a school, and a source of conflict, particularly when teachers feel they are losing control over decision-making rights as professionals. Hayward argues that society has changed its attitude towards teachers, and that the parent no longer gives unqualified support to the teacher. McCormick and Solman (1992), indicate that the community do not have respect for teachers. There is therefore general agreement that public criticism of teachers by the community is a source of stress for teachers.

A further aspect of the community environment which is a source of stress for teachers is the lack of understanding of the work of teachers. Regarding this aspect, Goss (1985), states that the interface between the school and the community-at-large brings its pressures in the form of expectations, which teachers may feel to be unrealistic misunderstandings based on misinformation, and changing social and moral norms which conflict with the values propagated by the school. In some cases, pressures are valid and constructive, and in others, pressures merely exert a negative influence. In their report, Rudd and Wiseman (1962), found that the public gave education a low status; Dewe (1986), also states that people have a low opinion of teachers. Literature indicates that parents who do not know what teachers actually do with their

children at school and what actually happens at school, are not likely to give sufficient support to the child. This has been identified as a source of stress to teachers (Trendall, 1989; Hayward, 1992).

Another potential source of stress for teachers associated with the community environment, is the multiculturalism of the community and the demands this makes on teachers. According to Hayward (1992), contemporary South African society comprising of a diversity of languages, cultures and religions, makes many different and conflicting demands on the teacher, concerning the inculcation of values and aims in the education system.

2.4.4. The professional environment

Several factors of the profession have been identified as sources of stress for teachers. In one of the earliest reports on teacher stress by Kyriacou and Sutcliffe (1978), a sizeable proportion of respondents indicate that inadequate salary is one of the sources of extreme stress in teachers. According to Kaizer (1982), the first and most basic of all needs is that of food and shelter which teachers' salaries should provide for. Further research evidence on inadequate salary as a source of stress is provided by Milstein, Golaszewski and Duquette (1984), who indicate that perceived low probability of reward leads to manifestation of stress. McCormick and Solman (1992), also report that nearly a third of the respondents in their study indicated that their income is not enough to live on, causing many problems resulting in stress.

Another source of stress related to teachers is that of job unsuitability (Booth, 1985; Biggs, 1988). Teachers sometimes apply for promotion posts confidently believing that they will find them fulfilling and that they will be adequate to the task, only to find, once they are appointed, that they are not at all suited to the job. This leads to stress for all people concerned, Biggs argues further. Calabrese (1992), writes that antagonism in schools is caused by administrators - the people in power have the right solutions and do not see the need to listen to anyone else. Calabrese concludes by saying the 'I am right, you are wrong' thinking closes the door to growth, it opens the door to bitterness and stress (1992: p. 2).

Disenchantment with school administration and staff members was found to be

another source of stress for teachers. In one of the most recent studies on the sources of teacher stress, Abouserie (1996), reports that only a small proportion of the respondents who took part in their research stated that relationships with colleagues was the cause of stress in the lives of academic staff. The results reveal no gender differences in stress levels, male and female academic staff appeared to have the same levels of stress.

Another source of stress reported which is related to the profession, is that of activities of the school inspectors. According to Gabriel (1957), evaluation by inspectors is a notable source of stress for teachers. This finding has recently been confirmed by Brimblecombe, Ormston and Shaw (1995), who found that teachers perceive inspection as one of the sources of stress.

Goss (1985), also reports that a number of behavioral scientists have identified good relationships between people at work as a central factor in individual and organizational health. There is much potential for stress in the school, unless harmonious relationships are maintained, and the interests of the various groups and individuals are balanced. Smilansky (1984), reports that the lowest level of stress in schools involves poor colleague-relationship, Hayward (1992), writes that it is inevitable that within any school there will be moments to tension among staff members. Each staff member has a unique perception of what should or should not be done at school. These reports on the relationships between teachers being a source of stress were confirmed by one of the latest research findings by Boyle et al. (1995).

Teaching too many subjects has been identified as another source of stress for teachers. According to Kyriacou and Sutcliffe (1978), too many periods of actual teaching cause a lot of stress for teachers. For maximum production, teachers have specific subjects they have to specialize in, but teachers often find themselves having to teach subjects that they have not specialized in. Fimian (1982), reports that teaching subjects that they have not trained for leads to stress in teachers. There are, however, reports by Okebukola and Jegede (1989), and McCormick and Solman (1992) that there have been few studies reporting on teaching subjects an individual is not trained for as being a source of stress .

### 2.4.5. Personal factors

A person's perceived value plays an important part in determining the degree of importance they attach to meeting or failing to meet any demand made on them in their work environment. According to Goss (1985), a person functions as a totality, and their behaviour at work and in other parts of their life are interdependent, and there are a number of interfaces between working life in school and life outside which gives rise to teacher stress. Gmelch (1985), argues that the job alone creates enough tension, but when we add the demands made on us, stress snowballs and, at times, becomes overwhelming.

Kyriacou and Sutcliffe (1979), in their study on Teacher stress and satisfaction, reported that more than half of the respondents had been absent from school due to ill-health, at least once over two school terms, and further indicated a greater frequency of absence for female as compared with male teachers. There seems to be a link between stress and ill-health, which results in teachers having to absent themselves from school. Buwalda and Kok (1991), report this possible link between stress and ill-health; only a third of respondents who took part in their research suffered from some form of ill-health as a direct result of their duties and responsibilities as teachers; and Abouserie (1996), confirms this and states that only a very small proportion of respondents who took part in the research reported that health problems are a source of stress. The editor of The Journal of Educational Administration (1990), commenting on dangers facing teachers under stress, indicates that the general well-being of older teachers is better than that of younger teachers.

Having reviewed the sources of stress in the subsection above, the following section discusses reports given in literature of teachers' reactions to stress. Whatever the behavior, there is some reaction to the stressor and these stress reactions are now discussed.

## 2.5. STRESS REACTIONS

When individuals experience a level of stress which is fairly continual and excessive, they will usually have clear warning signals, whether physical or psychological. Several writers (Selye, 1956; Monteiro, 1990, and Dunham,

1992), provide a framework based on three theoretical perspectives which are useful in understanding these reactions to stress.

The first theory identifies three stages: the alarm reaction, the stage of resistance and the state of exhaustion. During the first stage of alarm reaction, the body acknowledges the stressor. The body gets ready to adapt to the stressor or resist it; to fight or flee. If the pressures continue and there is little increase in coping strategies the alarm develops into the resistance stage. The body begins to repair the damage done by such arousal and the stress symptoms mostly vanish. There would have been minimal harm to the body. However, if the stressful conditions continue, the body's adaptive energy will eventually run out, and, exhaustion, (stage three) is launched. During this stage, bodily functions slow down and continued exposure to stress could result in death.

The second theory examines the relationship between the performance of our tasks at work, the pressures we experience and our stress reactions. This is illustrated in Figure 12.

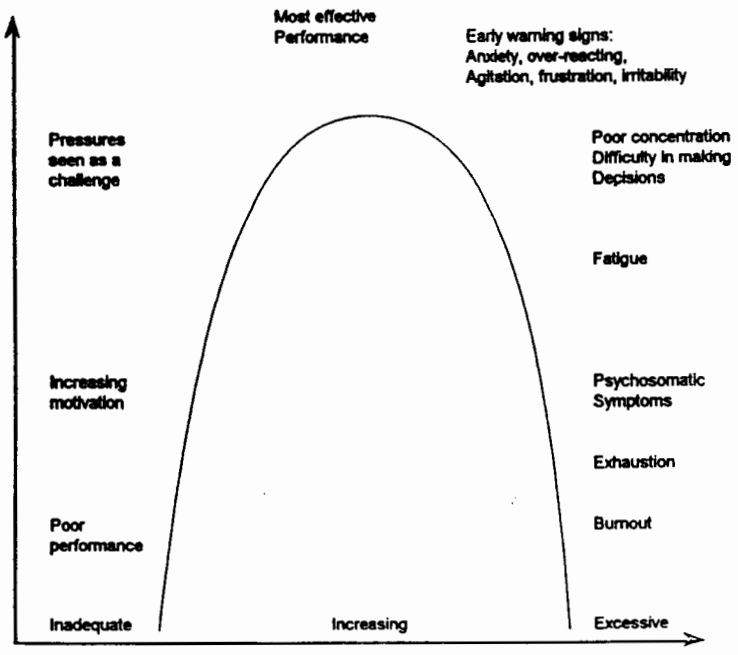


*Figure 12. The relationship between pressures, work performance and stress reactions (Dunham, 1992)*

This theory proposes that work with few demands results in poor performance of tasks. Increasing demands are perceived as stimulating and energizing, but if they are beyond the person's coping abilities they lead to high levels of anxiety, poor concentration and reduced effectiveness in one's work. Continued demands, without an increase in coping resources, may lead to fatigue, exhaustion and burnout.

The third theoretical perspective which Dunham claims is helpful in understanding stress reactions, also proposes that individuals pass through stress thresholds as they respond to increasing pressures. The first level consists of changes in behavior which are used by individuals in an attempt to cope with new or increased demands. If these attempts are unsuccessful in coping with the situation, the 'frustration threshold' is reached. If there is a continued failure to cope, individuals may begin to question their competence and will experience strong feelings of anxiety. More severe disturbances may lead to the development of psychosomatic symptoms. According to Blix et al. (1994), teachers may exhibit job strain through impaired life satisfaction and increased stress-related symptomatology. Prolonged teacher stress, they argue further, may lead to forms of withdrawal behavior, including physically leaving the work setting.

According to Dunham (1992), stress reactions to the pressures identified in the previous sections can be grouped into four main types: behavioral, emotional, mental and physical. Bradshaw (1991) however, gives three main groups - physical, mental and behavioral - which he says were agreed on by course participants who took part in the teacher enrichment program at the P.S.26 in the Bronx, (one of the largest elementary schools in New York City). Bradshaw notes that these groups are overlapping, and that several symptoms could have fit into more than one group.

Three main groups of reactions can be regarded as manifestations of stress because they indicate levels of pressure in excess of the teachers' coping resources. These kinds of reactions are given below:

### 2.5.1. Bodily reactions

According to Cozens (1988), physical symptoms may exist without any

psychological cause; they could be experienced in a mild form and/or intermittently - simply as a response to everyday pressure. Lowenstein (1991), notes that physical factors have also been studied as a possible contributor to stress. However, chronic conditions were reported by almost half of the teachers in the survey conducted by Needle et al. (1989). These included high blood pressure, kidney or bladder trouble, lung or breathing problems and heart disease.Even in some of the most recent reports, bodily reactions to stress have been given, for example, according to Blix et al. (1994), nearly half of the respondent in his research reported health problems resulting from work stress. Individuals who reported health problems perceived more stress at work, they were 'burnt-out' and were more likely to have considered changing jobs as a result of stress.

### 2.5.2. Emotional

Emotional factors have been identified as symptoms of stress by several writers. Kyriacou and Sutcliffe (1978), indicate that feeling very tense is a very common symptom of stress experienced. This finding was later confirmed by Lowenstein (1991), who reported that the intensive interaction of people in an emotionally-charged atmosphere makes teachers more susceptible to symptoms of stress and burn-out than many other professions, and emphasized that this leads to emotional exhaustion. According to Blix et al. (1994), emotional exhaustion was a component of 'burn-out' that seemed to be most critical in the sample studied. Teachers who rated high on work-stress scores experienced more health problems as a result of stress. They also reported less satisfaction in teaching, felt less productive at work, less able to cope with job stress and were most likely to consider job change. Examples of emotion-related stress symptoms are crying, frustration, anger and anxiety.

### 2.5.3. Behavioral

Teachers who rated high on stress scores have also reported behavioral change. They behave in a manner in which they have never behaved before. Dunham (1992), gives the following example of behavior-related stress symptoms: frequent lateness, absenteeism, driving aggressively, reduced work efficiency and productivity, unrealistic demands, sleeplessness, increased use of alcohol/drugs/tobacco, gambling or overspending, aggressive behavior,

exhaustion and difficulty with relating to others. According to Dunham (1992), reactions to stress can be placed in a framework of successive stages which staff pass through as their work and home pressures become increasingly severe. In the first stage, they develop new coping techniques or continue to use familiar ones. If these coping techniques are unsuccessful in reducing pressures, a number of emotional and mental reactions are experienced. These reactions include frustration, anger, anxiety, fear, poor concentration and memory loss.

## 2.6. COPING WITH STRESS

While this study emphasizes the sources of teacher stress, it is also important to look at how teachers cope with stress. This could provide another view of these incidences and sources of teacher stress.

Teachers experiencing stress, at best employ adjustment responses to try to remove or reduce the perceived threat to themselves. Poor health and negative psychological outcomes can lead to poorer teaching performance, lowered self-esteem, and poor job satisfaction. This is clearly a problem begging further scrutiny. A number of studies have investigated the efficacy of interventions in reducing teacher stress. This study highlights a few responses regarding coping techniques. In order to evaluate more fully the different strategies of stress management, further research is needed.

Not only do teachers perceive and experience stressors differently, but they also react differently. This applies to the coping processes that people employ as well. According to Lazarus (in Goss, 1985), people use a wide variety of coping processes, depending on their personal characteristics, the nature of the environmental demands and contingencies, and how these are appraised.

Several research surveys are presented here together with strategies used for stress-management by them.

### 2.6.1. The concept of coping

According to Freeman (1987), the concept of coping is a difficult one to define

satisfactorily. Freeman argues that part of the problem relates to its association with stress, which is also a difficult term to define - as indicated in some sections above. He asserts that it has been argued that the two concepts should be seen as two sides of the same coin in that stress arises when an individual is unable to cope, and that coping implies that there was a problem to overcome. Kyriacou (1981), refers to coping as the behavior intended to reduce the experience of stress - which Needle et al. (1981), refer to as any response to stressors that serve to prevent, avoid or control emotional distress. Abouserie (1996), states that one problem relating to the definition of coping, is whether coping is a conscious process or not, and when it actually occurs. According to Meichenbaum, the term 'coping' refers to 'the responses made by an individual who encounters a situation with a potentially harmful outcome,' (1983, p. 69-70).

For the purspose of this discussion, coping is defined as any response made by an individual intended to prevent, avoid or control the experience of stress.

### 2.6.2. Coping strategies

Successful coping either eliminates the stress experienced by the individual or reduces the discomfort and enables easier tolerance of the demanding situation. Unsuccessful coping leads to the continuation of the stress symptoms, and possibly to their intensification as a result of the anxiety produced by the failure to cope satisfactorily (Goss, 1985). Sometimes, the attempted coping response takes the form of a dysfunctional type of behaviour such as alcohol or drug abuse, and further problems are created.

Strategies successful and appropriate in one situation may not be especially appropriate on another occasion, nor will the strategies appropriate at one time necessarily be appropriate later. Bowers (1995), believes that, teachers who opt for an assertive/persuasive style in coping with many of the forms of job-related stressors they encounter, actually experience less psychological stress.

In summary, the individual plays a critical role in defining how stressful a set of events are. An individual's judgment of the demands and constraints of situations, and of the options and resources of meeting them is called 'cognitive appraisal' (Meichenbaum, 1983). There are two main kinds of cognitive

appraisal, namely primary and secondary; these are discussed in detail below.

Primary appraisal

'Primary appraisal' refers to the judgement that the situation is relevant or irrelevant; a challenge or threat; potentially beneficial or harmful. Such judgements are made at an unconscious level. The individual's beliefs, values, goals and commitment influence their primary appraisal of events.

Secondary appraisal

'Secondary appraisal' refers to the judgements about the adequacy of the forms of coping available for mastering the demands of a specific situation. Secondary appraisal involves evaluating coping strategies in terms of their cost and the probability of their success. A person's appraisal of a situation is influenced by a number of factors, both internal and environmental. Some of these factors, based on readings by McLean, (1979); Gmelch, (1982); Meichenbaum, (1983); and Goss, (1985), are outlined below:

a. Control

The more control felt over the duration and intensity of the stressor, the less stress is created. The longer a stressor operates, the more severe its effects. It is therefore, not the magnitude of the stressor itself which seems to count, but the amount of control the individual has over the stressor.

b. Past experience

Often, new adjustive demands that have not been anticipated and for which no ready-made coping patterns are available, will place an individual under severe stress. The more unique the situation, the greater the reaction of the individual. If an individual has already encountered a similar problem before, it may not be as stressful the second time. Successful past experience increases a person's competence and confidence in handling situations, and encourages favourable cognitive appraisals.

c. Available resources

The individual's perceptions of the personal and environmental resources available to them (e.g. technical and interpersonal skills, specific training, time, authority and status, and supportive and trustworthy helpers) influence their evaluation of their adequacy in the face of a particular demand. If an individual is marginally adjusted, the slightest frustration or pressure could be highly stressful. Individuals vary greatly both biologically and psychologically, in overall vulnerability to stressors, as well as in the types of stressors to which they are most vulnerable.

d. Importance of the event

If the potential stressor is relevant to the individual's values or goals, its presence may not lead to feelings of frustration, it will influence their cognitive appraisal in the direction of evaluating the situation as safe and non threatening. However, if the stressor blocks satisfaction of an important goal, stress will most probably ensue.

e. Severity of the demand

The demand may pose performance requirements which exceed or severely tax the individual's capabilities. The degree of difficulty of the demand may also be increased by its multiple nature. Demands that are ambiguous, in terms of requirements, and those that are novel, in terms of experience, tend to be perceived as being more threatening than others.

f. Personality factors

To a great extent, an individual's stress depends on their ability for handling tensions and anxiety. Some people have a cheerful and optimistic disposition, while others are excessively introspective and readily indulge in self-condemnation, which magnifies perceived inadequacy and inhibits motivation. The appraisal process reveals that stress may occur when a demand threatens to exceed an individual's capabilities.

Besides appraisal, two modes of coping may be used in different combinations.

When individuals direct their efforts at dealing with the sources of stress themselves, they would be using the techniques of problem solving. Suppose, for example, a pupil's misbehavior is a serious source of stress to a teacher, and as a means of coping, the teacher decides to monitor the misbehavior in this pupil. This strategy would be an example of a direct-action technique. When, on the other hand, an individual tries to cope with stress by dealing with the subjective experience of stress (i.e. regulation of emotions), then they would be using palliative techniques, such as trying to forget work, engaging in sport activities and consuming alcohol. According to Dewe (1985), one issue to emerge from the content analysis of the coping responses is the difficulty of fitting responses into either direct action or palliative categories. Working harder, a direct-action (problem solving) strategy, can be used as a means of reducing emotional discomfort. An individual may also seek advice from others or call in the assistance of fellow workers to master the threatening situation successfully. These two forms of coping are examined in detail below.

The direct-action technique of coping.

As has been indicated in the previous section, direct-action technique involves all types of behaviour designed to deal with the stressor. Direct-action technique may take four different forms which have been identified by several authors (e.g. Phillips and Lee, 1980; Goss, 1985). One way of coping directly with stress, is by fighting the stressor: The individual identifies the source of stress, confronts it and takes steps to deal with it.

Goss (1985) asserts that in adversary situations, such as conflict between individuals or groups, the source of stress may be perceived as a particular person, a group of people, or an organization. A display of aggression and anger towards the source of stress in such circumstances is a common coping response, and this may reduce the stress in the short term. Circumstances may prevent the person from showing aggression towards the source of stress, and displayed aggression may be expressed towards an accessible innocent person. In this way an individual may vent their hostility on their spouse when the real source of their stress is their supervisor at work. Unless perceived by their spouse to be part of their problem, such displaced aggression may give rise to further experiences of stress.

As individuals strengthen their resources for meeting future demands, they reduce the actual danger of not being able to meet those demands, as well as the perceived threat to themselves. This is a preventative measure rather than a form of coping. Instead of confronting or fighting the stressor, people sometimes respond to stressful situations by fleeing from them. This may involve physical withdrawal. This type of response may also entail procrastination in tackling unpleasant aspects of the work, excessive sick leave and rapid staff-turnover and unfinished projects or sending misbehaving pupils to the principal. Although these avoidance tactics may be functional in certain circumstances when a person simply cannot handle the situation or when temporary relief is essential, they are generally inappropriate because they do not solve the problem or strengthen the person's resistance in the future.

The last form of direct-action is ignoring or tolerating the demand. According to Needle et al. (1981), an individual selectively ignores the problem and focuses on a more gratifying aspect of work. Complete inaction in the face of demands made on an individual may represent a learned helplessness or hopelessness in the face of circumstances over which the individual is convinced they have no control.

Indirect action, or palliation, as a form of coping.

This form of coping with stress has been widely used. In a study of the frequency with which forty-two comprehensive school teachers in England used various actions to cope with work stress, Kyriacou (1980), found that the most frequently used actions reported were: to try to keep things in perspective, to try to avoid confrontations and to try to relax after work. Kyriacou and Pratt (1985), asked 127 school teachers to indicate how they usually coped with potentially stressful situations. The most frequent responses were: trying to stay calm; sharing problems with others; keeping things in perspective; avoiding confrontation; praying; being well prepared; and relaxing after work. In a survey of 800 primary school teachers throughout New Zealand, Dewe (1985), reports that the most frequently used coping strategies were: always try to be consistent and honest when dealing with children; establish some sort of teaching routine; keep the children occupied; positively reinforce the children; and be well organized and planned. Freeman (1987), in a study of teacher coping in a secondary school, reports that the most popular strategies were: to

try to keep things in perspective; to think objectively about the situation, to try to keep emotions under control; and to try to take some immediate action on the basis of your present understanding of the problem. Chan and Hui (1995), in one of the most recent reports found the following to be coping strategies frequently used by teachers: Confrontive coping; distancing; self control; seeking social support; accepting responsibility; and escaping avoidance. Abouserie (1996), reports that the following coping strategies have been reported as frequently used by teachers: acceptance of the problem; talking with others; trying to come to terms with each problem; involving myself with friends and trying to say no to unnecessary demands.

Schlebusch, (1991), suggests several practical methods which can be adopted to cope with stress. These include:

* elimination or avoidance of the danger of the perceived threat;

* reappraisal of the stressor (i.e. seeing it as less stressful, since the perception of the threat rather than the threat itself is a critical link in the stress-threat anxiety reaction, for example, enjoying traveling 60 km to work as some kind of a sight-seeing trip);

* the use of self-help techniques, for example, hobbies, relaxation-based techniques and exercises;

* the identification and analyses of situations which might produce this anxiety, for example, acknowledging the fact that the community one is working with, is illiterate and would therefore be limited in the help they can offer their children with school work - resulting in a heavier load on the teachers;

* a careful assessment of one's own coping resources or skills, for example, thinking objectively about the situation and trying to keep emotions under control;

* seeking professional help when personal stress management fails, seeking advice or sharing problems with other professionals;

* that the mental and physical relaxation training component of the stress-reduction programs provide subjects with the necessary strategies to reduce their level of stress;

* the whole coping process takes place over time. Some people are better able to tolerate stress in an environment than others; and

* the ability to apply intellect to actions and to remain in control of those actions appears to be fundamental to the effective management of many stress-inducing situations for the teachers. It appears reasonable to assume that teacher development programmes aimed at increasing assertiveness in relation to both students and colleagues may at the same time be successful in reducing levels of stress.

Other forms of coping strategies have been identified by several researchers. For example, four psychological coping strategies to handle job stress are examined by Needle et al. (1981); these are: positive comparisons, optimistic action, substitution of rewards and selectively ignoring problems. They claim that the question of how effective these coping strategies are in reducing stress has only recently begun to be addressed by researchers. Cohen et al. (1986), have, on the other hand suggested that avoidance-oriented strategies afford the individual some protection in intractable environments which offer little chance of control. It may be that when chosen by teachers, such strategies for coping reflect their perception of a lack of any real alternatives.

Lazarus (1993), contends that reinterpretation and denial are powerful techniques in the control of psychological stress. Bowers (1995), states that recent studies of teachers suggest that problem-focused approaches to dealing with stress (seeking advice, taking action rather than avoiding it) are significantly linked with low symptoms of stress. Bowers argues that avoidance strategies, while less significantly linked with stress than aggressive/confrontive approaches, are also potentially costly to the individual. Avoidance or denial is a last resort.

Borg and Falzon (1990), conclude that teachers tend to resort most often to the same set of strategies and that, in some of the sub-groups in their research, one type of coping technique is preferred over the other. They argue that preference

is not necessarily indicative of the effectiveness of a particular type of technique in helping the teacher cope.

Kyriacou (1981), writes that most researchers have emphasized the role of social support as a means of reducing the occupational stress experienced by school teachers. He found that social support has been largely equated with simply having someone to talk to about one's problem.

It is evident from what has been observed above that theoretical perspectives and research methods employed have varied. The way teachers experience stress depends on how the individual teacher perceives the situation, and the manner in which they cope with the stress also depend on how they perceive the situation.

# CHAPTER 3: METHODOLOGY

## INTRODUCTION

In this chapter I discuss the relationship between the problems under discussion, the evidence this requires towards a solution and the conclusion I hope to reach. Each of these items is discussed separately by way of outlining the methodology and particular tools and procedures I followed in the study.

The empirical focus is on teachers' experience of stress, focussing on the manner and aspects of their situations that they find stressful, as well as the coping strategies they find helpful.

Through my investigation, I will attempt to answer the following questions:

* What are the sources of stress experienced by teachers in rural areas?

* What is the extent of stress that teachers in rural areas experience?

* What coping strategies do these teachers employ in order to reduce the stress they experience?

* How likely is it that those in the field would still be teaching in 10 years time?

* How likely is it that those in the field would choose teaching as a career if they were to start their working lives again?

The research was carried out in two stages, firstly, the interview stage, and secondly, the questionnaire stage. The purpose of Stage I was to collect information on the causes and consequences of teachers' stress (see: Appendix C: Information from Interviews), and to use this information to develop a questionnaire which adequately captures the experiences of rural Northern Province of South Africa secondary school teachers (see: Appendix E: Questionnaire).

In Stage II, the questionnaire, constructed out of data and items from

instruments used in earlier studies was used to identify the sources of stress in rural secondary school teachers in Venda in the Northern Province.

## 3.1. STAGE 1 (the interview stage)

A total of forty-two secondary school teachers participated in this stage of the research, over a period of four months. Individual interviews were conducted by the author and the information obtained provided the informative basis for the next stage, i.e. the questionnaire stage.

### 3.1.1. Method

The interview schedule contained sixteen open-ended questions (see Appendix C). The teachers' responses to these questions are summarized in Appendix D. The content of these questions centered around factors related to the school, the home of the teacher, the community where the school is situated and the teacher as an individual.

I conducted the interviews in Tshivenda and tape recorded the responses. The interview schedule, provided in Appendix C, consisted of the open-ended questions. In order to maintain consistency, probing was kept to a minimum, and was, in most cases, employed for the purpose of clarification.

The interviews were conducted in some cases in a quiet room, and in other cases, outside under a tree. Forty-two Venda-speaking teachers were interviewed. I conducted interviews with only forty-two teachers because of the limitations of time that I could spend in each school. After a number of introductory questions about the teachers' work situations, the interview moved to more specific questions about their perceptions of the causes and consequences of teacher stress and how they coped with them.

Subjects were asked to think of incidences that made them feel under pressure in the classroom, within the school premises but outside the classroom, about the administration, about the community, and at home. Interviews lasted for forty-five minutes on average.

3.1.2. Subjects.

Forty-two Venda-speaking secondary school teachers, drawn from eleven schools in the Northern areas (Niani, Vhutavhatsindi, Vhumbedzi, Balethavha and Nzhelele) of the Northern Province of South Africa took part in the interview.

The sampling strategy in this pilot stage was intended to produce a heterogeneous set of schools and thus a wide range of teaching problems. To achieve this, the selection criteria employed were as follows:

The schools were chosen according to the following schema:

* two secondary schools from the North Western side of the Northern Province (with increasing enrolment);

* two junior secondary schools from the central areas;

* three from the Far Northern areas;

* four from the Far North Eastern side of the Northern Province.

Contact with the teachers was made through the principal. I visited each of the eleven participating schools and, after explaining to the principal the purpose of the survey and what this would entail, arrangements were made in regard to the best way to proceed without causing undue disruption to the school and the participants. At least five teachers were selected by the principal according to the following procedure:

* at least one teacher traveling to school by public or private transport;

* at least one teacher living within walking distance from school;

* at least one teacher staying in the teachers' houses within, or outside the school grounds.

### 3.1.3. Analysis

A thorough content analysis of the teachers' responses to the questions produced five major categories. (1) the learning-teaching situation; (2) the school; (3) the community; (4) the profession; (5) personal factors (see Appendix D for definitions of major categories, sub-categories and minor categories).

This analysis proceeded as follows: firstly the tape-recordings of the interviews were listened to, after this, I transcribed each tape in typed form for further analysis. These transcripts of teacher interviews are not included for reasons of space economy but are available from the author on request.

Each transcript was then read and re-read until the data as a whole suggested certain patterns in the meanings of the said and implied. These were called 'meaning units' after Potter and Wheterall, (1987). These 'meaning units' were used as a basis on which to translate the qualitative assessment of the patterns of meaning into basic quantitative categories as follows: categories; number of responses; description or operationalisation of each category and sub-category and minor category. These categories captured all bits and pieces of patterns in the responses to the interviews. Responses in each category were numbered in order to determine the most interesting to the least interesting pattern. These data are contained in Tables 1 to 10 in Chapter 4.

## 3.2. STAGE II (Questionnaires)

A total of 220 questionnaires were sent to teachers in twenty-two rural secondary schools. Questionnaires were sent to the school principals who, in turn, gave them to the teachers at their schools.

### 3.2.1. Method

The format of the questionnaire and the items used was developed following a review of the literature. The self-report questionnaire is based on the instrument used by Manthei and Solman (1988), which was adapted to the New Zealand conditions. Most of the items have been reproduced, others have

been constructed or modified following a pilot project, to adapt the instrument to the Northern Province conditions. The questionnaire was pilot-tested on a group of fifteen secondary school teachers to confirm the content.

I was granted permission by the Director of the Department of Education in the Northern Province to do research in the schools in the province (see Appendix A). I informed the principal through a letter about my research and that I would be visiting the schools (see Appendix B). Questionnaires were distributed to the teachers according to the criteria given above. Teachers were asked to return completed questionnaires to the principal's office for collection within three days of receipt. A few subjects who failed to comply with this deadline were willing to return their forms to the principal at a slightly later date; one hundred and seventy-seven questionnaires were returned, which accounted for 80.5% of those distributed; and forty-three questionnaires were not returned. (Data were collected during June, 1996).

The questionnaire covered several aspects of the teacher's work environment. For the purposes of this dissertation, only those parts of the questionnaire relating to stress will be described in detail.

The questionnaire consisted of seven sections. The first section requested biographical information regarding sex, length of teaching experience and distance between home and place of work. The second section, which deals with stress analyses, consisted of twenty-six questions. Teachers were asked to rate the items in response to the question 'how great a source of stress are these factors to you when you think about the past two school terms?', on a five-point Likert-type scale, ranging from 'no stress' to 'extreme stress' and scored from zero to four (see Appendix E).

In the third section, respondents were requested to indicate the extent of occupational stress response to the question 'In general, how stressful do you find being a teacher?' Responses are on a five point scale labelled from 'not at all' to 'extremely stressful' and scored from zero to four. This single item overall measure to teacher stress has been widely employed by other researchers.

The fourth section requested teachers to rate how satisfied they were with

teaching generally. They responded to three questions. The responses to the first question: 'In general how satisfied are you with your job as a teacher?' were given on a five-point scale labelled from 'not at all' to 'very dissatisfied', and scored from zero to four. The responses to the second question: 'How likely is it that you will be a teacher in ten years' time?' were also given on a five-point scale labelled 'very unlikely', to 'very likely' and scored from zero to four. The responses to the last question: 'How likely is it that you would choose teaching as a career if you were to start your working life over again?' were similarly labelled 'very unlikely' to 'very likely', and scored from zero to four. All questionnaires were completed anonymously.

3.2.2. Subjects.

One hundred and seventy-seven teachers from twenty-two secondary schools participated in this stage of the research: (forty females and 137 males). The population, or target group, was from the Northern Province Education Department secondary schools in the far northern areas (Vhutavhatsindi, Niani, Vhumbedzi, Balethavha, Nzhelele).

Teachers were selected by the school principal using the following criteria:

At least six teachers from the whole staff were selected in the following manner:

* at least one teacher within walking distance from the school;

* at least one teacher who travels using private or public transport to and from work;

* at least one teacher staying in the teachers' houses; and

* at least one teacher from the management team (head of department, deputy principal or the principal).

The purpose of this selection is to obtain a diverse representation of teachers from the different situations and positions, with regard to matters affecting their working situation.

### 3.2.3. Analysis

The SAS System was employed to examine the association between the self-reported teacher stress and the following factors:

a. Sex of the respondent;

b. Length of teaching experience of the respondent; organized as follows:

* 0 - 4 years;
* 5 - 10 years;
* 11 - 15 years; and
* over 15 years.

c. Distance travelled by the respondent, organized as follows:

* stay 20 kilometers or less between residence and place of work; and
* stay more than 20 kilometers between residence and place of work.

The mean scores for the whole sample and the groups (a), (b), and (c) above were rank-ordered and were also subjected to analysis of variance for the purposes of comparison.

# CHAPTER 4: RESULTS

## INTRODUCTION

In this Chapter I present the results obtained from the analyses of the forty-two interviews and 177 questionnaires completed by respondents from rural secondary schools. The Chapter is divided into two sections: Section A contains the data from the interviews and Section B contains the data from the questionnaires.

## 4.1. INTERVIEW DATA

The analysis of the data obtained through the interviews revealed five major sources of stress: (1) the learning-teaching situation, (2) the school, (3) the community, (4) the profession, and (5) personal factors. There are various sub-themes within each of these categories (see Appendix E, pp. 1-6).

My results are presented such that firstly, I will give an introduction to each of the tables, after which, I list the percentages of sources of stress as obtained from the analysis of the interview data; thirdly, I proceed with a description of the data in tabular form and lastly, I emphasize notable trends in the data.

I will present the analysis of the raw data along three different foci: firstly, the major sources of stress (1-5 above), then the sub-categories within each of these, and lastly, minor categories within each of the sub-categories. These three foci, i.e. the major sources of stress, the sub-categories within these and the minor categories within the sub-categories are meant as different levels of analysis. For example, a major source of stress, entitled 'the learning-teaching situation' (see Table 1, p.65), differentiates into five sub-categories: pupils' actions, curriculum demands, time demands, class size and pupil-teacher relationships (see Table 2, p.67). The most highly ranked of these, 'pupil's actions', differentiates into 6 minor categories (see Table 3, p.69). In some cases, the ranking suggests more than one sub-category of importance and in these cases I include a further differentiated analysis of the minor sources of stress (see Tables 4, and 6, p. 70 and 71 respectively, for examples).

4.1.1. Major sources of stress

The major sources of stress reported in the interviews are as follows. Here, it can be seen that the teachers focused on aspects related to learning in and around the school, the profession and the community.

Table 1: Major categories : sources of stress, rank order and percentage

| Rank | Category | Number of responses | Percentage |
|---|---|---|---|
| 1 | The school | 164 | 36.4 |
| 2 | The learning-teaching situation | 130 | 28.9 |
| 3 | The community | 86 | 19.1 |
| 4 | The profession | 56 | 12.4 |
| 5 | Personal factors | 14 | 3.1 |
| | TOTAL | 450 | 100 |

Table 1 shows the number of responses per major category of stress. The percentages are based on the overall responses of 450 to the interview as a whole. The most highly ranked category of stress is the school, (36.4%). The category reported as the least stressful source of stress is that of personal factors. Teachers are more concerned about the school and the learning situation than their personal problems. The learning-teaching situation is one of the highly ranked stressful categories (28.9); the profession does not seem to be particularly stressful (12.4%).

The sub-categories are given in the paragraph that follows, showing interesting patterns of sources of stress from these categories.

4.1.2. Sub-categories of stress

Table 2 presents the major categories, together with their sub-categories. The

focus is on sources of stress for teachers. The Table shows the rank order of the sub-categories within each major category. The number of responses and the percentages in each sub-category are also shown.

Table 2: Sources of stress: Categories, rank order, responses and percentage

| Sources of stress | Rank order | Responses | Percentage |
|---|---|---|---|
| ***The learning-teaching situation*** | | | |
| Pupils' actions | 1 | 91 | 70 |
| Curriculum demands | 5 | 5 | 3.8 |
| Time demands | 3 | 11 | 8.5 |
| Class size | 2 | 15 | 11.5 |
| Pupils and teacher relationship | 4 | 8 | 6.2 |
| Total responses | | 130 | 100 |
| ***The school*** | | | |
| Distance between school and home | 2 | 47 | 28.7 |
| Linkages to outside world | 4 | 8 | 4.9 |
| Lack of physical resources | 1 | 65 | 39.6 |
| Poor infrastructure | 3 | 44 | 26.8 |
| Total responses | | 164 | 100 |
| ***The community*** | | | |
| General poverty | 3 | 12 | 14 |
| Antagonism to school and teachers | 1 | 44 | 51.2 |
| Learning culture absent | 2 | 30 | 34.9 |
| Total responses | | 86 | 100* |
| ***The profession*** | | | |
| Poor remuneration | 3 | 12 | 21.4 |
| Teachers' attitudes | 1 | 31 | 55.4 |
| Teachers' qualifications | 2 | 13 | 23.2 |
| Total responses | | 56 | 100 |
| ***Personal*** | | | |
| Health | | 14 | 100 |

Notes: Percentages are based on the total responses of the sub-category. Each sub-category has been ranked individually.

* Percentage is rounded off to the nearest ten.

In what follows, I discuss patterns from the sub-categories above:

a. The learning-teaching situation

Five sub-categories of stressors are identified, these are: pupils' actions (70%), class size (11.5%), time demands (8.5%), pupil-teacher relationships (6.2%), and curriculum demands (3.8%). Looking at these results, pupils' actions are the major source of stress; the least stressful is that of curriculum demands.

b. The school

Four sub-categories of school stressors are identified, these are: lack of physical resources (39.6%); distance between school and home (28.7%); poor infrastructure (26.8%); and linkages to the outside world (4.9%). The highest ranked sub-category of the sources of stress is lack of physical resources, and the least stressful, linkages to the outside world.

c. The community

Three sub-categories can be identified in this category, these are: antagonism to school and teachers (51.2%), absence of a learning culture (34.9%) and general poverty (14%). The most stressful factor is antagonism to school and teachers, and general poverty is the least stressful factor.

d. The profession

This category has three sub-categories, these are: teachers' attitudes (55.4%), teachers' qualifications (23.2%), and poor remuneration (21.4%). The most stressful sub-category is teachers' attitudes. It is worth noting that poor remuneration is considered the least stressful factor.

e. Personal factors

This category has only one sub-category - health - and only fourteen responses. Teachers interviewed did not identify this factor as being considerably stressful. Each of the sub-categories has several patterns which are the sources

of stress. The sub-categories and their patterns which are worth noting are given below.

4.1.3. Minor categories of stress

In what follows, I discuss the most important minor categories of the sources of stress.

a. Pupils' actions

Table 3 shows the stress patterns from the minor category which are related to pupils' actions.

Table 3 : Stress patterns from minor categories: pupils' actions

| Stress patterns | Number of responses | % |
|---|---|---|
| Pupil recalcitrance | 30 | 33 |
| Lack of pupil participation | 26 | 28.6 |
| Negative attitude to tests | 10 | 11 |
| Pupils' absence from school | 9 | 10 |
| Noisy pupils | 8 | 8.8 |
| Teaching pupils who are over-age | 8 | 8.8 |
| TOTALS | 91 | 100* |

In Table 3 above patterns from pupils' actions as a minor category of stress, the number of responses by the teachers interviewed and the percentages of the responses are given. It is evident that pupil recalcitrance (33%) is the most reported source of stress. Pupils' misbehaviour is regarded as most stressful. Lack of pupil participation (28.6%) is also a notable sources of stress. Noisy pupils and teaching pupils who are over-age does not seem to be particularly stressful to teachers, both factors have the same number of responses (8= 8.8%).

b. Distance between school and home

Table 4 : Stress patterns: distance between school and home

| Stress patterns | Responses | % |
|---|---|---|
| Journey to school | 18 | 38.3 |
| Being late for school due to long distance | 17 | 36.2 |
| Lack of transport facilities | 12 | 25.5 |
| Total | 47 | 100 |

Table 4 gives the stress patterns related to distance between school and home. The majority of teachers teaching in these areas travel long distances to school every working day. Journey to school is regarded as a major source of stress (38.3%). It is interesting to note that being late for school is also one of the most important sources of stress (36.2%).

c. Lack of physical resources

The following stress patterns (Table 5) are related to lack of physical resources reported by teachers:

Table 5: Stress patterns : lack of physical resources

| Stress patterns | Responses | % |
|---|---|---|
| Shortage of classrooms | 34 | 52.3 |
| Lack of general accommodation | 18 | 27.7 |
| Lack of toilet facilities | 5 | 7.7 |
| Lack of fence | 5 | 7.7 |
| Classroom window panes broken | 3 | 4.6 |
| Total | 65 | 100 |

From the above table, it is evident that teachers regarded shortage of classrooms as an outstanding stress pattern (52.3%). The least-reported stress pattern is that of broken classroom window-panes (4.6%). Another factor that is worth noting is lack of toilet facilities (7.7%), which has the same percentage as lack of fencing around the school. This factor, lack of physical resources, is closely related to poor infrastructure which is given below.

d. Poor infrastructure

The following, Table 6, gives stress patterns which are related to poor infrastructure:

Table 6: Stress patterns related to the poor infrastructure

| Stress patterns | Responses | % |
|---|---|---|
| Shortage of equipment | 23 | 52.3 |
| Extreme temperatures | 12 | 27.3 |
| Lack of electricity | 9 | 20.5 |
| Total | 44 | 100* |

Shortage of equipment (52.3%) is regarded as the most outstanding stress factor and lack of electricity (20.5%) as the least stressful factor.

Stress factors related to teachers' personalities and behaviour by the community towards teachers and the school have also been mentioned as some of the notable sources of stress. These are given below.

e. Antagonism to school and teachers

The following stress patterns mentioned by teachers interviewed (given in Table 7), are related to the antagonism to school and teachers by the community. Only two patterns with high responses were identified.

Table 7: Stress patterns related to antagonism to school and teachers

| Stress patterns | Responses | % |
|---|---|---|
| Lack of understanding for the work of teachers | 30 | 68.2 |
| Undeserved public criticism of teachers | 14 | 31.8 |
| Total | 44 | 100 |

From the table above, it is evident that teachers regard lack of understanding for the work of teachers as the outstanding source of stress related to the community. Of the teachers interviewed, 31.8% reported that they find undeserved public criticism of teachers a stressful factor.

Salary-related sources of stress are also regarded as important, and these are given below.

f. Poor remuneration

Table 8 shows the stress patterns related to poor remuneration of teachers.

Table 8: Stress patterns related to poor remuneration of teachers

| Sources of stress | Responses | % |
|---|---|---|
| Salary does not cover the cost of living | 8 | 66.7 |
| Salary does not keep up with the rate of inflation | 4 | 33.3 |
| Total | 12 | 100 |

The fact that salary does not cover the cost of living expenses is regarded as the highest stress factor related to poor remuneration. These two factors were identified as sources of stress by very few teachers, despite the rise in the cost of living and the rate of inflation.

Another factor related to teachers which is discussed below, is the teachers' attitudes towards other teachers and the administration.

g. Teachers' attitudes

Teachers' attitudes have also been reported as a minor category of the sources of stress. Table 9 below shows the stress patterns related to teachers' attitudes reported by respondents during interview.

Table 9: Stress patterns related to teachers' attitudes

| Stress patterns | Responses | % |
|---|---|---|
| Disenchantment with school administration and staff members | 23 | 74.2 |
| Attitudes and behaviour towards others | 8 | 25.8 |
| Total | 31 | 100 |

Table 9 above shows the number of responses and the percentages of these stress patterns. Disenchantment with school administration and staff members is regarded as the highest stressful factor related to teachers' attitudes (74.2%). Few teachers (25.8%), regard attitudes and behaviour towards others as a stressful factor.

4.1.4. Highest ranked sub-categories

The highest ranked sub-categories of the sources of stress are given below:

Table 10: Stress factors, rank order and percentages of the highest ranked sub-categories

| Sub-categories | Rank order | % |
|---|---|---|
| Pupils' actions | 1 | 20.2 |
| Lack of physical resources | 2 | 14.4 |
| Antagonism to school and teachers | 3 | 9.8 |
| Teachers' attitudes | 4 | 6.9 |

The fifth sub-category has not been included because only one minor category was identified. It is interesting to note how great a source of stress is pupils' actions as compared to the other three sub-categories.

It is evident that pupils' actions is the highest ranked sub-category of the sources of stress (20.2%), and teachers attitudes the least stressful sub-category. Antagonism to school and teachers does not seem to be a particularly important source of stress.

## 4.2. QUESTIONNAIRE DATA

From a review of the biographic data ( see Appendix E, questions 1-11), it is apparent that the following variables influenced the responses:

* the gender of the teacher;
* length of teaching experience; and
* the distance between school and home.

In what follows, I include interesting patterns from these data.

The full data obtained from the analyses of the twenty-six items on the questionnaire completed by the respondents, are contained in Appendix F. In this chapter, noteworthy statistics are presented using five research questions as a guiding framework. These are:

* In general, how stressful do you find being a teacher?
* How likely is it that you will still be a teacher in 10 years time?
* In general, how satisfied are you with your job as a teacher?
* How likely is it that you would choose teaching as a career if you were to start your working life over again?

* How great a source of stress are each of the factors listed in the questionnaire to you?

Each of the research questions will be answered within three subgroupings, these are:

* all teachers (male and female), compared to separate groups of male and female teachers;

* male and female teachers grouped according to their teaching experience; and

* travel subgroups (teachers who travel less than 20 kilometers and those who travel more than 20 kilometers to school each school day).

Firstly, I will give an introduction to each of the tables after which the table listing the ranked means of the sources of stress (as obtained from the analysis of the questionnaires) is presented, lastly, I present interesting patterns in the data on the sources of stress.

### 4.2.1. Research question 1: Reported stress

The data that reveal what proportion of teachers perceive their work to be stressful were obtained from Section 3 of Teacher Stress Inventory in which the following question was asked: 'In general, how stressful do you find being a teacher?' Teachers responses to these questions are documented below.

a. Reported stress for all teachers

Table 11 below gives the reported stress for all teachers i.e. female and male together, and the female and male subgroups.

Table 11: Overall work stress for all teachers

| Sources of stress | All (male + female) % | Female % | Male % |
|---|---|---|---|
| Not at all | 16.9 | 17.5 | 16.8 |
| Mildly Stressful | 22.6 | 22.5 | 22.6 |
| Moderately stressful | 37.9 | 40.0 | 37.2 |
| Very stressful | 17.5 | 12.5 | 19.0 |
| Extremely stressful | 5.1 | 7.5 | 4.4 |

The data above shows the sample sizes of the whole group and both sexes. It is interesting to note that the pattern, by gender, is the same, and that for both male and female, the pattern is the same as that of the whole group (male and female together). In all cases, only a small percentage of teachers regard teaching as extremely stressful (All=5.1%, female =7.5%, and male = 4.4%). More than a third of the teachers in all three groups indicate that teaching is moderately stressful (All = 37.9%; Female = 40.0% and male = 37.2%). There is also no significant difference between the males and females in the manner in which they experience stress. There are also teachers who have indicated that they do not experience stress at all.

b. Reported stress for male and female teaching experience subgroup

Table 12 gives the overall work stress of male and female teachers according to length of teaching experience.

Table 12: Reported stress for male and female teaching experience subgroups

| Length of experience | Not at all % | | Mildly Stressful % | | Moderately stressful % | | Very/Extremely stressful % | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F |
| 0-4 | 12 | 11.1 | 23.1 | 22.2 | 53.8 | 44.4 | 11.5 | 22.2 |
| 5-10 | 16.0 | 20.7 | 22.7 | 24.1 | 34.7 | 34.5 | 26.6 | 20.0 |
| 11-15 | 27.8 | - | 22.2 | - | 27.8 | - | 22.2 | - |
| Over 15 | 17 | - | 22 | - | 33 | - | 27.8 | - |

The data above shows the male and female groups according to their years of teaching experience. There are no female teachers in the categories 11 to 15 years and over. Fewer female teachers with more than 11 years teaching experience teach in rural areas (they are reported to leave the area once they are married).

In all teaching experience subgroups, more teachers indicate stress with fewer teachers indicating that they experience extreme stress. There are teachers who have also indicated that they do not experience stress at all.

It is worth noting that a considerable percentage of the 11-15 years subgroup of male teachers have reported that they did not find teaching at all stressful. On the other hand, 12.1% of the female teachers with 0-4 years experience have also indicated that they did not find being a teacher at all stressful. Proportionally, female teachers with less teaching experience (0-4 years) reported more stress.

c. Reported stress for teaching experience travel subgroups

Table 13 below shows reported stress for teachers who travel for less than 20 kilometers and those who travel for more than 20 kilometers every day to their jobs.

Table 13: Reported stress for travel subgroups

| Travel group | Not at all stressful % | Mildly stressful % | Moderately stressful % | Very/extremely stressful % |
|---|---|---|---|---|
| Less than 20km (n=93) | 23.7 | 20.4 | 37.6 | 18.3 |
| More than 20km (n=80) | 8.8 | 26.3 | 38.8 | 26.0 |

Only 8.8% of teachers who travel more than 20 kilometers reported that they did not at all find teaching stressful, and 23.7% of teachers who travel less than 20 kilometers reported that they did not find teaching at all stressful. It is worth noting that 26% of teachers who travel more than 20 kilometers find teaching very stressful or extremely stressful, whereas 18.3% of teachers who travel less than 20 kilometers reported that they find teaching very stressful or extremely stressful.

4.2.2. Research question 2: Future possibilities

Table 14 below shows teachers' responses on how likely it is that they will still be teachers in 10 years time.

Table 14: Future possibilities: the whole group, male and female subgroups

| Future possibilities | All (M+F) % | Male % | Female % |
|---|---|---|---|
| Very unlikely | 10.7 | 10.2 | 12.5 |
| Fairly unlikely | 19.2 | 21.2 | 12.5 |
| Neither likely nor unlikely | 14.1 | 15.3 | 10.0 |
| Fairly likely | 33.3 | 33.6 | 32.5 |
| Very likely | 22.6 | 19.7 | 32.5 |

It is interesting to note that the patterns of all three groups are similar. Thirty-

two and a half percent females indicate that it is very likely that they will still be teaching in ten years time, a percentage which is slightly higher than the 19.7% of the male subgroups and the 22.6% of the whole sample, but not significantly different. Few teachers indicate that it is very unlikely that they will still be teachers in ten years time.

In Table 15, male and female subgroups, according to their years of teaching experience, are given, indicating how likely is it that they would still be teachers in ten years' time. It can be noted that female teachers with more than eleven years teaching experience could not be included in the sample. Only one female teacher with more than 11 years experience took part in the research.

Table 15: Future possibilities: male and female: teaching experience subgroup

| Exper-ience | Very unlikely % | | Fairly unlikely % | | Neither likely/unlikely % | | Fairly/Very likely % | | Very likely % | |
|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F |
| 0-4 | 11.5 | 11.1 | 11.5 | 22.2 | 23.1 | - | 26.9 | 11.1 | 26.9 | 55.6 |
| 5-10 | 8.0 | 10.3 | 26.7 | 10.3 | 10.7 | 13.8 | 33.3 | 37.9 | 21.3 | 27.6 |
| 11-15 | 11.1 | - | 11.1 | - | 16.7 | - | 50.0 | - | 11.1 | - |
| >15 | 16.7 | - | 22.2 | - | 22.2 | - | 27.8 | - | 11.1 | - |

Although not significantly different, more female teachers (55,6%) with teaching experience of 0-4 years, indicate that it is very likely that they would still be teachers in ten years time, as compared to male teachers of the same teaching experience (26,9%). A small percentage of teachers (8.0%) indicating that it is very unlikely they would not have left teaching, is that of male teachers with 5-10 years teaching experience.

Table 16 illustrates the future likelihoods reported by teachers according to distances traveled to work every day.

Table 16: Future possibilities: Traveling teachers

| Travel group | Very unlikely % | Neither likely/ unlikely % | Fairly unlikely % | Fairly likely % | Very likely % |
|---|---|---|---|---|---|
| Less than 20km | 7.5 | 22.6 | 16.1 | 33.3 | 20.4 |
| More than 20km | 13.8 | 16.3 | 10.0 | 33.8 | 26.3 |

In the table above 7.5% of teachers who travel less than 20 kilometers report that it is very unlikely that they will still be teaching in ten years' time. There is, however, no significant difference in the report on their future possibilities in the teaching experience subgroups. About the same percentages of teachers who travel more than 20 kilometers indicate that it is fairly likely or very likely that they would still be teaching in 10 years' time.

### 4.2.3. Research question 3: Job satisfaction

In what follows, I discuss teachers' reports on how satisfied they are with their jobs as teachers. I have compared reports from all teachers together, those of teachers according to the gender, their years of teaching experience and those according to the distances they travel to their jobs every day.

Table 17: Job satisfaction for whole group and female and male subgroups

| Job satisfaction | All % | Female % | Male % |
|---|---|---|---|
| Not at all | 4.0 | 10.3 | 2.2 |
| Fairly satisfied | 64.2 | 56.4 | 66.4 |
| Neither satisfied nor dissatisfied | 13.1 | 15.4 | 12.4 |
| Fairly dissatisfied | 12.5 | 12.8 | 12.4 |
| Very dissatisfied | 6.3 | 5.1 | 6.6 |

Table 17 above shows that slightly more female than males indicate that they are not at all satisfied with teaching. Only 2.2% of the male teachers indicate they are not at all satisfied with their jobs. There is, however, no significant difference between the groups on their report on job satisfaction.

In what follows, I give a report by male teachers according to their teaching experience on how satisfied they are with their job.

Table 18: Job satisfaction: Male teaching experience subgroup

| Experience | Not at all satisfied % | Fairly satisfied % | Neither satisfied /dissatisfied % | Fairly/Very dissatisfied % |
|---|---|---|---|---|
| 0-4 | 3.8 | 61.3 | 11.5 | 11.5 |
| 5-10 | 2.7 | 65.3 | 13.3 | 14.3 |
| 11-15 | - | 66.7 | 11.1 | 16.7 |
| > 15 | - | 77.8 | 11.1 | 11.1 |

Table 18 indicates reports by male teachers according to their teaching experience. No male teachers in the most experienced subgroups (11 years and over), have reported that they are not at all satisfied with teaching, and only 11.1% of the most experienced teachers have reported that they are dissatisfied with teaching. It is also evident that only 3.8% of the least experienced teachers have reported that they are not at all satisfied with teaching. It is worth noting that the highest percentage of teachers reporting that they are fairly satisfied with teaching is that of the most experienced teachers (77.8%) and the lowest percentage of teachers reporting that they are fairly satisfied with teaching is that of teachers with the least experience (61.3%).

The table below gives the report by female teachers grouped according to their teaching experience on how satisfied they are with their job.

Table 19: Job satisfaction: Female teaching experience subgroup

| Experi-ence | Not at all | Fairly satisfied % | Neither satisfied/dis-satisfied % | Fairly dissatisfied % | Very dissatisfied % |
|---|---|---|---|---|---|
| 0-4 | - | 66.7 | 22.2 | - | 4.3 |
| 5-10 | 10.7 | 53.6 | 14.3 | 17.9 | 3.6 |

Table 19 indicates how female teachers report on their job satisfaction. No female teachers in the category of the least teaching experience (0-4 years) have reported that they are not at all satisfied with their jobs, while 10.7% of those with 5-10 years teaching experience have indicated that they are not at all satisfied with teaching. Although the percentages indicate that more teachers with less than five years teaching experience as compared with those who have more than five are fairly satisfied, there is however significant difference in the manner in which they have reported on job satisfaction.

It is also worth reporting on how satisfied the travel subgroup are with their jobs as teachers. This is shown in Table 20. It is evident that very small percentages of both subgroups (3.3% males and 3.8% females) have reported that they are not at all satisfied with their job as teachers. Important to note is the report by 8.8% teachers who travel more than 20 kilometers to their jobs indicating that they are very dissatisfied with their jobs as teachers, compared to 4.3% of those who travel less than 20 kilometers to their jobs.

Table 20: Reported job satisfaction by travel groups

| Travel group | Not at all satisfied % | Fairly satisfied % | Neither satisfied/ dissatisfied % | Fairly dissatisfied % | Very dissatisfied % |
|---|---|---|---|---|---|
| Less than 20km | 3.3 | 63.0 | 12.0 | 17.4 | 4.3 |
| Less than 20km | 3.8 | 67.5 | 13.8 | 6.3 | 8.8 |

### 4.2.4. Research question 4: commitment to teaching

The questionnaire also requested teachers to indicate how likely is it that they would choose teaching as a career if they were to start their working lives again. The purpose of this question was to study the teachers' commitment to teaching. Table 21 below shows data for the whole group i.e. male and female together and then for the separate gender groups.

Table 21: Commitment to teaching: whole group and male and female subgroups

| Commitment to teaching | All (M+F) % | Male % | Female % |
|---|---|---|---|
| Very unlikely | 22.6 | 21.2 | 27.5 |
| Fairly Unlikely | 16.4 | 18.2 | 10.0 |
| Neither likely/unlikely | 9.0 | 10.2 | 5.0 |
| Fairly likely | 24.9 | 23.4 | 30.0 |
| Very likely | 27.1 | 27.0 | 27.5 |

The data in Table 21 indicate that the patterns are the same in all subgroups. About 27% of teachers in all subgroups indicate that it is very likely that they would still choose teaching as a career if they were to start their working lives again. The percentages indicate that more than half of the teachers in the sample are committed to teaching. In all subgroups, fewer teachers indicate that it is very unlikely that they would choose teaching again. Proportionally, the figures in the table above show that more teachers indicate that they would still choose teaching if they had to start their working career again.

Table 22: Commitment to teaching: male, teaching experience subgroup

| Commitment to teaching | 0-4 years | 5-10 years | 1115 years | Over 15 years |
|---|---|---|---|---|
| Very unlikely | 19.2 | 18.7 | 22.2 | 33.3 |
| Fairly unlikely | 14.4 | 21.3 | 11.1 | 16.7 |
| Neither likely/unlikely | 7.7 | 10.7 | 11.1 | 11.1 |
| Fairly likely | 30.8 | 21.3 | 27.8 | 16.7 |
| Very likely | 26.9 | 28.0 | 27.8 | 22.2 |

In Table 22 above, the following patterns are worth noting: 50% of the teachers with the most teaching experience (over 15 years) have reported that it is unlikely that they would choose teaching as a career if they were to start their working life over again, and 38.9% reported that they would choose teaching again; of the teachers with the least teaching experience, 33.6% indicated that it is unlikely that they would choose teaching as a career if they were to start their working life over again while 57.7% indicated that it is likely.

The female subgroup was also analysed. Table 23 shows the data indicating how female teachers indicated the likelihood of choosing teaching as a career if they were to start their working lives over again.

Table 23: Commitment to teaching: Female teaching experience subgroup:

| Commitment to teaching | 0-4 Years | 5-10 Years |
|---|---|---|
| Very unlikely | 44.4 | 20.7 |
| Fairly unlikely | - | 13.8 |
| Neither likely nor unlikely | - | 6.9 |
| Fairly likely | 22.2 | 31.0 |
| Very likely | 33.3 | 27.6 |

Here, it is evident that 44.4% of the teachers with 0-4 years teaching experience have reported that it is unlikely that they would choose teaching as a career if they were to start their working life over again, and while 55.5% reported that it is likely. It is also important to note that 58.6% of the female teachers with 5-10 years teaching experience have reported that it is likely that they would still choose teaching if they were to start their working life over again.

Another subgroup with interesting data is the travel group. Table 24 gives an indication of their commitment to teaching.

Table 24: Commitment to teaching: travelling teachers

| Commitment to teaching | Less than 20 km - % | More than 20 km - % |
|---|---|---|
| Very unlikely | 21.5 | 3.8 |
| Fairly unlikely | 20.4 | 12.5 |
| Neither likely/unlikely | 8.6 | 10.0 |
| Fairly likely | 21.5 | 27.5 |
| Very likely | 28.0 | 26.3 |

In the table above, the following patterns are worth noting: 49.5% of the teachers who travel less than 20 kilometers to their jobs report that it is likely that they would choose teaching as a career if they were to start their working life over again, while 41.9% report that it is unlikely; 53.8% of teachers who travel more than 20 kilometers to their jobs report that it is likely that they would still choose teaching if they were to start their working life over again. This is significantly higher than that of teachers who travel less than 20 kilometers ($f=4.45$. $p=.0446$). It is also important to note that 36.3% of teachers who travel report that it is unlikely that they would choose teaching as a career if they were to start their working lives again, and 41.9% of those who travel more than 20 kilometers report that it is unlikely.

### 4.2.5. Research question 5: Sources of stress

In what follows, I turn to the sources of stress as reported by teachers in the whole group, teachers according to their genders, teachers according to teaching experience and teachers according to how they travel to their jobs.

#### a. Sources of stress for the total sample

Sources of stress as rated by teachers in the sample as a whole are given in Table 25. The means, standard deviation and the percentages of the ratings of the twenty six sources of stress for the whole sample are shown. The rank order based on the means of each of the sources is also listed.

From the rank order, the top five sources of stress rated by the Northern Province rural secondary school teachers are: shortage of school buildings and equipments, salary does not keep with the rate of inflation, salary does not cover the cost of living expenses, salary is not adequate for the amount of training teachers have undergone, and excessive class size. Maintaining class discipline with difficult classes does not seem to be particularly stressful; it is ranked number twenty one. It is important to note that salary related factors are so stressful as to be rated in three of the top five sources of stress, while the other two are related to classes.

It should be noted that even though the above suggest certain tendencies in the data, only one significant difference was established, i.e. distance travelled to school and the extent of stress experienced.

Table 25: Overview of sources of stress: means, standard deviations and rank order for the total sample

| Sources of stress | Rank Order | Mean* | SD | % |
|---|---|---|---|---|
| Shortage of school buildings and equipment | 1 | 2.95 | 1.28 | 69.1 |
| Salary does not keep with the rate of inflation | 2 | 2.86 | 1.21 | 65.0 |
| Salary does not cover the cost of living | 3 | 2.85 | 1.21 | 64.4 |
| Salary is not adequate for amount of training for teachers | 4 | 2.53 | 1.23 | 51.7 |
| Excessive class size | 5 | 2.43 | 1.33 | 51.1 |
| Geographic isolation of the school | 6 | 2.36 | 1.45 | 51.7 |
| Lack of understanding for work of teachers by community | 6 | 2.36 | 1.34 | 50.8 |
| Unpleasant geographic surrounding of your school | 8 | 2.25 | 1.36 | 45.4 |
| Poor promotional opportunities | 9 | 2.21 | 1.37 | 46.3 |
| Pupils impolite and disruptive behaviour | 10 | 2.19 | 1.25 | 43.0 |
| Journey to school | 10 | 2.19 | 1.54 | 46.3 |
| Environmental conditions such as noise and temperature | 12 | 2.04 | 1.36 | 37.9 |
| Undeserved public criticism of teachers and/the education system | 13 | 2.03 | 1.25 | 38.1 |
| Lack of direction in curriculum change | 14 | 1.98 | 1.27 | 37.5 |
| Excessive time demands of teaching /organizational duties | 15 | 1.97 | 1.19 | 31.8 |
| Lack of time for preparation, marking and/organization | 16 | 1.95 | 1.37 | 40.6 |
| Lack of time to assist individual pupils with difficulties | 17 | 1.93 | 1.25 | 34.7 |
| Individual pupils who continually misbehave | 18 | 1.88 | 1.13 | 29.0 |
| Demands on teachers to cope with changes in community | 19 | 1.81 | 1.16 | 26.8 |
| Problems implementing curriculum change | 20 | 1.79 | 1.20 | 30.0 |
| Maintaining class discipline with difficult classes | 21 | 1.77 | 1.25 | 27.3 |
| Lack of recognition for your contribution in teaching | 22 | 1.76 | 1.31 | 30.1 |
| Experiencing pressure on the school from the community | 23 | 1.73 | 1.31 | 28.4 |
| Lack of encouragement to be involved in decision-making | 24 | 1.66 | 1.28 | 28.0 |
| Dissatisfaction with the school administration/staff members | 25 | 1.57 | 1.31 | 28.6 |
| Frequent changes in curriculum | 26 | 1.43 | 1.09 | 16.0 |

*No stress=0; extreme stress= 4

Of interest is the lack of understanding of the work by teachers from the community and the geographical isolation of the school; both are ranked sixth. (Note that the research was done in the rural area where the community is isolated from the developed urban areas). Frequent changes in curriculum is the least stressful factor. Some of the lowest ranked stressful factors are: dissatisfaction with the school administration and or staff members, lack of encouragement to be involved in decision making and experiencing pressure on the school from the community.

b. Stressful work aspects as perceived by different gender groups

The means, standard deviations and rank order of the ratings of the sources of stress for the sex groups are set out in Table 26. The highest ranked factor, which is the most stressful for both female and male groups is the shortage of school buildings and equipment. The top four rankings by both male and female subgroups centre on classrooms and salary and are as follows: shortage of school buildings and equipments, salary does not keep with the rate of inflation, excessive class size, salary is not adequate for the amount of training undergone by teachers, and salary does not cover the cost of living expenses.

Male teachers regard the geographical isolation of the school as a more stressful factor than the female teachers (ranked fifth by male teachers and seventh by female teachers). Generally, there is much similarity in the rank orders between the male and the female teachers' stress factors. For both male and female teachers, for instance, excessive class size ranks fifth, and the least two stressful factors are frequent changes in curriculum and dissatisfaction with school and administration/other staff members.

Percentages show that female teachers find the following nine factors considerably more stressful than their male colleagues: Lack of direction in curriculum changes (41% female: 36.5% males); lack of time to adequately assist individual pupils with difficulties (41% females: 32.9% males); maintaining class discipline with difficult classes (35.8% females: 24.8% males); shortage of school buildings and equipments (76.9% females: 66.9% males); demands on teachers to cope with rapid changes in community (34.3% females: 24.8% males); excessive class size (59% females: 48.9% males); poor

Table 26: Sources of stress: rank order, means and standard deviation for the gender subgroups

| Source of stress | Female teachers Rank order | Mean* (N=40) | SD | Male teachers Rank order | Mean* (N=136) | SD |
|---|---|---|---|---|---|---|
| Excessive class size | 5 | 2.61 | 1.31 | 5 | 2.36 | 1.34 |
| Individual pupils who continually misbehave | 19 | 1.80 | 1.07 | 17 | 1.90 | 1.15 |
| Pupils' impolite and disruptive behavior | 16 | 2.00 | 1.04 | 8 | 2.25 | 1.30 |
| Maintaining discipline with difficult classes | 14 | 2.05 | 1.30 | 23 | 1.69 | 1.23 |
| Frequent changes in curriculum | 26 | 1.39 | 0.95 | 26 | 1.45 | 1.12 |
| Problems implementing curriculum change | 17 | 1.95 | 1.13 | 20 | 1.74 | 1.21 |
| Lack of direction in curriculum change | 12 | 2.23 | 1.27 | 16 | 1.91 | 1.27 |
| Excessive time demands of teaching and/ or organizational duties | 20 | 1.79 | 1.30 | 13 | 2.01 | 1.16 |
| Lack of time for preparation, marking and organizational duties | 17 | 1.95 | 1.41 | 15 | 1.95 | 1.36 |
| Lack of time to assist individual pupils with difficulties | 14 | 2.05 | 1.34 | 18 | 1.89 | 1.22 |
| Shortage of school buildings and equipments | 1 | 3.26 | 1.12 | 1 | 2.87 | 1.31 |
| Geographic isolation of your school | 7 | 2.38 | 1.43 | 5 | 2.36 | 1.46 |
| Unpleasant geographical surroundings | 7 | 2.38 | 1.31 | 9 | 2.21 | 1.38 |
| Environmental conditions | 9 | 2.34 | 1.34 | 14 | 1.96 | 1.35 |
| Journey to school | 11 | 2.29 | 1.39 | 10 | 2.16 | 1.58 |
| Undeserved public criticism of teachers | 22 | 1.75 | 1.13 | 12 | 2.12 | 1.28 |
| Lack of understanding for the work of teachers by the community | 10 | 2.33 | 1.44 | 5 | 2.36 | 1.31 |
| Demands on teachers to cope with rapid changes in community | 13 | 2.13 | 1.28 | 21 | 1.72 | 1.11 |
| Experiencing pressure on the school | 20 | 1.79 | 1.47 | 21 | 1.72 | 1.27 |
| Salary not adequate with amount of training | 3 | 2.97 | 1.24 | 4 | 2.40 | 1.20 |
| Salary does not cover the cost of | 4 | 2.95 | 1.15 | 2 | 2.82 | 1.23 |
| Salary does not keep with rate of inflation | 2 | 3.05 | 1.22 | 3 | 2.81 | 1.21 |
| Lack of recognition for your contribution | 24 | 1.69 | 1.38 | 19 | 1.78 | 1.29 |
| Lack of encouragement to be involved | 23 | 1.71 | 1.09 | 24 | 1.64 | 1.33 |
| Dissatisfaction with school administration | 25 | 1.42 | 1.24 | 25 | 1.61 | 1.33 |
| Poor promotional opportunities | 6 | 2.49 | 1.34 | 11 | 2.13 | 1.37 |

promotional opportunities (59% females: 42.6% males); environmental conditions such as noise and temperature (50% females: 34.5% males); and salary is not adequate for the amount of training for teachers (65.8% females: 47.8% males). On the other hand, male teachers find the following three factors more stressful than their female colleagues: undeserved public criticism of teachers (41.2%: 27.5%); pupils' impolite and disruptive behaviour (47.4%: 27.5%); and frequent changes in curriculum (18.2%: 7.9%).

However, using one way analyses of variance (ANOVA) for unbalanced data via GLM procedure to compare the mean differences of each stress symptom among teachers for the grouping variables (gender) significant differences were revealed: female teachers find the following two factors significantly more stressful than their male colleagues: demands on teachers to cope with rapid changes in community, significant at 5% level, (f=4.06; p=454); and salary not adequate with amount of training teachers receive, (f=7.12; p=.0084). So, the gender of the teacher also contributes significantly to the levels of stress experienced. This may be due to salary inadequacy and demands from the community which differ between genders.

c. Work aspects stressful to teachers according to their teaching experience

Table 27 below shows the means, standard deviations and rank order of the ratings in response to the stress factors for the teaching experience male subgroups. Two of the four teaching experience male subgroups, 5-10 years and 11-15 years, identify the same three principal sources of stress (although in different rank order): salary does not cover the cost of living expenses, salary does not keep up with the rate of inflation, and shortage of school buildings and equipments. Male teachers with the least experience find salary does not cover the cost of living expenses a greater source of stress than their more experienced colleagues (ranked third and second respectively).

Table 27: Sources of stress: rank order, means and standard deviation for the teaching experience male subgroup

| Sources of stress | 0-4 years Rank order | Mean* (n=26) | SD | 5-10 years Rank order | Mean* (n=75) | SD | 11-15 years Rank order | Mean* (N=18) | SD | Over 15 Rank order | Mean* (n=18) | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pupil misbehavior | 19 | 1.85 | 1.12 | 17 | 1.77 | 1.14 | 13 | 2.00 | 1.24 | 13 | 2.39 | 1.09 |
| Public criticism of teachers | 14 | 2.16 | 1.25 | 11 | 2.03 | 1.29 | 11 | 2.06 | 1.35 | 20 | 2.00 | 1.20 |
| Lack direction in curriculum change | 23 | 1.77 | 1.18 | 13 | 1.95 | 1.34 | 24 | 1.44 | 0.98 | 13 | 2.39 | 1.24 |
| Lack of time for preparation | 15 | 2.00 | 1.39 | 18 | 1.75 | 1.41 | 09 | 2.22 | 1.44 | 12 | 2.44 | 0.92 |
| Lack of encouragement | 19 | 1.85 | 1.35 | 23 | 1.45 | 1.30 | 15 | 1.78 | 1.52 | 20 | 2.00 | 1.24 |
| Pupils' impolite behaviour | 12 | 2.27 | 1.19 | 10 | 2.07 | 1.36 | 07 | 2.39 | 1.29 | 04 | 2.38 | 1.15 |
| Experiencing pressure | 10 | 2.35 | 1.32 | 24 | 1.43 | 1.14 | 22 | 1.50 | 1.15 | 18 | 2.22 | 1.40 |
| Lack of time to assist pupils | 21 | 1.81 | 1.17 | 16 | 1.85 | 1.20 | 15 | 1.78 | 1.40 | 16 | 2.28 | 1.23 |
| Problems implementing | 15 | 2.00 | 1.10 | 21 | 1.64 | 1.18 | 22 | 1.50 | 1.47 | 20 | 2.00 | 1.24 |
| Salary not covering expenses | 01 | 2.92 | 1.41 | 03 | 2.67 | 1.23 | 02 | 2.78 | 1.26 | 02 | 3.33 | 0.77 |
| Community lack understanding | 03 | 2.62 | 1.39 | 09 | 2.12 | 1.34 | 04 | 2.72 | 1.18 | 08 | 2.67 | 1.08 |
| Maintaining class discipline | 15 | 2.00 | 1.10 | 22 | 1.56 | 1.25 | 19 | 1.72 | 1.41 | 26 | 1.72 | 1.13 |
| Lack for recognition in teaching | 21 | 1.81 | 1.44 | 19 | 1.72 | 1.28 | 15 | 1.78 | 1.40 | 20 | 2.00 | 1.08 |
| Salary not keeping up inflation | 02 | 2.81 | 1.23 | 02 | 2.76 | 1.20 | 01 | 2.83 | 1.29 | 03 | 3.00 | 1.24 |
| Excessive time demands | 13 | 2.19 | 1.13 | 15 | 1.87 | 1.15 | 19 | 1.72 | 1.02 | 08 | 2.67 | 1.19 |
| Geographical isolation | 5 | 2.46 | 1.53 | 06 | 2.20 | 1.47 | 05 | 2.44 | 1.50 | 05 | 2.78 | 1.26 |
| Unpleasant geographical area | 10 | 2.35 | 1.44 | 08 | 2.13 | 1.39 | 09 | 2.22 | 1.48 | 15 | 2.33 | 1.24 |
| Dissatisfaction with staff | 15 | 2.00 | 1.23 | 25 | 1.35 | 1.36 | 15 | 1.78 | 1.40 | 24 | 1.94 | 1.11 |
| Frequent changes in curriculum | 24 | 1.58 | 1.14 | 26 | 1.33 | 1.08 | 25 | 1.22 | 1.17 | 24 | 1.94 | 1.16 |
| Shortages of school buildings | 04 | 2.58 | 1.42 | 01 | 2.83 | 1.31 | 03 | 2.76 | 1.52 | 01 | 3.56 | 0.62 |
| Demands to cope with change | 26 | 1.54 | 0.76 | 20 | 1.65 | 1.17 | 19 | 1.72 | 1.18 | 16 | 2.28 | 1.13 |
| Excessive class size | 07 | 2.42 | 1.24 | 05 | 2.23 | 1.33 | 05 | 2.44 | 1.54 | 05 | 2.78 | 1.31 |
| Poor promotional opportunities | 08 | 2.40 | 1.15 | 14 | 1.89 | 1.38 | 11 | 2.06 | 1.47 | 05 | 2.78 | 1.31 |
| Environmental condition | 24 | 1.58 | 1.30 | 11 | 2.03 | 1.33 | 14 | 1.94 | 1.56 | 18 | 2.22 | 1.31 |
| Salary not adequate with tuition | 05 | 2.46 | 1.45 | 04 | 2.32 | 1.14 | 07 | 2.39 | 1.24 | 08 | 2.67 | 1.08 |
| Journey to school | 09 | 2.38 | 1.55 | 06 | 2.20 | 1.54 | 25 | 1.22 | 1.66 | 11 | 2.61 | 1.46 |

Using the one way anova to compare the mean differences of each stress factor among teachers according to the number of years teaching experience, there are significant differences attributed to the dependent variables that are attributed to the classification of the independent variables in the following factors: Experiencing pressure on the school from the community, (f=4.86; p=.0031) and journey to school (f=3.74; p=.0129). Teachers with the least experience find these two factors significantly more stressful than their more experienced colleagues. On the other hand, teachers with the most experience (over 15

years) find excessive time demands of teaching and/or organizational duties (f=2.86; p=.0393) and shortages of school buildings and equipments (f=3.08; p=.0300) significantly more stressful than those with less than 15 years experience.

Teachers with the least teaching experience find demands to cope with changes in community the least stressful factor. Although not significant, the least experienced teachers find this source less stressful than the most experienced ones (7.7%, 25.3%, 33.3%, and 38.9% respectively).

Teachers with the most experience (over 15 years) find shortage of school buildings and equipment a greater source of stress than those with the least experience (0-4 years), which is also the case with teachers in the teaching experience group of 5-10 years.

Maintaining class discipline with a difficult class is the least source of stress for the more experienced teachers. However, percentage-wise, the least experienced teachers find this source one of the less stressful factors (0-4 years= 19.2%; 5-10 years = 25.3%; 11-15 years = 27.6% and over 15 years = 27.8%) although they differ in rank.

Although having the same rank (one) in the two teaching experience subgroups, shortage of buildings is considered more stressful by the more experienced teachers than by those with 5-10 years teaching experience.

Table 28 sets out the means, standard deviations and rank order of the ratings in response to the stress factors for the teaching experience female subgroups. Two out of the initial four age-groups are considered for results, one age-group was represented by only one respondent and the other was not represented. Only 0-4 years and 5-10 years age groups were fairly represented in the sample and were therefore considered for results. Both teaching experience female subgroups identify the same three principal sources of stress, and in the same rank order; shortage of school buildings and equipment, salary does not keep with the rate of inflation, salary not adequate for the training required for teachers. Although having the same rank, shortage of school buildings and equipment is significantly more stressful to teachers with the least experience (0-4 years) than to those with 5-10 years experience.

Table 28: Sources of stress: rank order, means and standard deviation for the teaching experience female subgroups

| Sources of stress | 0 - 4 Years | | | 5 - 10 Years | | |
|---|---|---|---|---|---|---|
| | Rank order | Mean* N=9 | SD | Rank order | Mean* N=29 | SD |
| Pupil misbehavior | 16 | 1.89 | 1.05 | 22 | 1.69 | 1.04 |
| Public criticism of teachers/education system | 24 | 1.22 | 0.97 | 18 | 1.90 | 1.14 |
| Lack of direction in curriculum change | 20 | 1.67 | 1.00 | 07 | 2.39 | 1.34 |
| Lack of time for preparation, marking/organizing | 21 | 1.56 | 1.51 | 14 | 2.00 | 1.39 |
| Lack of encouragement | 19 | 1.75 | 1.04 | 23 | 1.68 | 1.12 |
| Pupils impolite/disruptive behaviour | 14 | 2.00 | 0.71 | 19 | 1.86 | 1.03 |
| Experiencing pressure on school from community | 10 | 2.22 | 1.39 | 24 | 1.61 | 1.47 |
| Lack of time to assist individual pupils | 14 | 2.00 | 1.32 | 13 | 2.11 | 1.40 |
| Problems implementing curriculum change | 16 | 1.89 | 1.27 | 17 | 1.97 | 1.15 |
| Salary does not cover cost of living expenses | 04 | 2.78 | 1.20 | 03 | 2.93 | 1.16 |
| Community lack understanding for work of teachers | 08 | 2.56 | 1.24 | 09 | 2.25 | 1.55 |
| Maintaining class discipline with difficult classes | 13 | 2.11 | 0.78 | 14 | 2.00 | 1.47 |
| Lack of recognition for contribution in teaching | 25 | 1.11 | 1.27 | 21 | 1.82 | 1.42 |
| Salary does not keep up with the rate of inflation | 02 | 3.33 | 0.87 | 02 | 3.03 | 1.30 |
| Excessive time demands of teaching/organization | 21 | 1.56 | 1.13 | 19 | 1.86 | 1.38 |
| Geographic isolation of your school | 18 | 1.78 | 1.48 | 11 | 2.17 | 1.42 |
| Unpleasant geographical surroundings of school | 05 | 2.75 | 1.16 | 10 | 2.21 | 1.35 |
| Dissatisfaction with school administration/staff | 26 | 0.75 | 1.16 | 24 | 1.61 | 1.26 |
| Frequent changes in community | 23 | 1.50 | 0.93 | 26 | 1.29 | 0.94 |
| Shortages of school buildings and equipment | 01 | 3.75 | 0.71 | 01 | 3.07 | 1.19 |
| Demands to cope with changes in community | 09 | 2.25 | 1.39 | 14 | 2.00 | 1.25 |
| Excessive class size | 07 | 2.63 | 1.51 | 05 | 2.55 | 1.27 |
| Poor promotional opportunities | 11 | 2.13 | 1.36 | 05 | 2.55 | 1.38 |
| Environmental conditions such as noise/temperature | 11 | 2.13 | 1.46 | 07 | 2.39 | 1.31 |
| Salary not adequate with training required for | 03 | 2.88 | 1.46 | 03 | 2.93 | 1.21 |
| Journey to school | 05 | 2.75 | 1.04 | 12 | 2.14 | 1.46 |

Teachers with the least teaching experience find dissatisfaction with school administration/staff the least stressful factor, and those with 5-10 years teaching experience find frequent changes in curriculum the least stressful factor.

Based on percentages, female teachers with the least experience find the following six factors more stressful than their colleagues: experiencing pressure on school from the community (44.4% :25%); problems implementing curriculum change (66.6%: 34.5%); salary does not keep up with the rate of inflation (77.8%: 65.5%); geographic isolation of your school (55.6%: 37.9%); frequent changes in curriculum (12.5%: 3.6%); and journey to school (62.5%: 39.3%). Female teachers with 5-10 years teaching experience find the following factors more stressful than their colleagues: lack of recognition for your contribution in teaching (39.3%: 11.1%); excessive time demands (35.7%: 22.2%); and environmental conditions such as noise/temperature (53,6%: 37.5%).

The journey to school is such a great source of stress to female teachers with the least experience, that it falls within the five principal sources of stress (ranked twelfth with the other group). Experiencing pressure on the school from the community is a greater source of stress for the less experienced teachers than their more experienced colleagues. The one way anova reveals a significant difference in the mean ratings of this factor between female teachers with 0-4 years and those with 5-10 years experience in their response to stress due to experiencing pressure on the school from the community ($f=4.16$; $p=.0509$). It should therefore be noted that the relationship between the length of teaching experience, gender (in the case of female) and reported stress is statistically significant.

Table 29 below sets out the means, standard deviations and rank order of the ratings of the twenty six factors for the subgroups according to distance traveled to school. In line with the above results, the four major sources of stress for teachers who stay less than 20 kilometers from their place of work are: salary does not cover the cost of living expenses, salary does not keep up with the rate of inflation, shortage of school buildings and equipment, and salary not adequate with training required for teachers. Teachers who stay more than 20 kilometers from place of work find the journey to school a far greater source of stress than their colleagues. It is ranked second, as compared to the 25th ranking of the group of teachers who stay less than 20 kilometers from their place of work. Dissatisfaction with school administration/staff is the least stressful factor for teachers who travel more than 20 kilometers from place of work.

Table 29: Sources of stress: rank, means and standard deviation for traveling subgroup

| Sources of stress | < 20km | | | > 20km | | |
|---|---|---|---|---|---|---|
| | Rank order | Mean* N=93 | SD | Rank order | Mean* N=80 | SD |
| Pupil misbehavior | 17 | 1.85 | 1.16 | 16 | 1.89 | 1.12 |
| Public criticism of teachers/education system | 07 | 2.16 | 1.35 | 18 | 1.86 | 1.13 |
| Lack of direction in curriculum change | 13 | 1.97 | 1.33 | 14 | 1.94 | 1.21 |
| Lack of time for preparation, marking/organization | 12 | 2.00 | 1.33 | 19 | 1.84 | 1.37 |
| Lack of encouragement | 22 | 1.68 | 1.38 | 24 | 1.56 | 1.12 |
| Pupil's impolite\disruptive behaviour | 09 | 2.12 | 1.29 | 11 | 2.24 | 1.21 |
| Experiencing pressure on school from community | 19 | 1.77 | 1.27 | 23 | 1.65 | 1.33 |
| Lack of time to assist individual pupils | 16 | 1.90 | 1.29 | 14 | 1.94 | 1.21 |
| Problems implementing curriculum change | 23 | 1.65 | 1.20 | 17 | 1.88 | 1.15 |
| Salary does not cover the cost of living expenses | 01 | 2.86 | 1.20 | 04 | 2.78 | 1.23 |
| Community lack understanding for work of teachers | 06 | 2.26 | 1.33 | 08 | 2.40 | 1.34 |
| Maintaining class discipline with difficult classes | 21 | 1.70 | 1.24 | 21 | 1.81 | 1.27 |
| Lack of recognition for your contribution | 20 | 1.74 | 1.28 | 22 | 1.74 | 1.31 |
| Salary does not keep up with the rate of inflation | 03 | 2.81 | 1.24 | 03 | 2.89 | 1.19 |
| Excessive time demands of teaching/organization | 14 | 1.96 | 1.27 | 13 | 1.96 | 1.12 |
| Geographic isolation of your school | 11 | 2.04 | 1.41 | 05 | 2.74 | 1.38 |
| Unpleasant geographic surroundings | 10 | 2.10 | 1.34 | 07 | 2.42 | 1.38 |
| Dissatisfaction with the school staff | 23 | 1.65 | 1.30 | 26 | 1.47 | 1.34 |
| Frequent changes in curriculum | 26 | 1.34 | 1.14 | 25 | 1.54 | 1.02 |
| Shortages of school buildings and equipment | 02 | 2.83 | 1.33 | 01 | 3.05 | 1.22 |
| Demands to cope with changes in community | 18 | 1.79 | 1.22 | 20 | 1.82 | 1.11 |
| Excessive class size | 05 | 2.40 | 1.29 | 09 | 2.39 | 1.38 |
| Poor promotional opportunities | 08 | 2.14 | 1.33 | 10 | 2.27 | 1.42 |
| Environmental conditions such as noise/temperature | 15 | 1.93 | 1.35 | 12 | 2.19 | 1.39 |
| Salary not adequate with training required for tears | 04 | 2.47 | 1.23 | 06 | 2.53 | 1.22 |
| Journey to school | 25 | 1.42 | 1.45 | 02 | 3.01 | 1.16 |

Teachers who stay more than 20 kilometers from their place of work find the three factors more stressful than teachers who stay less than 20 kilometers from place of work: geographical isolation of school, unpleasant geographical surroundings of school, and journey to school. The one way anova has also revealed that teachers who

travel more that 20 kilometers from their place of work find their journey to school significantly more stressful than those who travel less than 20 kilometers from their place of work (f=4.45; p=.044). However, teachers who stay less than 20 kilometers from their place of work find the following two factors more stressful than their colleagues: public criticism of teachers/education system, and lack of encouragement.

The most and least stressful sources of stress for each of the subgroups are given below. It is readily evident that the fact that salary does not keep up with the rate of inflation appears as the most stressful source in all the subgroups; shortage of school buildings and equipment is rated among the most stressful factors in nine out of the ten instances. Considering the least stressful factors, frequent changes in curriculum appears in nine out of the ten instances. Dissatisfaction with the school administration/staff members appears in seven out of the subgroups and lack of encouragement to be involved in decision making in five.

The most and the least stressful sources for each subgroup

| Most Stressful sources | Least stressful sources |
|---|---|
| **Females** | |
| 1. Shortage of school buildings and equipment | Lack of recognition for your contribution in teaching |
| 2. Salary does not keep up with the rate of inflation. | Dissatisfaction with the school administration/staff members. |
| 3. Salary not adequate with training required for teachers. | Frequent changes in curriculum |
| **Males** | |
| 1. Shortage of school buildings and equipment | Lack of encouragement to be involved in decision making. |
| 2. Salary does not cover cost of living expenses. | Dissatisfaction with school administration/staff members |
| 3. Salary does not keep up with the rate of inflation. | Frequent changes in curriculum |

0-4 Years teaching experience: males

| | | |
|---|---|---|
| 1. | Salary does not cover cost of living expenses. | Frequent changes in curriculum |
| 2. | Salary does not keep up with the rate of inflation. | Environmental conditions such as noise and temperatures |
| 3. | Lack of understanding for the work of teachers by the community | Demands on teachers to cope with rapid changes in community |

5 - 10 Years teaching experience: males

| | | |
|---|---|---|
| 1. | Shortages of school buildings and equipment | Environmental conditions such as noise and temperature |
| 2. | Salary does not keep up with the rate of inflation. | Dissatisfaction with the school administration /other staff members. |
| 3. | Salary does not cover cost of living expenses. | Frequent changes in curriculum. |

11 - 15 Years teaching experience: males

| | | |
|---|---|---|
| 1. | Salary does nor keep up with the rate of inflation. | Lack of direction in curriculum changes. |
| 2. | Salary does not cover cost of living expenses. | Frequent changes in curriculum. |
| 3. | Shortages of school buildings and equipment | Journey to school. |

Over 15 years teaching experience: males

| | | |
|---|---|---|
| 1. | Shortages of school buildings and equipment. | Dissatisfaction with the school administration /other staff members. |
| 2. | Salary does not cover the costs of living expenses. | Frequent changes in curriculum. |
| 3. | Salary does not keep up with the rate of inflation. | Maintaining class discipline with difficult classes. |

0 - 4 Years teaching experience: females

| | | |
|---|---|---|
| 1. | Shortage of school buildings and equipment. | Undeserved public criticism of teachers/the education system. |
| 2. | Salary does not keep up with the rate of inflation. | Lack of recognition for your contribution in teaching. |
| 3. | Salary does not cover costs of living expenses. | Dissatisfaction with the school administration/other staff members. |

5 - 10 Years teaching experience: females

| | | |
|---|---|---|
| 1. | Shortages of school buildings and equipment. | Problems implementing curriculum change. |
| 2. | Salary does not keep up with the rate of inflation. | Dissatisfaction with the school. administration/other staff members. |
| 3. | Salary does not cover costs of living expenses. | Frequent changes in curriculum. |

Travel less than 20 kilometers to school

| | | |
|---|---|---|
| 1. | Salary does not cover costs of living expenses. | Problems implementing curriculum change. |
| 2. | Shortages of school buildings and equipment. | Journey to school. |
| 3. | Salary does not keep up with the rate of inflation. | Frequent changes in curriculum. |

Travel more than 20 kilometers to school

| | | |
|---|---|---|
| 1. | Shortages of school buildings and equipment. | Lack of encouragement to be involved in effective decision-making. |
| 2. | Journey to school. | Frequent changes in curriculum. |
| 3. | Salary does not keep up with the rate of inflation. | Dissatisfaction with the school administration/staff members |

# CHAPTER 5 : DISCUSSION

## INTRODUCTION

In this Chapter I analyse the empirical data presented in Chapter 4. My aim is to highlight significant trends in both the data and the literature review in Chapter 2. Once again, the interview and questionnaire data will be discussed separately. Firstly, the results of interviews will be discussed followed by those of questionnaire groups. Both are discussed according to the major categories in which the sources of stress have been grouped, giving notable findings and indicating any literature relevant to these findings. Overall results will thereafter be discussed looking at the similarities and differences. The last section will explore the models of stress found to be most helpful in the identification of the stress factors.

## 5.1. INTERVIEWS

In interpreting the results, it is important to state that the data were collected in a manner which encouraged the teachers to be open about their experiences. It is also important to note that in most instances, no direct comparison with any other research could be made because of the uniqueness of the study undertaken in these rural areas (cf. Woodhouse et al. 1985). The interviews revealed sources of stress that are unique - in comparison to non-rural areas - and dramatic as some of the stories related will indicate.

Five major categories of sources of stress have been identified: the learning-teaching situation, the school, the community, the profession and personal factors, these are discussed in detail below.

### 5.1.1. The learning-teaching situation

The learning-teaching situation is reported to be a major stressful category. The large class sizes were found to be depressing for teachers with some having to face 120 pupils in one classroom, built for thirty-five pupils. The crowded classrooms further demoralized teachers by making it difficult for teachers to control these large numbers. Pupil participation in learning activities in these situations is poor. Individual attention is almost impossible under such

conditions, which also means that learning cannot take place. It is therefore no wonder that pupil-teacher relationships are so poor.

Five sub-categories are revealed in the learning-teaching situation, as indicated in Table 2, these are: pupils' actions, curriculum demands, time demands, class size, and pupil-teacher relationships. The results indicate that although there are several pupils' actions mentioned by the respondents which are sources of stress, pupil recalcitrance is a factor which generates more stress for teachers. Disruptive behaviour as a source of stress has earlier been reported by Prinsloo (1990). This is probably due to class size which are too large to handle. Five out of the six regions in this province experience shortages of classrooms.

Maintenance of class discipline becomes progressively more stressful as class size increases. These results agree to a large extent with those reported by Manthei and Solman (1988). Another report, by Borg and Falzon (1991), indicates that of the top four sources of stress, three have to do with pupils' actions. Similar results have also been reported by several other researchers (Kyriacou and Sutcliffe, 1978; 1879; Pratt, 1978; Dunham, 1980 and Smilansky, 1984). In agreement with Borg and Falzon (1991), teachers who resort to assessing a great deal of written school work and homework, faced with large numbers in the class, which have to be marked and corrected, are always faced with work load they cannot cope with. It is also probably this aspect of the teachers' work, rather than the sheer number of pupils, which causes stress. It takes longer to finish marking books for pupils in one class and it is frustrating when books cannot be returned within a day or two. The situation seems to be worsening as student enrolment increases without concomitant growth in the number of teachers, due to a shortage of funds for paying teachers' salaries.

Excessive class size is also identified as a source of stress independent of the shortage of classrooms. These are classes that have been found to be excessively large with regard to the number of pupils. This is in agreement with Manthei and Solman (1988) who report that about a third of the teachers in their sample reported experiencing stress due to excessive class size.

According to The NEPI-Framework Report document (1993a), the provision of classrooms is lowest in rural areas. The Human Science Research Council

(HSRC) has recently released statistics of the Northern Province School/College Register of Needs Survey (1996), which indicate that five out of six regions experienced shortage of classrooms where the pupil-classroom ratio is still 56:1. It would have been surprising to find a teacher enjoying teaching while teaching under such conditions. Teachers also reported in interviews that this is one of the sources of frustration in teaching. The results of this study are in agreement with what has been found by Needle et al. (1981) - that overcrowded classrooms is one of the factors that can lead to teacher frustration, disillusionment and eventual incapacitation. Only one study could be found (Marais, 1992) which indicates that excessive class size is ranked among the least stressful sources of stress but Marais argues that even the least-ranked stressful factor must be considered important.

This study has also shown that although the variable, 'students' poor attitude to work' does not top the list of stress factors to teachers, it is nevertheless reported as stressful by teachers in the sample (Table 3, p. 63). This is in accord with findings from UK (Fletcher and Payne, 1982; Payne and Furnham, 1987), Australia (Laughlin, 1984), and Nigeria (Okebukola and Jegede, 1989). An example of this would be the frustration experienced by a teacher who, on having spent a great amount of time and effort in preparing a lesson, is faced with students who show apathy towards the subject and the lesson. Refusal to do homework and a carefree attitude towards exercise and tasks given in the class as reported by teachers are characteristics of this poor attitude of students. This may mean that students may develop an increasingly poor attitude towards school work and therefore causing teachers a great deal of stress. On the other hand, it is possible that inadequacies in their own training and potential effectiveness could be contributing to poor work attitudes of students. O'Connor and Clarke speculate on this point:

> The relationship between stress arising from student behaviour and the type of training that teachers had received could be interpreted as showing that, relative to the more academically oriented degree programs, the more practically oriented teaching certificate and diploma courses are more effective in developing the skills and strategies that teachers need in order to interact effectively with students (1990: 50).

It is also interesting to note that teachers have identified teaching pupils who

are over-age as a source of stress. This is in agreement with the report by Payne and Furnham (1987), that it is stressful to teachers having to teach an age range for which they have not been trained. Teachers interviewed mentioned that most of the students they teach are over-age due to the fact that they started attending school either at a later stage or because they left school at some stage and later came back. Many teachers are young and they find that teaching students who are older than themselves stressful. Some interesting illustrations for this point have been made by interviewees:

*R 1: Most females we teach are married women. I find it very difficult to teach such people who come to school to while away time. They do not have any reason why they come to school. I sometimes give instructions to students, and I have always found that most married women do not gladly accept my instructions. They regard marriage highly, and seem to feel offended accepting instructions from a man who is not the husband. This is one thing that makes me not to enjoy teaching.

R 2: I teach very big boys, and if they are not disciplined, it is difficult to teach them. One big boy once told me while I was teaching that what I was saying was wrong whereas I was definitely right. I felt that he was provoking me, and had to call him to the staffroom as I feared that he might go on arguing in the class. He refused to come to the staffroom, and I did not know what to do. I forced myself to go into that class for fear of being perhaps booed by those boys because there were several big boys in that class.

The curriculum has also been identified as a source of stress. There are many changes taking place in the curriculum due to changes taking place in education as a result of developments in the government structures in the 1990's, some of which would require training and retraining in order to be effective. The results indicate that problems implementing curriculum change are identified as a stressful factor (ranking 20 in the whole sample). This finding is confirmed by

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*R stands for 'respondent' and I have numbered different respondents. Extracts are given as quoted in the interview.

Burrage and Stewart (1990), according to whom there are concerns about new modes of curriculum delivery and the need for staff training, and that staff frequently report that much of the innovation required of them has to be accomplished within time constraints, which have not been adjusted to accommodate these new demands. This is further confirmed by Downton (1987), who reports that insufficient expertise to meet curriculum demands is a highly ranked source of stress.

It is also worth noting that teachers have reported pupil-teacher relationships as a source of stress. Some teachers are reported falling in love with students they teach and having sexual relations with them. Other teachers have indicated that they feel uncomfortable when their colleagues fall in love with students they teach. This, they reported, leads to total collapse of discipline. Dunham (1978), in his report, indicates that interaction with pupils may be stressful because of the difficulties involved in meeting demands which are contradictory. The community expects the teacher to act as 'loco parentis', and falling in love with those children destroys that parental relationship. The following interesting illustration for this point has been made by one of the interviewees:

R 3: Teachers in our school fall in love with pupils they teach, and have sexual relations with them. As one of the teachers in the same school, I feel frustrated by this. Parents expect us to act here at school on their behalf. If we fall in love with these pupils, it destroys that child-parent relationship.

### 5.1.2. The school

The situation of schools in rural areas is most depressing. There is an acute shortage of classrooms, administrative blocks, and even toilets. Teachers are forced to teach in frustrating circumstances - under trees or temporary classrooms, poorly constructed from timber or corrugated iron. Some schools are situated far from the villages so that pupils and teachers are forced to travel long distances. Resources in these schools are almost non-existent. Morale in these schools is very low. There is very little that encourages pupils and teachers to work productively.

Teachers find it quite frustrating to teach in a school where there are no toilets at all - teachers and pupils use the nearby bush (fortunately, most schools in rural areas are situated out of the village) - where imaginary lines have been drawn to separate 'boys' toilets' from 'girls' toilets' and also 'pupils' toilets' from 'teachers' toilets'. The following remark by one of the female teachers interviewed illustrates this frustration:

R 4: One source of dissatisfaction is lack of toilets in our school. We use the bush, and to tell you honestly, there are dangerous snakes in this bush. The other day I had started relieving myself when I saw a very big snake in front of me. You can imagine what happened. I never went to the bush again. I make sure I go to the toilet at home before I come to school.

Shortage of school buildings and equipment has been identified as one of the factors that is causing stress by teachers who took part in the interview. According to Galloway et al. (1985), unsatisfactory school buildings and playground space are associated with low satisfaction. In agreement with Tuettemann and Punch (1992), inadequate access to facilities has also been identified as a source of stress. Teachers find it difficult to teach effectively without facilities, and it is therefore not surprising that they find it frustrating to teach under such circumstances. The 1996 report by the HSRC indicates that at nearly three quarters of all primary and secondary schools in the Northern Province, no materials were provided, no equipments were supplied, nearly all schools had no media collections and equipment, and that five out of six regions experienced shortages of classrooms. This is further evidence that teachers should find teaching under these conditions stressful. The data can be given further depth by relating the following comments given by one of the respondents during the interview:

R 5: You cannot enjoy teaching under a tree. You cannot enjoy administering your school from under a tree. Look, the principal sitting under a big tree, where there is no office, no telephone, no electricity, and where transport facilities are bad, where there is nothing at all, you see, teachers do not have a staff room. It is very bad because we have only four classrooms whereas our school has five class groups, from Standard 6 to 10, with the enrolment of 250. In allocating classes we gave preference to the Standard 10 class. Standard 6 attend lessons in the

tent, Standard 7 outside under the tree. We are using one classroom as office and staffroom where we also store books and other equipment.

R 6: Our school has a great shortage of buildings. We do not have an administrative block, and we have an acute shortage of classrooms. For example, two of our Standard 6 classes have up to 10 pupils in each classroom. It is very difficult to teach in such crowded classrooms. Some classes, for example Standard 10, attend some lessons divided in two separate subject groups - Physical Science and Agricultural Science. One group attends in a class and the other outside. This is very frustrating, because pupils have to move furniture time and again, and it is not possible to teach when it is raining.

R 7: It is very frustrating to teach in this school where there is no administrative block. Look, we do not have a staffroom, we sit under these trees that you see around us. When it is raining, we sit in cars. It is difficult to do your marking and preparation under these circumstances. The principal does not have an office, we share the trees that you see around us.

Some teachers told incredible stories of how frustrating it can be to teach under trees and it is difficult to imagine how any learning can take place under such circumstances. This is a remark by one of the teachers during an interview:

R 8: Teaching pupils under a tree is very frustrating. Most of the time, especially in summer, donkeys pass here doing funny things, like the other day, they were mating just here in front of the pupils while the teacher was teaching. Pupils laughed uncontrollably until the teacher stopped teaching and sent the boys to chase the donkeys away, but it was not long before they came back. This is their grazing area. We have many similar incidences. It is frustrating to teach under a tree under such circumstances.

R 9: Our classes are overcrowded. Some pupils are taught sitting under trees, and as you can see, that class does not even have enough furniture - some are sitting on stones. This area is very hot in summer, and teaching

> under trees frustrates me especially during August when trees have shed their leaves. Pupils cannot concentrate, and I find it difficult to teach effectively.

Some of the notable findings of this study include the ranking given to 'shortage of equipment' by teachers (see Table 5, p. 64 ). This finding is supported in literature by Okebukola and Jegede (1989), and Pierce and Molloy (1990) where this factor is ranked number one. Teachers mention shortage of equipment as stressful, probably because of frustration built up over time, due to the inability to promote meaningful learning through the provision of learning aids, which resulted from the severely reduced budgetary allocation of schools in these rural areas during the apartheid era.

Lack of electricity is perceived to be the least important source of stress in this category, probably because no school in the rural area has a supply of electricity. The 1996 HSRC report indicates that electrification of schools is almost non-existent, with almost two thirds of schools not being wired and not supplied with electricity; a small proportion were wired and not supplied with electricity; and just a few schools utilized other sources of energy, such as the solar system.

In an article in The Sowetan, (1997), Mamaila writes that Dr Aaron Motsoaledi, commenting on the poor matriculation results of November 1996, states that the province is poisoned three times by the apartheid system of government and that it would take between five to eight years for this Northern Province to reach the level of other provinces. This would therefore mean that for a long time teachers are still going to find it difficult to cope with the problems in school caused by this inadequate supply, and would continue to experience stress. No school uses electricity for educational and administrative purposes. Only those teachers who aspire to use modern equipment such as duplicating machines, photo-copiers and projectors, perceive lack of electricity as a source of stress. It is not surprising that only a few teachers reported that lack of electricity is a source of stress. A similar finding was reported by Okebukola and Jegede (1989), in schools in Nigeria.

5.1.3. The community

Most members of communities in rural areas are illiterate. They lack interest in matters affecting education of their children, and therefore concentrate on what they regard as important aspects of their daily living. One of the teachers interviewed illustrated this point in this remark:

R 10: Most of the parents in this area work in this plantation that you see near this school. Those who do not work in the plantation, concentrate on ploughing the fields. If there are problems at school, and you invite them to meetings, they do not come, even if given permission from their work - we once wrote a letter to the plantation requesting management to release those parents who have children at the school, but they never attended. Even if you call a parent to school because there is a problem with their child, they never come.

Results in Table 2 show that antagonism to school and teachers and the learning culture absent as the two main stressful sub-categories. Further analyses (see Annexure D) reveal that lack of understanding of the work by teachers from the community, and community illiteracy have an equal number of responses. The former is in agreement with literature, for instance, in accordance with McCormick and Solman (1992), lack of respect for teachers is reported as a source of stress. The reason for these two factors causing stress in teachers could again be community illiteracy. This can be illustrated by a recent article in the City Press News, January 19, 1997, titled 'Squeezed into despair', in which a Member of the Executive Council (MEC) for Education, Arts, Culture and Sports in the Northern Province, Dr Aaron Motsoaledi, states that more than two thirds of the economically active population in the province - one of the poorest - was functionally illiterate. Few parents know what actually happens in the classroom, and they have no reason to respect teachers when they don't know what they are doing, except taking their children away from home and duties required for their livelihood.

Illiteracy on the part of the community probably results in parents lacking motivation in matters regarding the education of their children. Many people in these areas have large herds of cattle. Cultivating the land and looking after cattle and goats is regarded as very important in these communities. As role

models, pupils aspire to having many cattle or goats and never think that education can bring something better for them; children must only learn to read and write so that they would be able to read and answer letters from those who are working in urban areas. A culture of learning is absent. The following is a remark made by one of the teachers I interviewed:

R 11: The community is not motivated. To give an example, on the day when cattle are sent to the dipping tank, parents send their children to the dipping tank. Some pupils come back after dipping cattle and others don't, and this happens fortnightly. Pupils, on being reprimanded, tell that if they do not take cattle to the dipping tank, they may not be given food at home.

Poor community background has been identified as a source of stress for teachers. This is in agreement with the literature. For instance, in accordance with Pratt (1978), the home background of the children taught is a major and pervasive influence on stress amongst teachers. Stress is caused through dealing with children who come from areas where there are a relatively large number of financially deprived homes. Pratt (1978), states further that more stress is caused by a tendency towards increasing non-co-operation and aggression as the children grow older, than is the case in schools in the more wealthy areas.

Another interesting factor reported by teachers as a source of stress, which can be related to the poor family background, is pupils without uniform. This is also cited in the literature, for example, Woodhouse et al. 1985, state that pupils wearing the wrong uniform or inappropriate clothing has been reported as a source of stress for teachers. Even though teachers realize the type of environment and communities in which they work, they still report that this factor is a source of stress, probably because they find it difficult to enforce the wearing of uniform - which they regarded highly.

### 5.1.4. The profession

Teaching subjects they are not qualified in and low salary have also contributed to teachers being negative towards the profession. Many teachers in the rural schools are under-qualified, and are forced to teach all subjects. It is

noteworthy that poor remuneration is reported here as one of the least stressful factors by teachers interviewed. It is difficult to explain why teachers interviewed were reluctant to talk about how poor salary affects them and how stressful a low salary is. They may feel ashamed to admit openly that a low salary is a source of stress for fear that it would be assumed that they work with the sole purpose of getting higher salaries. It could also be that teachers think it is so obvious that they are not satisfied with their salaries and therefore did not deem it necessary to mention. Even though the interviews were private, they were probably afraid to indicate that low salary is a source of dissatisfaction for fear that it might indicate to colleagues and superiors that they are not up to their job.

Teachers have reported disenchantment with the school administration and staff members as very stressful (see Table 9, p.67). This is in agreement with a report by Williamson and Campbell (1987), who indicate that relations with superiors and subordinates create a significant amount of stress for principals. Strained relations between teachers and principals are probably due to poor administration skills on the part of the principal which leads to insubordination by the teachers. This data can be given further depth by remarks some of the respondents made during the interviews:

R 12: I become worried by the unhealthy relations at our school. That is one thing that makes me not enjoy teaching. Lack of co-operation hinders progress. If the elephants are fighting, it is the grass that suffers. If we have meetings on very important issues, most of our teachers end up taking it as a joke because of the behaviour of the principal.

R 13: Our administration is poor. Our principal cannot control his teachers. He cannot tell his teachers to come to school on time..... this frustrates me. I become moody and would sometimes yell at pupils even though not necessary.

Even though the interview data do not reveal salary as an issue, this was an important factor in questionnaire data (see p. 109).

### 5.1.5. Personal factors

Personal factors were not considered a highly stressful factor by most teachers interviewed. Health problems and fatigue did bother some but most tended to avoid mentioning personal factors as sources of stress in their job. Several symptoms were, however, indicative of the amount of stress teachers have to deal with due to factors that are personal, for example, high blood pressure, headache and peptic ulcers.

In agreement with Blix et al. (1994), this study has revealed that teachers suffer a variety of health problems which may be due to stress. Teachers have reported symptoms such as increased incidence of heart disease, low resistance to fatigue and infection, which have also been reported by Brown and Ralph (1992). It is difficult to give possible reasons for this stress. The following remark by one of the teachers illustrates this:

R 14: My health deteriorated. I started thinking how I was going to cope... and I started complaining about head ache. I also complain about back ache, something I have never experienced before. I sometimes have stomach disorders, something I have never experienced before. These problems also affect my appetite, I feel hungry but have no appetite, which affects my health a lot.

Teachers have also reported that they always feel tired, which could also be attributed to the fact that more teachers travel long distances to and from school. Several related stress symptoms have also been reported by teachers as given in Appendix D.

## 5.2. QUESTIONNAIRES

Before discussing the results of this study, three points must be made regarding the interpretation of data analysed in terms of biographical sub-groups.

* First, the biographical characteristics of teachers are not mutually independent; for example, teachers with greater teaching experience tend to be male (teaching experience range from 0- over 15 years for male,

and 0-10 years for female teachers).

* Secondly, the sample of teachers is drawn from a population of teachers in schools situated in sparsely populated areas where few teachers come from the area in which the school is situated. The sample might include disproportionate numbers of exceptionally satisfied or exceptionally stressed teachers.

* Thirdly, older teachers differ in being not only older but of a different generation as far as their expectations, attitudes and values go. For example, regarding the legitimacy of corporal punishment in maintaining pupil discipline, compared with younger teachers, older teachers tended to argue that it must be maintained as it is the only way in which pupils can be disciplined; this may reflect either the effects of age 'per se', or the effects of being of a different generation.

Such consideration indicates that although the present study may allow general patterns to be identified, the explanation of such patterns may require further investigation.

Questionnaires were based on four major categories of the sources of stress: the learning-teaching situation; the school environment; the community environment; and the professional factors, as compared to the five identified by teachers who were interviewed. These are discussed below:

5.2.1. The learning-teaching situation

Excessive class size, adjusting to the changes in curriculum, and lack of time seem to demotivate teachers. Overcrowded classes, which also tend to increase disciplinary problems and render individual attention to pupils impossible, seem to make teaching a nightmare

This study has shown that teachers experience greater stress over problems associated with pupil-teacher interaction in the school, the pupils' impolite and disruptive behavior (noisy pupils, pupils who continually misbehave, cheek). Pupils who are poorly motivated probably find pleasure in disrupting classes and never appreciate the efforts teachers are making. The results (Table 11)

are in agreement with those of Kyriacou and Sutcliffe (1978), Dewe (1986), Payne and Furnham (1987), and Manthei and Solman (1988). Female teachers report greater stress than male colleagues in maintaining class discipline. This could be due to less willingness on the part of men to admit to worrying about such aspects as their work, or to female teachers' great desire to achieve rapport and a good working relationship with students. Alternatively, it may well be largely a reflection of classroom realities - students may, in fact, give their female teachers more trouble; pupils may respect male teachers more.

The older teachers (those with teaching experience of more than 15 years), report pupil misbehavior as a greater source of stress than the less experienced teachers. Despite their experience, male teachers seem to be intolerant of pupils who misbehave because they have grown older and no longer have the strength to maintain discipline with the troublesome pupils. On the other hand, older female teachers (the more experienced teachers) did not find this factor a greater source of stress. Unlike the more experienced male teachers, female teachers seem to be tolerant and are experienced enough to be able to deal with problematic pupils better than their newly appointed female colleagues.

Male teachers with more than ten years teaching experience in this study have reported that they find it difficult to cope with change, this does not actually seem to be a problem with those who are less experienced. The more experienced teachers probably want to retain the old 'teachings' and therefore feel threatened by the recent changes in South Africa - both politically and educationally. According to Greenberg (1984), change can be a significant stressor. Hink (1985), also states that in a staffroom it is unlikely that there will be total consensus on the pace of change, and therefore a degree of stress within the staffroom is inevitable. Teachers with more than ten years teaching experience report experiencing more stress with the lack of direction in curriculum change than the less experienced teachers (cf. Table 12: p. 71). This is in agreement findings by Galloway et al. (1982b), and Manthei and Solman (1988). The reason for this could be that they find it difficult to cope with the changes in curriculum as South Africa is currently undergoing an educational overhaul. It could be that their training was inferior and that these teachers lack training to handle such changes in the curriculum. They may, however, also lack confidence to face these challenges. The results also show that teachers find frequent changes in curriculum least stressful in comparison with other

stressors. This reveals, however, that although changes in curriculum are a source of stress, the frequency of the changes do not worry the teachers.

Results for the different gender subgroups indicate that male teachers find excessive time demands of teaching and or organizational duties more stressful than female teachers. Doing administration and teaching demand a lot of time from the male teachers, while female teachers have little experience on school administration where only a few hold these posts as indicated in a report by Hayward (1992), that, the 1991 figures for the Transvaal Education Department indicate that the majority of teachers are women but they do not hold the majority of promotion posts. Men occupy nearly all the posts of principals of schools. On the other hand, female teachers rate lack of time to adequately assist with pupils, as more stressful than male teachers. The reasons for female teachers having such caring love that they prefer to give individual attention to pupils, and when they cannot find time to do so feel worried, are not easily identifiable.

The extent to which teachers perceive themselves to be achieving valued teaching goals may be affected by the environment in which they teach. It is, therefore, not surprising that one of the findings of this study is that teachers find the school environment a source of stress. Teachers with the least experience perceive unpleasant geographical surroundings of their school as more stressful than teachers with more than ten years teaching experience. Since many teachers in rural areas come from an urban environment, they have difficulty in adjusting to the rural teaching environment. The study by Trendall (1989), shows that the uninspiring physical environment of schools do, indeed, contribute towards reduced effectiveness.

### 5.2.2. The school

Teaching is effective when equipment is available, and this can only be available if classrooms have been provided, where such equipment can be stored. If these are not available, particularly in a rural environment, it makes motivation of pupils and teachers a very big task. It is no wonder that teachers are depleted through working under such stressful conditions.

In agreement with literature, this study has revealed that shortage of school

buildings and equipment is the most stressful factor for teachers ( cf. Table 11, p. 70). For instance, in accordance with Payne and Furnham (1987), teachers find lack of material resources for teaching (ranked 1 and 3) stressful. Results for both male and female subgroups are, on the whole, in line with what is reported in literature. Both find shortage of school buildings and equipment the most stressful factor (cf. Table 26, p.83). For example, in accordance with Galloway et al. (1985), the adequacy of school buildings is related to job satisfaction. They find it inappropriate to teach under trees and in crowded classrooms, which probably contributes towards poor class management and poor administration (preparation and marking) by the teacher. This study also confirms findings by Okebukola and Jegede (1989), and Hodge et al.(1994), that environmental conditions are stressful for teachers. Female teachers find this factor more stressful than male teachers.

Tables 27 and 28 show the average stress-factor scores for each of the teaching experience male and female subgroups. Significant differences can be detected between teachers with different teaching experience in their responses to stress due to the long journey to school. Less experienced teachers (both male and female with 0-4 years teaching experience), experience greater stress in traveling to and from school than teachers with more than ten years teaching experience. This could be due to the fact that older teachers have probably been traveling the same distance to and from school for some years. The one-way anova has revealed a significant difference for the grouping variable travel groups: teachers who travel for more than 20 kilometers to and from work experience significantly more stress than those who travel less than 20 kilometers ($f=4.45$; $p=.446$). The reason for this could be that there are problems encountered with transport, or due to long distances traveled on poorly maintained gravel roads.

### 5.2.3. The community

The community has been mentioned by teachers as a source of stress - because of their public and unconstructive criticism towards the school and the teachers. Members of the community are actually supposed to be motivating their children and giving teachers moral support. Members of the community also make unnecessary demands like allowing them to send their children to the dipping tank once a week even if it is during school time, which only increases

the stress teachers experience.

Subgroup difference in the manner in which teachers experienced stress did emerge between sexes of the teachers and the years of teaching experience. Male teachers find undeserved public criticism of teachers more stressful, although not significantly so than female teachers. The same difference is observed in their response to lack of understanding of the work by teachers from the community. The reason for this difference could be that men are more sensitive to criticism of their work than female teachers: Men do not want to be criticized by the members of the community. Traditionally, a Venda man is regarded as head of the family, whatever he does he is 'always right'. It could also be that there is lack of contact between school staff and parents, or a lack of communication between parents, pupils and teachers about the objectives of the educational system, in order to achieve co-operation and greater understanding. Paulet confirms that lack of understanding by the community is a source of stress for teachers, and states:

> Parents who do not understand the objectives of the educational programme do not support the schools. In fact those who feel the schools are taking their children from them and assimilating them into the dominant society actively oppose the educational authorities (1989, p. 127).

The one-way anova revealed significant differences for two of the stress factors related to the community: Female teachers found demands on teachers to cope with rapid changes in community significantly more stressful than the male teachers ($f=4.06$; $p=.0454$)., and the less experienced teachers found experiencing pressure on the school from the community significantly more stressful than the more experienced teachers - 5 years and over ($f=4.86$; $p=.0031$).

### 5.2.4. The profession

Inadequate salary appears in three out of the first four ranking positions of the major sources of stress. Teachers are not rewarded sufficiently for their contributions. They also feel that they do not get any encouragement for what they do at school either from the parents or education authorities.

A look at the average stress-factor scores in Table 25 (p.81) suggests that teachers are concerned with the problems associated with their level of salaries; a finding similar to that of Manthei and Solman (1988). Of the first four highest - ranked stress factors, three are salary-related, which suggests that teachers regard poor salaries they receive as a source of stress. This is to be expected if the increase of salaries cannot cope with the rising cost of living. As professionals, teachers expect to get salaries that can make them afford a decent living.

Differences, although not significant, were detected between teachers of different ages and sexes in their responses to stress due to the level of teachers' salaries (see Table 26, p. 83) . The study confirms earlier findings by Rudd and Wiseman (1962), and Manthei and Solman (1988), that male teachers find the factor 'salary does not cover the cost of living expenses' a significantly greater source of stress than do female teachers. This difference between stress levels of different sex groups probably reflects traditional gender-role expectations - with male teachers being more conscious of the need to provide for their families, and, therefore, more concerned about improving their financial position.

However, the one-way anova reveals only one significant difference between male and female teachers in their response to salary-related factors: Female teachers find the fact that their salary is not measurable with the amount of training undergone by them, to be significantly more stressful than the male teachers ($f=7.12$; $p=.0084$). Female teachers worry about the amount of training they receive which seems to be much more compared to the poor salaries they receive.

Observation of the average stress-factor scores in Table 27 (p.85) confirms earlier findings by Galloway et al. (1982b), and Borg and Falzon (1991), that the less experienced teachers find an inadequate salary significantly more stressful than do their more experienced colleagues. This suggests that older teachers are less concerned with the problems associated with their level of salaries. The reason for this could very well be historical. Hayward (1993), found that until recently, salary scales for 'Post Level One teachers' (i.e. teachers not in promotion posts) in South Africa, were largely determined by qualifications and a number of years' service. There were three incentive

notches, in the form of Merit Achievement Awards, and there was a demarcated route which teachers had to follow should they wish to seek promotion. This resulted in less experienced teachers getting low salaries due to the fewer number of years in the teaching field and the fact that they can only be merited once they are in the field for a considerable number of years. Teachers with more than ten years teaching experience, therefore, might feel comparatively satisfied with the present parities. However, teachers with less than ten years teaching experience tend to be more qualified than their more experienced colleagues. During their university studies, these teachers followed courses of the same duration as, for instance, lawyers or medical doctors, and feel that although their training was as demanding (equal number of years in training) as that of their legal or medical colleagues, their rewards are comparatively low.

### 5.2.5 Other factors

There are several other factors, besides those outlined above, which have been found to be associated with sources of stress. There are teachers who also feel that although teaching is stressful, they can still go on teaching and would choose teaching as a career even if they were to start their working lives again.

The finding that almost a third of the respondents in this study, rated being a teacher as either very stressful or extremely stressful is consistent with that obtained in previous studies, for example, Kyriacou and Sutcliffe (1978), Smilansky (1984), and O'Connor and Clarke, (1990). Stress occurs more frequently in response to the daily hassles of coping with the amount of work to be done, student factors, issues within the organization of the school, or matters within the employing system or the broader community. Teachers find that the demands put on them, are greater than their capacity to meet them. Yet despite apparently high levels of stress, the majority of teachers still regard teaching as rewarding generally (see Table 14, p. 72). Respondents have indicated that it is likely that they will still be teaching in ten years time, and that they would still choose teaching as a career if they were to start their working lives again (see Table 16, p.74).

Table 17 (p.74) shows that although more teachers who travel more than 20 kilometers to their place of work are dissatisfied with teaching and therefore

experience more stress, they still indicate that they would choose teaching as a career if they were to start their working lives again (see Table 12, p.71 and 19, p. 76). It is difficult to explain why, despite the stressful conditions under which teachers travel these long distances (more than 20 kilometers) to work, they indicate that they still like teaching.

Another interesting finding is that one third of the teachers in the study indicate that it is fairly or very unlikely that they would still be teaching in ten years' time. This is consistent with findings by a considerable number of other studies (e.g. Kyriacou and Sutcliffe, (1979); Taylor and Dale, (1971); Farber, (1984). One of the reasons for this is that most teachers do not feel as if they were adequately prepared for the stresses of teaching. They were not aware that they would have to deal with such stressful conditions in teaching, neither were they prepared for the amount of stress they need to cope with in teaching.

### 5.2.6. Overall results: Interviews and questionnaires

Overall results indicate that a greater percentage of all teachers in the sample regard teaching as 'moderately stressful'. This indicates that although some teachers find teaching extremely stressful, and others not at all, stress as a factor is generally experienced.

An analyses of the interview and the questionnaire results produced five major categories:

* firstly, the learning-teaching situation, which includes the pupils' actions, curriculum demands, time demands, class size and pupils and teacher relationships;

* secondly, the school, which includes distance between school and home, communication, lack of physical resources, poor infrastructure and geographic position of the school;

* thirdly, the community, which includes general poverty, antagonism to school and teachers, learning culture absent, demands of the community on the school and teachers;

* fourthly, the profession, which includes poor remuneration, teachers' attitudes, teachers' qualifications, teachers' contributions to teaching; and

* fifthly, personal factors, which includes the health of the teacher and his/her reactions to stress.

Both interview and questionnaire results identified the lack of physical resources and poor infrastructure (shortage of school buildings and equipment) as the major source of stress for teachers in rural secondary schools in the Northern Province of South Africa. Teachers also reported teaching pupils who are seating under trees, having overcrowded classes, poor telecommunication, and teaching in schools where provision of materials, equipment, media collections and media equipment are almost non-existent. This confirms convincingly the unique conditions in which teachers in rural secondary schools work.

Another set of interesting findings emerged when the rank-ordering of the stress factors in both the interview and questionnaire results were analysed. It is surprising that salary-related factors are ranked highly by teachers who completed the questionnaire, whereas those who were interviewed did not indicate low salary as a significant source of stress. An examination of the detailed statistics of the sources of stress for all teachers (Appendix D), reveals that only a very small proportion of teachers interviewed indicate that poor remuneration is a source of stress, whereas a little more than half of the teachers who completed questionnaires indicated salary-related factors as a source of stress.

One of the factors identified consistently as a source of stress by both teachers interviewed and those who completed the questionnaire, is excessive class size (ranked 7th and 6th respectively), which is caused by lack of classrooms. It is interesting to note that both interview and questionnaire groups identified distance between school and home as a notable source of stress.

Pupil recalcitrance was identified by teachers interviewed as a notable source of stress (ranked 2nd), but was ranked less so (10th) by the teachers who completed the questionnaire. Despite the difference in rank order, this factor

is regarded as a notable source of stress.

Other factors worth looking at are those related to the community. Both groups have identified a lack of understanding of the work by teachers from the community as a notable source of stress. This is related to the perceived absence of a learning culture, which has also been identified as a source of stress. Although we can identify and describe different stressful situations, they do not seem to be independent of each other. There is a pattern among stressful events and thus, the probability that one situation leads to another. It is probably understandable that teachers should experience pressure from such a community, because if the parents are illiterate, they may not be in a position to help their children with their school work. It is difficult to encourage them in their school activities with the full knowledge of the advantages of such activities and of attending school, there would also be a lack of role models, and it is also possible that when teachers feel that parents are not giving their children the support they need, it makes it even more difficult to motivate the child. This is one of the unique factors identified by teachers interviewed in this study; other researchers have remained silent on the issue.

5.2.7. Models of stress from the results.

Broadly, interactional models view stress as an individual phenomenon, it is the individual's perception of the stressfulness of the event and their ability to cope with it, it is not the nature of the stress event itself that influences how individuals react, but the psychological perception of the implied threat. It is found to be most consistent with ideas reflected in this study data.

# CHAPTER 6 : CONCLUSION

There is a great deal of published research on teacher stress, which have focused on the stress experienced by teachers in urban areas. However, no similar information is available on rural areas - in South Africa and outside. This study is therefore an attempt to make a contribution in this regard. It sets out to investigate teacher stress as a factor in the experience of a selected group of rural secondary school teachers of the Northern Province Education Department. In particular, this report gives an indication of:

* the extent to which these teachers experience stress;

* the aspects of their work they perceive as most stressful;

* whether there are unique sources of stress for teachers in rural communities; and

* which coping methods teachers find helpful.

I hope the findings of this study would help create a better understanding of the sources of stress and help teachers, parents and educational authorities to take steps to combat the problem.

It is interesting to note a recent article in The Cape Argus, February 19, 1997 titled 'Rationalized teachers tell of stress and fear', in which 'teachers stressed by fears of loosing their jobs had been booked off by doctors for six months'. The article went on to say that a teacher was booked off in January because she could not cope with the work-load. The said teacher was a Science and Mathematics teacher, but due to the departure of the English teacher, she no longer taught the two subjects, but had to teach English rather than her own subjects of expertise. She had to teach five classes for 40 periods a week, which she felt was too much as teachers normally take 20 to 25 periods a week. Each class had between 40 and 50 pupils and if a test was written, she had to see to it that more than 200 books or answer-sheets were marked (see Appendix G).

This tells a familiar story reported by teachers in this study about classes which

are excessively large and the amount of work which has been reported to be too large. These sources of stress and several others have been identified by teachers who were interviewed and those who completed the questionnaires.

The research has revealed five general major categories of the sources of stress as identified by teachers: the learning-teaching situation, school-related factors, the community, the profession and personal factors.

An analysis of the sources of stress has revealed the following, which I consider to be of interest in that the research questions (2-3) are answered as follows:

* a substantial percentage of teachers surveyed in the rural secondary school in the Northern Province of South Africa find their job stressful;

* only a small percentage of teachers surveyed find teaching extremely stressful, and the majority reported that they find teaching moderately stressful;

* although teachers who took part in the survey report that they find teaching in the rural areas stressful, a substantial percentage would remain in teaching and would also choose teaching as a career if they had to start their working lives again;

* the results did not reveal any significant main effect between the male and female teachers, suggesting that the overall level of stress between the gender groups was evenly distributed;

* there were some significant differences revealed between the different groups of teachers according to their teaching experience;

* the results did not reveal any significant main effect between the group of teachers who travel long distances to and from the place of work and those who travel less than 20 kilometers in their experience of stress;

* shortage of school buildings and equipment is the most stressful factor;

* the provision of classrooms is a severe problem in rural areas;

* salary-related factors have been considered the second highest sources of stress;

* class groups are considered excessively larger than they ought to be. Despite the official pupil-teacher ratio of 1:35 in secondary schools, class size was found to range between forty and 120;

* antagonism towards school and teachers which teachers identified as a notable source of stress is related to rates of community literacy;

* coping methods found most helpful are the indirect action as a form of coping; and

* the sources of teacher stress in rural areas in the Northern Province are, to a greater extent, similar to those reported by teachers in other areas. A few sources of stress reported by teachers in the rural areas have been found to be unique, for example, lack of toilet facilities.

Sources of pressure at work evoke different reactions from different teachers. Some teachers are better able to cope with stressors than others, they adapt their behavior in a way that meets the environmental challenge. Teachers need to understand what stress is, to be aware of its sources and to be able to take steps to manage it in order to reach their maximum potential.

The observations made above with regard to stress i.e. the sources of stress and the extent to which it affects teachers, have several implications for policy and teacher training in the Northern Province, of which I regard the following as being of utmost importance:

* Education authorities could organize and co-ordinate programmes to help teachers identify and manage their stress.

* There is a need for developing a teachers resource centre for meeting the demands to overcome some of the sources of stress identified in this investigation.

* Teacher trainers need to recognize and address the problem of increasing stress among teachers, by making teachers themselves aware of the stress-provoking factors in the teaching situation.

* There is need for specific follow-up training programmes for teachers once they get into the teaching field in order to cope with the ever-changing curriculum and social demands.

* Schools, too, need to adopt a considered approach to the management of stress. It is important to ensure that the process begins with a 'whole school' debate and that all staff are fully involved in planning and implementation of strategies agreed, i.e. the whole school stress reduction plans. Such involvement would make teachers aware of the effects of stress and would often try to prevent it.

Despite studies reviewed above (Chapter 2), there are still a number of unresolved questions concerning the nature and causes of teacher stress. There is therefore a need for further research on this topic. The following suggestions for further research are made in order to develop understanding and diminish the effects of stress on teachers.

* The findings of this study need to be verified by studies carried out in other rural areas of the South African Provinces to enable a cohesive body of research to be established on stress factors on rural secondary school teachers. Such further research would help to fill the void in the literature on occupational stress with respect to teachers in the rural area. It would also help in extending the frontier of knowledge on teacher stress generally.

* There is need for further research on the sources of stress identified by the teachers in this study and on the coping actions employed by these rural secondary school teachers in order to compare with teachers in other provincial education departments.

* The stress experienced by teachers in promotion posts teaching in rural secondary schools could be investigated in order to establish whether,

as administrative heads, their stressors are similar to those of teachers who are not in promotion posts.

In conclusion, it should be noted that stress can have a major impact on the experience of teaching and far-reaching effects on teachers, schools and the pupils themselves. This study assumes that stress is harmful and dysfunctional, but teachers continue teaching under the present circumstances. Ways should be found to ease the stress teachers in rural secondary schools are experiencing in order to ensure the welfare of both the students dependent on the education system and of the teachers who are essential to its survival.

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APPENDIX A

# Northern Transvaal Province

EDUCATION, ARTS, CULTURE & SPORTS

TEL: (0159) 31001 Ext.

FAX: (0159) 31179

Private Bag X 2250
SIBASA
0970

REFERENCE NO.: MAMATHUBA N.M.

19 SEP 1995

ENQUIRIES:

Mr. Kutame A.P.
P.O. Box 85
SHAYANDIMA

PERMISSION TO CONDUCT RESEARCH INTO TEACHER STRESS IN RURAL SECONDARY SCHOOLS IN THE NORTHERN PROVINCE.

1. The matter stated above refers.

2. Your request for conducting an educational research in the Mutshindudi, Mutale and Nzhelele Areas has been approved.

3. It should however be noted that the process of interviewing teachers and the completion of questionaires should be done in such a way that there will be no hinderance of teachers from performing their normal duties at schools.

4. Wishing you the best in your studies.

ACTING REGIONAL DIRECTOR
/asd

APPENDIX B

Tel.:( 0159) 41850(h)
0159872 ask 1912(w)

P.O. Box 85
Shayandima
0945

23 October 1995

The Principal
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INVESTIGATION INTO THE INCIDENCE AND SOURCES OF TEACHER STRESS IN RURAL SECONDARY SCHOOLS IN THE NORTHERN PROVINCE.

I am making an investigation into the incidence and sources of teacher stress in rural secondary schools in the Northern Province towards a M.Ed degree of the university of Cape Town.

Through this research I hope to determine the extent to which secondary school teachers in rural communities self report stress as a significant factor in their working lives, investigate the occupational and personal factors associated with these self-reported symptoms of stress, the existence of institutional support for teachers and whether this support reduces stress or not.

I intend visiting your school for an interview and later completion of questionnaires and should be most grateful if you would help me with this part of my investigation sometime during October through to February 1996.

Teachers will be interviewed and/or complete questionnaires on their own free will.

May I assure you that the survey is anonymous and is designed mainly to obtain an overall statistical picture.

In anticipation, please accept my sincere appreciation for your willingness to help me.

Yours faithfully

A.P. Kutame

APPENDIX C

INTERVIEW SCHEDULE

1. My name is Philip Kutame, and I teach at Muvhavha Secondary School near Thohoyandou. I am interested in hearing about the circumstances under which you teach and which of these give you satisfaction and dissatisfaction.

2. Could you make a list of all the circumstances which give you cause for satisfaction? Some circumstances might be related to the
   * classroom
   * school as a whole
   * home
   * community

3. I am interested in knowing about the causes of dissatisfaction in your teaching situation. Could you tell me about those aspects that cause dissatisfaction in :
   3.1. the classroom situation
   3.2. the school as a whole
   3.3. the community
   3.4. the environment
   3.5. the conditions of service
   3.6. the home

4. When you think about the fact that teaching causes you some dissatisfaction, it is possible that you have also experienced some reactions that make you realise you are feeling dissatisfied. Could you list them for me?

5. I have a list of some reactions one can also have as a result of dissatisfaction in teaching, which I would like you to go through and tick those that you have not mentioned but feel you have experienced.

6. You have mentioned or indicated that..... (e.g. you feel depressed) ....., could you tell me what you actually mean by that?

7. What impact do these feelings have on your
   * relationship with the community?
   * school relations?
   * family relations?

8. What do you do to cope with such situations?

APPENDIX D



INTERVIEW RESULTS

| CATEGORIES | Number of responses | OPERATIONALIZATION |
|---|---|---|
| **1. LEARNING-TEACHING SITUATION** | | Circumstances in which teachers are helping the pupils acquire knowledge and life skills in the school. |
| 1.1. Pupils actions. | | Manner in which pupils behave in class or in the school. |
| 1.1.1. Pupil recalcitrance | 30 | Pupils are cheeky, refuse to obey instructions and dodge lessons. |
| 1.1.2. Lack of pupil participation. | 26 | Pupils do not ask or answer questions in class, do not talk actively in class or groups, or take part in extra-mural activities. |
| 1.1.3. Negative attitude towards tests | 10 | Pupils do not like writing tests, they dodge or stay away from school to avoid writing a test, or grumble when a test is announced. |
| 1.1.4. Pupils' absence from school. | 9 | Pupils not attending school regularly; loafing with no valid reason. |
| 1.1.5. Noisy pupils. | 8 | Pupils who disturb others while they are studying or doing their school work. |
| 1.1.6. Teaching pupils who are over-age | 8 | Pupils who are above the age of 18 years but are still in secondary school; pupils who entered school older than school-going age, girls who returned after taking a break from school in order to have babies. |
| 1.2. Curriculum demands. | | The demands of the new curriculum in addition to those made on the teacher in terms of work and time |
| 1.2.1. Problems implementing Curriculum change. | 5 | Teachers' inability to teach according to the new way in which the subject matter has been arranged. |
| 1.2.2. Teaching subjects not trained for | 4 | Teachers have to teach subjects they have not been trained to teach or never attempted |

| | | | |
|---|---|---|---|
| | | | at school level. |
| 1.3. | Time demands. | | Teachers have a lot of work to do and little time. |
| 1.3.1. | Lack of time to assist individual pupils with learning difficulties | 16 | Due to large class size caused by lack of accommodation, teachers are unable to give attention to slow learners without slowing down the pace at which others learn. |
| 1.3.2. | Lack of time for preparation or marking. | 5 | Teachers feel their time is insufficient for adequate lesson preparation and marking tests and exercises. Preparation means reading text books, prescribed books and any book relevant to the subject matter, writing down facts to teach pupils. Marking involves drawing up memoranda and thereafter mark answers after which marks are compiled in mark sheets for compiling schedules. |
| 1.4. | Class size. | | Number of pupils attending lessons in one classroom (which normally accommodates 35 pupils) |
| 1.4.1. | Excessive class size. | 15 | Pupils exceeding 35, some classes as large as 120 pupils, and thus difficult to control. |
| 1.5. | Pupils-teacher relationship. | | The way in which pupils and teachers talk, befriend, live and play together. |
| 1.5.1. | Sexual relations or problems. | 8 | Teachers falling in love with pupils and having sexual relations. |
| **2.** | **THE SCHOOL.** | | |
| 2.1. | Distance between school and home. | | Long distances teachers travel to school by bus, taxi or car organised by teachers (due to lack of public transport) who work in those rural areas. |
| 2.1.1. | Journey to school. | 18 | Long distance - up to 120km (240km return)- teachers travel daily - by bus, taxi or car - on poorly maintained, gravel roads, spending up to 2.5 hours on the road. |

| | | | |
|---|---|---|---|
| 2.1.2 | Being late for school due to long distance. | 17 | Teachers travelling by organised public transport- bus or taxi- which is controlled by the group, arrive late for school. |
| 2.1.3. | Lack of transport facilities. | 12 | There is no public transport- bus or taxi- to the areas as they areas are remote, and few people use transport. |
| 2.2. | Linkages to outside world. | | The way in which teachers in one school communicate with other places. |
| 2.2.1. | Lack of communication facilities | 8 | There are no telephones, and cellphones are out of reach as they cannot receive the signal. |
| 2.3. | Lack of physical resources. | | Classrooms, office blocks and school grounds not available or insufficient for use by pupils and teachers in the school. |
| 2.3.1. | Shortage of classrooms. | 34 | Few classrooms built for large numbers of pupils in the school, no science classroom/laboratory; library or other centres (typing, home economics) are also unavailable. |
| 2.3.2. | Lack of general accommodation | 18 | No office for Principal or Heads of department, no staffroom for teachers, no storeroom for garden tools or cleaning materials. |
| 2.3.3. | Lack of toilet facilities. | 5 | There are no toilets in the school or ablution block. |
| 2.3.4. | Lack of fence. | 5 | There is no wire fence or barrier around the school yard to keep off animals and protect school from vandalism. |
| 2.3.5. | Classroom window-panes broken. | 3 | Classrooms are poorly maintained, if windows panes are broken they are never replaced. |
| 2.4. | Poor infrastructure. | | Facilities such as teaching aids and materials used in class for learning to be successful are few or totally unavailable. |
| 2.4.1. | Shortage of equipments. | 23 | Lack of teaching aids such as overhead projectors, Television sets and videos, |

| | | | |
|---|---|---|---|
| | | | models for use in Biology or Geography or practical subjects and apparatus for performing science experiments. |
| 2.4.2. | Extreme temperatures. | 12 | Very high temperatures experienced by schools in Niani area, whilst the schools in the mountainous Balethavha area, experience very low temperatures. |
| 2.4.3. | Lack of electricity. | 9 | Schools not supplied with electricity as there is no supply to the area. |
| 3. | **THE COMMUNITY.** | | |
| 3.1. | General poverty. | | Not having enough money, unemployed, no source of income to make a living. |
| 3.1.1. | Poor family background. | 7 | Family originating from people who never worked for income or never had any source of income; no one in the family to rely on who has a source of income. |
| 3.1.2. | Pupils without uniform. | 5 | Pupils who manage to get clothes to put on from relatives or sympathizers but cannot get money to buy clothes prescribed by the school. |
| 3.2. | Antagonism to school and teachers. | | Community opposing the manner in which learning takes place at school; activities organised by teachers for pupils in the class and in the sports fields; and sabotaging school activities; lack of respect for teachers. |
| 3.2.1. | Lack of understanding for the work of teachers | 30 | Community does not know what teachers actually do with their children at school or what actually happens at school, do not know what their children learn from school where they spend the day with people who come from far as they do not have teachers from the local community. |
| 3.2.2. | Undeserved public criticism of teachers. | 14 | Unfair complaints by parents about teachers' activities. |

| | | | |
|---|---|---|---|
| 3.3. | Learning culture absent | | There is no general support for learning and teaching in the community. |
| 3.3.1. | Community illiterate. | 30 | Parents never attended school or any formal learning institution; cannot assist their children in their homework or any school work; cannot check children's books or encourage them to study; cannot read school reports to see what progress their children are making. |
| 4. | **THE PROFESSION.** | | Factors relating to the teaching career. |
| 4.1. | Poor remuneration. | | Low salary received by teachers which is too little to live on. |
| 4.1.1. | Salary does not cover the cost of living | 8 | Monthly salary received by teachers is so little that they cannot buy what they want for their status, and still remain with extra money. |
| 4.1.2. | Salary does not keep up with the rate of inflation | 4 | The rate at which teachers' salary is increased is so slow that things become so expensive they only afford to buy very little; price rise is faster than salary increase. |
| 4.2. | Teachers' attitude. | | The way teachers think about other teachers and the management team in their school. |
| 4.2.1. | Disenchantment with the school administration and staff members | 23 | Negativity of/the teacher towards others; being unable to carry out instructions of other teachers, heads of departments, and principal. |
| 4.2.2. | Attitudes and behaviour towards others. | 8 | Teachers being cheeky and arrogant towards others, gossip about others and look down upon them. |
| 4.3. | Teachers' qualifications. | | The way in which teachers are trained to teach subjects in particular classes. |
| 4.3.1. | Teaching too many subjects. | 7 | Teachers teaching more than two subjects in different classes. |
| 4.3.2. | Teaching subjects not trained for. | 6 | Teachers offering subjects they haven't specialised in at teacher training. |

| | | | |
|---|---|---|---|
| 5. | **PERSONAL FACTORS.** | | What affects the teacher in his job as a result of what comes from within that individual. |
| 5.1. | Health | | The effects of ill health on the individual teacher in his/her job. |
| 5.1.1. | Constant colds and flu. | 7 | Suffering from colds and flu, which are so severe they cause the teacher to be absent from school. |
| 5.1.2. | Fatigue | 7 | Feeling tired at all times after arriving at school or home from work. |
| 5.2. | Reactions to stress | | Symptoms of dissatisfaction experienced by teachers as a result of teaching. |

APPENDIX E

## QUESTIONNAIRE ON STRESS IN TEACHING

The problem of teacher stress is well recognised in research literature. However, some of this literature is relatively out of date, and very little is known about how South African teachers experience stress and burnout. As you know, there is a particular interest in educational reform currently.

This study is being undertaken to provide an understanding of how rural teachers in the Northern Province experience stress and burnout.

The findings from these questionnaires will not be tied to your name, and everyone's privacy and integrity will be respected. The findings will be reported on in a Masters dissertation, a copy of which will be available to borrowers via the University of Cape Town library.

This questionnaire should take about 15 - 20 minutes to complete.

You are free to contact me if you have comments or questions regarding this questionnaire:

*Mr Philip Kutame*
*P.O. Box 85*
*Shayandima*
*0945*

*Tel: (0159) 41850 (h)*

*(0159872) ask 1912*

SECTION 1. BIOGRAPHICAL DATA

Please supply the following information by making a cross on the appropriate block:

1. Date:.....

2. Took part in stress interview by the researcher Yes [__] No [__]

3. Sex: Male: [__] Female: [__]

4. Age: Under 26 [__] 46-55 [__]
26-35 [__] Over 55 [__]
36-45 [__]

5. Length of teaching experience in years: 0-4 [__] 11-15 [__]
5-10 [__] Over 15 [__]

6. Number of years at present school: 0-1 [_] 2 [_] 3 [_] 4 [_] over 4 [_]

7. Position held in school: Teacher [__] HOD [__]
Deputy Principal [__] Principal [__]

8. Qualifications: Univ. degree [__] Teachers Col. diploma [__] Other [__]

9. During the school week, live at home [__] with relatives or other [__]

10. Stay 20 kilometres or less from place of work [__]
Stay more than 20km from place of work [__]

11. Spend R40 or more per month on transport to get to work [__]
Spend less than R40 per month on transport to get to work [__]

SECTION 2. STRESS ANALYSIS.

Stress can be defined to be the degree of tension, anxiety and/ or pressure experienced by you. Stress can be related to apprehension, agitation, irritation, annoyance, fear, mental discomfort, nervous upset, inability to cope, frustration, depression, unhappiness, etc.

Below is a list of some sources of stress. If they are not applicable to your situation or feelings, please tick the box No Stress. If you feel they are a source of some stress, please tick the box which best describes your experiences.

As a teacher, how great a source of stress are these factors to you when you think about the **PAST TWO SCHOOL TERMS?**

| | | No Stress 0 | Mild Stress 1 | Moderate Stress 2 | Much Stress 3 | Extreme Stress 4 |
|---|---|---|---|---|---|---|
| 12. | Individual pupils who continually misbehave | [__] | [__] | [__] | [__] | [__] |
| 13. | Undeserved public criticism of teachers and/or the education system | [__] | [__] | [__] | [__] | [__] |
| 14. | Lack of direction in curriculum change | [__] | [__] | [__] | [__] | [__] |
| 15. | Lack of time for preparation, marking and/ or organization | [__] | [__] | [__] | [__] | [__] |
| 16. | Lack of encouragement to be involved in effective decision-making | [__] | [__] | [__] | [__] | [__] |
| 17. | pupils impolite and disruptive behaviour | [__] | [__] | [__] | [__] | [__] |
| 18. | Experiencing pressure on the school from the community | [__] | [__] | [__] | [__] | [__] |

| | | No Stress | Mild stress | Moderate stress | Much tress | Extreme stress |
|---|---|---|---|---|---|---|
| 19. | Lack of time to adequately assist individual pupils with difficulties | [__] | [__] | [__] | [__] | [__] |
| 20. | Problems implementing curriculum change | [__] | [__] | [__] | [__] | [__] |
| 21. | Salary does not cover the cost of living expenses | [__] | [__] | [__] | [__] | [__] |
| 22. | Lack of understanding for the work of teachers by the community | [__] | [__] | [__] | [__] | [__] |
| 23. | Maintaining class discipline with difficult classes | [__] | [__] | [__] | [__] | [__] |
| 24. | Lack of recognition for your contributions in teaching and /or organization | [__] | [__] | [__] | [__] | [__] |
| 25. | Salary does not keep up with the rate of inflation | [__] | [__] | [__] | [__] | [__] |
| 26. | Excessive time demands of teaching and/or organisational duties | [__] | [__] | [__] | [__] | [__] |
| 27. | Geographic isolation of your school | [__] | [__] | [__] | [__] | [__] |
| 28. | Unpleasant geographical surroundings of your school | [__] | [__] | [__] | [__] | [__] |
| 29. | Dissatisfaction with the school administration and/ or other staff members | [__] | [__] | [__] | [__] | [__] |
| 30. | Frequent changes in curriculum | [__] | [__] | [__] | [__] | [__] |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31. | Shortages of school buildings and equipments | [__] | [__] | [__] | [__] | [__] |
| 32. | Demands on teachers to cope with the rapid changes in community | [__] | [__] | [__] | [__] | [__] |
| 33. | Excessive class size | [__] | [__] | [__] | [__] | [__] |
| 34. | Poor promotional opportunities | [__] | [__] | [__] | [__] | [__] |
| 35. | Environmental conditions such as noise and temperature | [__] | [__] | [__] | [__] | [__] |
| 36. | Salary is not adequate for the amount of training required for teachers | [__] | [__] | [__] | [__] | [__] |
| 37. | Journey to school | [__] | [__] | [__] | [__] | [__] |

## SECTION 3. GENERAL STRESS

38. In general how stressful do you find being a teacher?

| Not at all | Mildly Stressful | Moderately Stressful | Very Stressful | Extremely Stressful |
|---|---|---|---|---|
| [__] | [__] | [__] | [__] | [__] |

## SECTION 4. JOB SATISFACTION

39. In general how satisfied are you with your job as a teacher?

| Not at all | Fairly Satisfied | Neither Satisfied nor Dissatisfied | Fairly Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|
| [__] | [__] | [__] | [__] | [__] |

40. How likely is it that you will be a teacher in ten years' time?

| Very Unlikely | Fairly Unlikely | Neither Likely nor Unlikely | Fairly Likely | Very Likely |
|---|---|---|---|---|
| [__] | [__] | [__] | [__] | [__] |

41. How likely is it that you would choose teaching as a career if you were to start your working life over again?

| Very Unlikely | Fairly Unlikely | Neither Likely nor Unlikely | Fairly Likely | Very Likely |
|---|---|---|---|---|
| [__] | [__] | [__] | [__] | [__] |

## SECTION 5. GENERAL WELL-BEING

Below is a standardized questionnaire known as The General Health Questionnaire (G.H.Q.). Could you please **circle** the answer which most nearly applies to you. These questions refer to your feelings only over the **past few weeks** and are not necessarily job-related.

Have you recently:

| | | | | | |
|---|---|---|---|---|---|
| 42. | Been able to concentrate on whatever you're doing? | More so than usual | Same as usual | Less than usual | Much less than usual |
| 43. | Lost much sleep over worry | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 44. | Felt that you are playing a useful part in things? | More so than usual | Same as usual | Less useful than usual | Much less useful |
| 45. | Felt capable of making decisions about things? | More so than usual | Same as usual | Less so than usual | Much less capable |
| 46. | Felt constantly under strain? | Not at all | No more than usual | Rather more than usual | Much more than usual |

| | | | | | |
|---|---|---|---|---|---|
| 47. | Felt that you couldn't overcome your difficulties? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 48. | Been able to enjoy your normal day-to-day activities? | More so than usual | Same as usual | Less so than usual | Much less than usual |
| 49. | Been able to face up to your problems? | More so than usual | Same as usual | Less able than usual | Much less able |
| 50. | Been feeling unhappy or depressed? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 51. | Been losing confidence in yourself? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| 52. | Been thinking of yourself as a worthwhile person? | Not at all | No more than usual | Rather more than usual | Much more than usual |

## SECTION 6. ABSENTEEISM

53. Please estimate the total number of sickness days absent from school taken by you so far this year: [_____]

54. Estimate the average number of days per year taken as sick leave over the past 4 years [_____]

## SECTION 7. FREE RESPONSE

55. Are there any comments you would like to make about stress in teaching or this questionnaire in particular? Are there any variables in the environment both at work or outside of work, that you feel may increase work stress? Have you experienced any life change or job structure changes not mentioned that may have affected positively or negatively your job?

.....

.....

.....

.....

APPENDIX F

TO WHAT EXTENT ARE WORK ASPECTS SOURCES OF STRESS?

F.1. All teachers.

F.2. Female teachers

F.3. Male teachers

F.4. Male: 0-4 years teaching experience

F.5. Male: 5-10 years teaching experience

F.6. Male: 11-15 years teaching experience

F.7. Male: Over 15 years teaching experience

F.8. Female: 0-4 years teaching experience

F.9. Female: 5-10 years teaching experience

F.10. Travel less than 20 kilometers to work

F.11. Travel more than 20 kilometers to work

APPENDIX F.1



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 177 | 1.6384181 | 0.4818216 | 1.0000000 | 2.0000000 |
| X3 | 177 | 1.2259887 | 0.4194182 | 1.0000000 | 2.0000000 |
| X4 | 177 | 2.1920904 | 0.6099037 | 1.0000000 | 4.0000000 |
| X5 | 177 | 2.1242938 | 0.8503527 | 1.0000000 | 4.0000000 |
| X6 | 175 | 4.3314286 | 1.1957231 | 1.0000000 | 5.0000000 |
| X7 | 177 | 1.2598870 | 0.7762278 | 1.0000000 | 4.0000000 |
| X8 | 177 | 1.5932203 | 0.5040285 | 1.0000000 | 3.0000000 |
| X9 | 172 | 1.1686047 | 0.3754955 | 1.0000000 | 2.0000000 |
| X10 | 173 | 1.4624277 | 0.5000336 | 1.0000000 | 2.0000000 |
| X11 | 177 | 1.2655367 | 0.4428714 | 1.0000000 | 2.0000000 |
| X12 | 176 | 1.8750000 | 1.1294752 | 0 | 4.0000000 |
| X13 | 176 | 2.0340909 | 1.2508179 | 0 | 4.0000000 |
| X14 | 176 | 1.9772727 | 1.2737102 | 0 | 4.0000000 |
| X15 | 175 | 1.9485714 | 1.3699088 | 0 | 4.0000000 |
| X16 | 175 | 1.6571429 | 1.2807787 | 0 | 4.0000000 |
| X17 | 177 | 2.1920904 | 1.2510653 | 0 | 4.0000000 |
| X18 | 176 | 1.7329545 | 1.3102865 | 0 | 4.0000000 |
| X19 | 176 | 1.9261364 | 1.2468011 | 0 | 4.0000000 |
| X20 | 177 | 1.7853107 | 1.1962104 | 0 | 4.0000000 |
| X21 | 177 | 2.8474576 | 1.2128136 | 0 | 4.0000000 |
| X22 | 176 | 2.3579545 | 1.3361969 | 0 | 4.0000000 |
| X23 | 176 | 1.7670455 | 1.2500260 | 0 | 4.0000000 |
| X24 | 176 | 1.7613636 | 1.3092577 | 0 | 4.0000000 |
| X25 | 177 | 2.8644068 | 1.2124959 | 0 | 4.0000000 |
| X26 | 176 | 1.9659091 | 1.1947396 | 0 | 4.0000000 |
| X27 | 177 | 2.3615819 | 1.4476838 | 0 | 4.0000000 |
| X28 | 176 | 2.2500000 | 1.3627703 | 0 | 4.0000000 |
| X29 | 175 | 1.5657143 | 1.3108615 | 0 | 4.0000000 |
| X30 | 175 | 1.4342857 | 1.0854161 | 0 | 4.0000000 |
| X31 | 175 | 2.9542857 | 1.2767467 | 0 | 4.0000000 |
| X32 | 175 | 1.8114286 | 1.1566329 | 0 | 4.0000000 |
| X33 | 176 | 2.4261364 | 1.3331805 | 0 | 4.0000000 |
| X34 | 175 | 2.2057143 | 1.3658274 | 0 | 4.0000000 |
| X35 | 174 | 2.0402299 | 1.3573146 | 0 | 4.0000000 |
| X36 | 174 | 2.5287356 | 1.2291176 | 0 | 4.0000000 |
| X37 | 175 | 2.1885714 | 1.5402216 | 0 | 4.0000000 |
| X38 | 177 | 1.7118644 | 1.0983073 | 0 | 4.0000000 |
| X39 | 176 | 1.5284091 | 0.9793816 | 0 | 4.0000000 |
| X40 | 177 | 2.3785311 | 1.3134757 | 0 | 4.0000000 |
| X41 | 177 | 2.1751412 | 1.5439961 | 0 | 4.0000000 |
| X42 | 174 | 1.2011494 | 0.7972488 | 0 | 4.0000000 |
| X43 | 175 | 0.9714286 | 0.9674506 | 0 | 3.0000000 |
| X44 | 174 | 0.8735632 | 0.7945566 | 0 | 3.0000000 |
| X45 | 175 | 0.7428571 | 0.7784031 | 0 | 3.0000000 |
| X46 | 175 | 1.2114286 | 1.0427008 | 0 | 3.0000000 |
| X47 | 174 | 0.8908046 | 0.9997840 | 0 | 3.0000000 |
| X48 | 174 | 1.1206897 | 0.7918133 | 0 | 3.0000000 |
| X49 | 175 | 0.9828571 | 0.8741123 | 0 | 4.0000000 |
| X50 | 173 | 1.2369942 | 0.9501629 | 0 | 3.0000000 |
| X51 | 174 | 0.6034483 | 0.8919613 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X52 | 172 | 1.8255814 | 1.0167240 | 0 | 4.0000000 |
| X53 | 176 | 2.4772727 | 5.2567829 | 0 | 50.0000000 |
| X54 | 176 | 6.6647727 | 9.4691142 | 0 | 78.0000000 |

| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 64 | 36.2 | 64 | 36.2 |
| 2 | 113 | 63.8 | 177 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 137 | 77.4 | 137 | 77.4 |
| 2 | 40 | 22.6 | 177 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 14 | 7.9 | 14 | 7.9 |
| 2 | 120 | 67.8 | 134 | 75.7 |
| 3 | 38 | 21.5 | 172 | 97.2 |
| 4 | 5 | 2.8 | 177 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 35 | 19.8 | 35 | 19.8 |
| 2 | 104 | 58.8 | 139 | 78.5 |
| 3 | 19 | 10.7 | 158 | 89.3 |
| 4 | 19 | 10.7 | 177 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 5.1 | 9 | 5.1 |
| 2 | 12 | 6.9 | 21 | 12.0 |
| 3 | 15 | 8.6 | 36 | 20.6 |
| 4 | 15 | 8.6 | 51 | 29.1 |
| 5 | 124 | 70.9 | 175 | 100.0 |

Frequency Missing = 2



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 156 | 88.1 | 156 | 88.1 |
| 2 | 7 | 4.0 | 163 | 92.1 |
| 3 | 3 | 1.7 | 166 | 93.8 |
| 4 | 11 | 6.2 | 177 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 73 | 41.2 | 73 | 41.2 |
| 2 | 103 | 58.2 | 176 | 99.4 |
| 3 | 1 | 0.6 | 177 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 143 | 83.1 | 143 | 83.1 |
| 2 | 29 | 16.9 | 172 | 100.0 |

Frequency Missing = 5

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 93 | 53.8 | 93 | 53.8 |
| 2 | 80 | 46.2 | 173 | 100.0 |

Frequency Missing = 4

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 130 | 73.4 | 130 | 73.4 |
| 2 | 47 | 26.6 | 177 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 21 | 11.9 | 21 | 11.9 |
| 1 | 46 | 26.1 | 67 | 38.1 |
| 2 | 58 | 33.0 | 125 | 71.0 |
| 3 | 36 | 20.5 | 161 | 91.5 |
| 4 | 15 | 8.5 | 176 | 100.0 |

Frequency Missing = 1

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 13.1 | 23 | 13.1 |
| 1 | 40 | 22.7 | 63 | 35.8 |
| 2 | 46 | 26.1 | 109 | 61.9 |
| 3 | 42 | 23.9 | 151 | 85.8 |
| 4 | 25 | 14.2 | 176 | 100.0 |

Frequency Missing = 1

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 26 | 14.8 | 26 | 14.8 |
| 1 | 42 | 23.9 | 68 | 38.6 |
| 2 | 42 | 23.9 | 110 | 62.5 |
| 3 | 42 | 23.9 | 152 | 86.4 |
| 4 | 24 | 13.6 | 176 | 100.0 |

Frequency Missing = 1

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 36 | 20.6 | 36 | 20.6 |
| 1 | 34 | 19.4 | 70 | 40.0 |
| 2 | 34 | 19.4 | 104 | 59.4 |
| 3 | 45 | 25.7 | 149 | 85.1 |
| 4 | 26 | 14.9 | 175 | 100.0 |

Frequency Missing = 2



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 40 | 22.9 | 40 | 22.9 |
| 1 | 46 | 26.3 | 86 | 49.1 |
| 2 | 40 | 22.9 | 126 | 72.0 |
| 3 | 32 | 18.3 | 158 | 90.3 |
| 4 | 17 | 9.7 | 175 | 100.0 |

Frequency Missing = 2

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 10.2 | 18 | 10.2 |
| 1 | 38 | 21.5 | 56 | 31.6 |
| 2 | 45 | 25.4 | 101 | 57.1 |
| 3 | 44 | 24.9 | 145 | 81.9 |
| 4 | 32 | 18.1 | 177 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 41 | 23.3 | 41 | 23.3 |
| 1 | 36 | 20.5 | 77 | 43.8 |
| 2 | 49 | 27.8 | 126 | 71.6 |
| 3 | 29 | 16.5 | 155 | 88.1 |
| 4 | 21 | 11.9 | 176 | 100.0 |

Frequency Missing = 1

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 13.1 | 23 | 13.1 |
| 1 | 51 | 29.0 | 74 | 42.0 |
| 2 | 41 | 23.3 | 115 | 65.3 |
| 3 | 38 | 21.6 | 153 | 86.9 |
| 4 | 23 | 13.1 | 176 | 100.0 |

Frequency Missing = 1



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 28 | 15.8 | 28 | 15.8 |
| 1 | 50 | 28.2 | 78 | 44.1 |
| 2 | 46 | 26.0 | 124 | 70.1 |
| 3 | 38 | 21.5 | 162 | 91.5 |
| 4 | 15 | 8.5 | 177 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 5.6 | 10 | 5.6 |
| 1 | 16 | 9.0 | 26 | 14.7 |
| 2 | 37 | 20.9 | 63 | 35.6 |
| 3 | 42 | 23.7 | 105 | 59.3 |
| 4 | 72 | 40.7 | 177 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 12.5 | 22 | 12.5 |
| 1 | 27 | 15.3 | 49 | 27.8 |
| 2 | 36 | 20.5 | 85 | 48.3 |
| 3 | 48 | 27.3 | 133 | 75.6 |
| 4 | 43 | 24.4 | 176 | 100.0 |

Frequency Missing = 1

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 29 | 16.5 | 29 | 16.5 |
| 1 | 53 | 30.1 | 82 | 46.6 |
| 2 | 46 | 26.1 | 128 | 72.7 |
| 3 | 26 | 14.8 | 154 | 87.5 |

Frequency Missing = 1



| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 37 | 21.0 | 37 | 21.0 |
| 1 | 43 | 24.4 | 80 | 45.5 |
| 2 | 43 | 24.4 | 123 | 69.9 |
| 3 | 31 | 17.6 | 154 | 87.5 |
| 4 | 22 | 12.5 | 176 | 100.0 |

Frequency Missing = 1

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 5.1 | 9 | 5.1 |
| 1 | 18 | 10.2 | 27 | 15.3 |
| 2 | 35 | 19.8 | 62 | 35.0 |
| 3 | 41 | 23.2 | 103 | 58.2 |
| 4 | 74 | 41.8 | 177 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 12.5 | 22 | 12.5 |
| 1 | 40 | 22.7 | 62 | 35.2 |
| 2 | 58 | 33.0 | 120 | 68.2 |
| 3 | 34 | 19.3 | 154 | 87.5 |
| 4 | 22 | 12.5 | 176 | 100.0 |

Frequency Missing = 1

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 13.6 | 24 | 13.6 |
| 1 | 35 | 19.8 | 59 | 33.3 |
| 2 | 28 | 15.8 | 87 | 49.2 |
| 3 | 33 | 18.6 | 120 | 67.8 |
| 4 | 57 | 32.2 | 177 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 13.6 | 24 | 13.6 |

| | | | | |
|---|---|---|---|---|
| 1 | 31 | 17.6 | 95 | 54.5 |
| 2 | 41 | 23.3 | 136 | 77.8 |
| 3 | 37 | 21.0 | 173 | 98.9 |
| 4 | 2 | 1.1 | 175 | 100.0 |

Frequency Missing = 1

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 50 | 28.6 | 50 | 28.6 |
| 1 | 40 | 22.9 | 90 | 51.4 |
| 2 | 35 | 20.0 | 125 | 71.4 |
| 3 | 36 | 20.6 | 161 | 92.0 |
| 4 | 14 | 8.0 | 175 | 100.0 |

Frequency Missing = 2

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 37 | 21.1 | 37 | 21.1 |
| 1 | 61 | 34.9 | 98 | 56.0 |
| 2 | 49 | 28.0 | 147 | 84.0 |
| 3 | 20 | 11.4 | 167 | 95.4 |
| 4 | 8 | 4.6 | 175 | 100.0 |

Frequency Missing = 2

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 6.9 | 12 | 6.9 |
| 1 | 16 | 9.1 | 28 | 16.0 |
| 2 | 26 | 14.9 | 54 | 30.9 |
| 3 | 35 | 20.0 | 89 | 50.9 |
| 4 | 86 | 49.1 | 175 | 100.0 |

Frequency Missing = 2



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 12.6 | 22 | 12.6 |
| 1 | 53 | 30.3 | 75 | 42.9 |
| 2 | 53 | 30.3 | 128 | 73.1 |
| 3 | 30 | 17.1 | 158 | 90.3 |
| 4 | 17 | 9.7 | 175 | 100.0 |

Frequency Missing = 2

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 10.8 | 19 | 10.8 |
| 1 | 27 | 15.3 | 46 | 26.1 |
| 2 | 40 | 22.7 | 86 | 48.9 |
| 3 | 40 | 22.7 | 126 | 71.6 |
| 4 | 50 | 28.4 | 176 | 100.0 |

Frequency Missing = 1

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 13.1 | 23 | 13.1 |
| 1 | 39 | 22.3 | 62 | 35.4 |
| 2 | 32 | 18.3 | 94 | 53.7 |
| 3 | 41 | 23.4 | 135 | 77.1 |
| 4 | 40 | 22.9 | 175 | 100.0 |

Frequency Missing = 2

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 25 | 14.4 | 25 | 14.4 |
| 1 | 45 | 25.9 | 70 | 40.2 |
| 2 | 38 | 21.8 | 108 | 62.1 |
| 3 | 30 | 17.2 | 138 | 79.3 |
| 4 | 36 | 20.7 | 174 | 100.0 |

Frequency Missing = 3



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 5.2 | 9 | 5.2 |
| 1 | 31 | 17.8 | 40 | 23.0 |
| 2 | 44 | 25.3 | 84 | 48.3 |
| 3 | 39 | 22.4 | 123 | 70.7 |
| 4 | 51 | 29.3 | 174 | 100.0 |

Frequency Missing = 3

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 39 | 22.3 | 39 | 22.3 |
| 1 | 23 | 13.1 | 62 | 35.4 |
| 2 | 32 | 18.3 | 94 | 53.7 |
| 3 | 28 | 16.0 | 122 | 69.7 |
| 4 | 53 | 30.3 | 175 | 100.0 |

Frequency Missing = 2

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 16.9 | 30 | 16.9 |
| 1 | 40 | 22.6 | 70 | 39.5 |
| 2 | 67 | 37.9 | 137 | 77.4 |
| 3 | 31 | 17.5 | 168 | 94.9 |
| 4 | 9 | 5.1 | 177 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 4.0 | 7 | 4.0 |
| 1 | 113 | 64.2 | 120 | 68.2 |
| 2 | 23 | 13.1 | 143 | 81.3 |
| 3 | 22 | 12.5 | 165 | 93.8 |
| 4 | 11 | 6.3 | 176 | 100.0 |

Frequency Missing = 1



| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 10.7 | 19 | 10.7 |
| 1 | 34 | 19.2 | 53 | 29.9 |
| 2 | 25 | 14.1 | 78 | 44.1 |
| 3 | 59 | 33.3 | 137 | 77.4 |
| 4 | 40 | 22.6 | 177 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 40 | 22.6 | 40 | 22.6 |
| 1 | 29 | 16.4 | 69 | 39.0 |
| 2 | 16 | 9.0 | 85 | 48.0 |
| 3 | 44 | 24.9 | 129 | 72.9 |
| 4 | 48 | 27.1 | 177 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 28 | 16.1 | 28 | 16.1 |
| 1 | 94 | 54.0 | 122 | 70.1 |
| 2 | 43 | 24.7 | 165 | 94.8 |
| 3 | 7 | 4.0 | 172 | 98.9 |
| 4 | 2 | 1.1 | 174 | 100.0 |

Frequency Missing = 3

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 67 | 38.3 | 67 | 38.3 |
| 1 | 63 | 36.0 | 130 | 74.3 |
| 2 | 28 | 16.0 | 158 | 90.3 |
| 3 | 17 | 9.7 | 175 | 100.0 |

Frequency Missing = 2



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 59 | 33.9 | 59 | 33.9 |
| 1 | 86 | 49.4 | 145 | 83.3 |
| 2 | 21 | 12.1 | 166 | 95.4 |
| 3 | 8 | 4.6 | 174 | 100.0 |

Frequency Missing = 3

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 77 | 44.0 | 77 | 44.0 |
| 1 | 70 | 40.0 | 147 | 84.0 |
| 2 | 24 | 13.7 | 171 | 97.7 |
| 3 | 4 | 2.3 | 175 | 100.0 |

Frequency Missing = 2

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 56 | 32.0 | 56 | 32.0 |
| 1 | 50 | 28.6 | 106 | 60.6 |
| 2 | 45 | 25.7 | 151 | 86.3 |
| 3 | 24 | 13.7 | 175 | 100.0 |

Frequency Missing = 2

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 79 | 45.4 | 79 | 45.4 |
| 1 | 53 | 30.5 | 132 | 75.9 |
| 2 | 24 | 13.8 | 156 | 89.7 |
| 3 | 18 | 10.3 | 174 | 100.0 |

Frequency Missing = 3

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 39 | 22.4 | 39 | 22.4 |
| 1 | 81 | 46.6 | 120 | 69.0 |
| 2 | 48 | 27.6 | 168 | 96.6 |
| 3 | 6 | 3.4 | 174 | 100.0 |

Frequency Missing = 3

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 55 | 31.4 | 55 | 31.4 |
| 1 | 80 | 45.7 | 135 | 77.1 |
| 2 | 29 | 16.6 | 164 | 93.7 |
| 3 | 10 | 5.7 | 174 | 99.4 |
| 4 | 1 | 0.6 | 175 | 100.0 |

Frequency Missing = 2

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 44 | 25.4 | 44 | 25.4 |
| 1 | 62 | 35.8 | 106 | 61.3 |
| 2 | 49 | 28.3 | 155 | 89.6 |
| 3 | 18 | 10.4 | 173 | 100.0 |

Frequency Missing = 4

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 105 | 60.3 | 105 | 60.3 |
| 1 | 45 | 25.9 | 150 | 86.2 |
| 2 | 12 | 6.9 | 162 | 93.1 |
| 3 | 12 | 6.9 | 174 | 100.0 |

Frequency Missing = 3



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 10.5 | 18 | 10.5 |
| 1 | 51 | 29.7 | 69 | 40.1 |
| 2 | 47 | 27.3 | 116 | 67.4 |
| 3 | 55 | 32.0 | 171 | 99.4 |
| 4 | 1 | 0.6 | 172 | 100.0 |

Frequency Missing = 5

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 85 | 48.3 | 85 | 48.3 |
| 1 | 17 | 9.7 | 102 | 58.0 |
| 2 | 20 | 11.4 | 122 | 69.3 |
| 3 | 13 | 7.4 | 135 | 76.7 |
| 4 | 11 | 6.3 | 146 | 83.0 |
| 5 | 9 | 5.1 | 155 | 88.1 |
| 6 | 5 | 2.8 | 160 | 90.9 |
| 7 | 4 | 2.3 | 164 | 93.2 |
| 8 | 3 | 1.7 | 167 | 94.9 |
| 10 | 5 | 2.8 | 172 | 97.7 |
| 15 | 1 | 0.6 | 173 | 98.3 |
| 22 | 1 | 0.6 | 174 | 98.9 |
| 32 | 1 | 0.6 | 175 | 99.4 |
| 50 | 1 | 0.6 | 176 | 100.0 |

Frequency Missing = 1

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 61 | 34.7 | 61 | 34.7 |
| 1 | 2 | 1.1 | 63 | 35.8 |
| 2 | 9 | 5.1 | 72 | 40.9 |
| 3 | 10 | 5.7 | 82 | 46.6 |
| 4 | 10 | 5.7 | 92 | 52.3 |
| 5 | 10 | 5.7 | 102 | 58.0 |
| 6 | 16 | 9.1 | 118 | 67.0 |
| 7 | 3 | 1.7 | 121 | 68.8 |
| 8 | 7 | 4.0 | 128 | 72.7 |
| 10 | 9 | 5.1 | 137 | 77.8 |
| 12 | 7 | 4.0 | 144 | 81.8 |
| 13 | 4 | 2.3 | 148 | 84.1 |
| 14 | 3 | 1.7 | 151 | 85.8 |



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 15 | 7 | 4.0 | 158 | 89.8 |
| 16 | 3 | 1.7 | 161 | 91.5 |
| 17 | 1 | 0.6 | 162 | 92.0 |
| 20 | 5 | 2.8 | 167 | 94.9 |
| 24 | 3 | 1.7 | 170 | 96.6 |
| 28 | 1 | 0.6 | 171 | 97.2 |
| 30 | 2 | 1.1 | 173 | 98.3 |
| 36 | 1 | 0.6 | 174 | 98.9 |
| 48 | 1 | 0.6 | 175 | 99.4 |
| 78 | 1 | 0.6 | 176 | 100.0 |

Frequency Missing = 1

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 40 | 1.6250000 | 0.4902903 | 1.0000000 | 2.0000000 |
| X3 | 40 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X4 | 40 | 2.0000000 | 0.3922323 | 1.0000000 | 3.0000000 |
| X5 | 40 | 1.8500000 | 0.5795666 | 1.0000000 | 4.0000000 |
| X6 | 39 | 4.1794872 | 1.3547537 | 1.0000000 | 5.0000000 |
| X7 | 40 | 1.0500000 | 0.3162278 | 1.0000000 | 3.0000000 |
| X8 | 40 | 1.7250000 | 0.4522026 | 1.0000000 | 2.0000000 |
| X9 | 38 | 1.1315789 | 0.3425700 | 1.0000000 | 2.0000000 |
| X10 | 37 | 1.5405405 | 0.5052279 | 1.0000000 | 2.0000000 |
| X11 | 40 | 1.2000000 | 0.4050957 | 1.0000000 | 2.0000000 |
| X12 | 40 | 1.8000000 | 1.0669871 | 0 | 4.0000000 |
| X13 | 40 | 1.7500000 | 1.1266014 | 0 | 4.0000000 |
| X14 | 39 | 2.2307692 | 1.2661907 | 0 | 4.0000000 |
| X15 | 38 | 1.9473684 | 1.4132074 | 0 | 4.0000000 |
| X16 | 38 | 1.7105263 | 1.0882144 | 0 | 4.0000000 |
| X17 | 40 | 2.0000000 | 1.0377490 | 0 | 4.0000000 |
| X18 | 39 | 1.7948718 | 1.4721893 | 0 | 4.0000000 |
| X19 | 39 | 2.0512821 | 1.3367029 | 0 | 4.0000000 |
| X20 | 40 | 1.9500000 | 1.1311442 | 0 | 4.0000000 |
| X21 | 40 | 2.9500000 | 1.1535897 | 0 | 4.0000000 |
| X22 | 39 | 2.3333333 | 1.4388104 | 0 | 4.0000000 |
| X23 | 39 | 2.0512821 | 1.2967311 | 0 | 4.0000000 |
| X24 | 39 | 1.6923077 | 1.3794325 | 0 | 4.0000000 |
| X25 | 40 | 3.0500000 | 1.2184479 | 0 | 4.0000000 |
| X26 | 39 | 1.7948718 | 1.3014059 | 0 | 4.0000000 |
| X27 | 40 | 2.3750000 | 1.4266241 | 0 | 4.0000000 |
| X28 | 39 | 2.3846154 | 1.3101905 | 0 | 4.0000000 |
| X29 | 38 | 1.4210526 | 1.2440470 | 0 | 4.0000000 |
| X30 | 38 | 1.3947368 | 0.9455293 | 0 | 4.0000000 |
| X31 | 39 | 3.2564103 | 1.1172793 | 0 | 4.0000000 |
| X32 | 38 | 2.1315789 | 1.2770543 | 0 | 4.0000000 |
| X33 | 39 | 2.6410256 | 1.3076129 | 0 | 4.0000000 |
| X34 | 39 | 2.4871795 | 1.3351876 | 0 | 4.0000000 |
| X35 | 38 | 2.3421053 | 1.3411636 | 0 | 4.0000000 |
| X36 | 38 | 2.9736842 | 1.2408986 | 0 | 4.0000000 |
| X37 | 38 | 2.2894737 | 1.3931860 | 0 | 4.0000000 |
| X38 | 40 | 1.7000000 | 1.1367971 | 0 | 4.0000000 |
| X39 | 39 | 1.4615385 | 1.0220247 | 0 | 4.0000000 |
| X40 | 40 | 2.6000000 | 1.3922864 | 0 | 4.0000000 |
| X41 | 40 | 2.2000000 | 1.6203830 | 0 | 4.0000000 |
| X42 | 39 | 1.1025641 | 0.7537580 | 0 | 3.0000000 |
| X43 | 39 | 0.7948718 | 0.9227957 | 0 | 3.0000000 |
| X44 | 39 | 1.0256410 | 0.8425269 | 0 | 3.0000000 |
| X45 | 40 | 0.7500000 | 0.9268087 | 0 | 3.0000000 |
| X46 | 39 | 1.1794872 | 1.2327077 | 0 | 3.0000000 |
| X47 | 40 | 0.8000000 | 1.0907537 | 0 | 3.0000000 |
| X48 | 39 | 0.9743590 | 0.9028370 | 0 | 3.0000000 |
| X49 | 40 | 1.0000000 | 0.9336996 | 0 | 3.0000000 |
| X50 | 39 | 1.0256410 | 0.9864124 | 0 | 3.0000000 |
| X51 | 39 | 0.5384615 | 0.8222611 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X52 | 38 | 1.9210526 | 1.0496223 | 0 | 4.0000000 |
| X53 | 40 | 2.2500000 | 2.3506682 | 0 | 10.0000000 |
| X54 | 40 | 6.6750000 | 7.8817787 | 0 | 30.0000000 |

| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 15 | 37.5 | 15 | 37.5 |
| 2 | 25 | 62.5 | 40 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 40 | 100.0 | 40 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 7.5 | 3 | 7.5 |
| 2 | 34 | 85.0 | 37 | 92.5 |
| 3 | 3 | 7.5 | 40 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 22.5 | 9 | 22.5 |
| 2 | 29 | 72.5 | 38 | 95.0 |
| 3 | 1 | 2.5 | 39 | 97.5 |
| 4 | 1 | 2.5 | 40 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 4 | 10.3 | 4 | 10.3 |
| 2 | 2 | 5.1 | 6 | 15.4 |
| 3 | 2 | 5.1 | 8 | 20.5 |
| 4 | 6 | 15.4 | 14 | 35.9 |
| 5 | 25 | 64.1 | 39 | 100.0 |

Frequency Missing = 1



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 39 | 97.5 | 39 | 97.5 |
| 3 | 1 | 2.5 | 40 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 11 | 27.5 | 11 | 27.5 |
| 2 | 29 | 72.5 | 40 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 33 | 86.8 | 33 | 86.8 |
| 2 | 5 | 13.2 | 38 | 100.0 |

Frequency Missing = 2

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 17 | 45.9 | 17 | 45.9 |
| 2 | 20 | 54.1 | 37 | 100.0 |

Frequency Missing = 3

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 32 | 80.0 | 32 | 80.0 |
| 2 | 8 | 20.0 | 40 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 7.5 | 3 | 7.5 |
| 1 | 14 | 35.0 | 17 | 42.5 |
| 2 | 15 | 37.5 | 32 | 80.0 |
| 3 | 4 | 10.0 | 36 | 90.0 |
| 4 | 4 | 10.0 | 40 | 100.0 |

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 10.0 | 4 | 10.0 |
| 1 | 16 | 40.0 | 20 | 50.0 |
| 2 | 9 | 22.5 | 29 | 72.5 |
| 3 | 8 | 20.0 | 37 | 92.5 |
| 4 | 3 | 7.5 | 40 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 4 | 10.3 | 4 | 10.3 |
| 1 | 7 | 17.9 | 11 | 28.2 |
| 2 | 12 | 30.8 | 23 | 59.0 |
| 3 | 8 | 20.5 | 31 | 79.5 |
| 4 | 8 | 20.5 | 39 | 100.0 |

Frequency Missing = 1

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 21.1 | 8 | 21.1 |
| 1 | 7 | 18.4 | 15 | 39.5 |
| 2 | 9 | 23.7 | 24 | 63.2 |
| 3 | 7 | 18.4 | 31 | 81.6 |
| 4 | 7 | 18.4 | 38 | 100.0 |

Frequency Missing = 2



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 13.2 | 5 | 13.2 |
| 1 | 13 | 34.2 | 18 | 47.4 |
| 2 | 9 | 23.7 | 27 | 71.1 |
| 3 | 10 | 26.3 | 37 | 97.4 |
| 4 | 1 | 2.6 | 38 | 100.0 |

Frequency Missing = 2

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 5.0 | 2 | 5.0 |
| 1 | 11 | 27.5 | 13 | 32.5 |
| 2 | 16 | 40.0 | 29 | 72.5 |
| 3 | 7 | 17.5 | 36 | 90.0 |
| 4 | 4 | 10.0 | 40 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 25.6 | 10 | 25.6 |
| 1 | 8 | 20.5 | 18 | 46.2 |
| 2 | 9 | 23.1 | 27 | 69.2 |
| 3 | 4 | 10.3 | 31 | 79.5 |
| 4 | 8 | 20.5 | 39 | 100.0 |

Frequency Missing = 1

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 12.8 | 5 | 12.8 |
| 1 | 11 | 28.2 | 16 | 41.0 |
| 2 | 7 | 17.9 | 23 | 59.0 |
| 3 | 9 | 23.1 | 32 | 82.1 |
| 4 | 7 | 17.9 | 39 | 100.0 |

Frequency Missing = 1



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 15.0 | 6 | 15.0 |
| 1 | 6 | 15.0 | 12 | 30.0 |
| 2 | 14 | 35.0 | 26 | 65.0 |
| 3 | 12 | 30.0 | 38 | 95.0 |
| 4 | 2 | 5.0 | 40 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 2.5 | 1 | 2.5 |
| 1 | 4 | 10.0 | 5 | 12.5 |
| 2 | 9 | 22.5 | 14 | 35.0 |
| 3 | 8 | 20.0 | 22 | 55.0 |
| 4 | 18 | 45.0 | 40 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 12.8 | 5 | 12.8 |
| 1 | 8 | 20.5 | 13 | 33.3 |
| 2 | 7 | 17.9 | 20 | 51.3 |
| 3 | 7 | 17.9 | 27 | 69.2 |
| 4 | 12 | 30.8 | 39 | 100.0 |

Frequency Missing = 1

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 12.8 | 5 | 12.8 |
| 1 | 9 | 23.1 | 14 | 35.9 |
| 2 | 11 | 28.2 | 25 | 64.1 |
| 3 | 7 | 17.9 | 32 | 82.1 |
| 4 | 7 | 17.9 | 39 | 100.0 |

Frequency Missing = 1

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 28.2 | 11 | 28.2 |
| 1 | 7 | 17.9 | 18 | 46.2 |
| 2 | 8 | 20.5 | 26 | 66.7 |
| 3 | 9 | 23.1 | 35 | 89.7 |
| 4 | 4 | 10.3 | 39 | 100.0 |

Frequency Missing = 1

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 2.5 | 1 | 2.5 |
| 1 | 5 | 12.5 | 6 | 15.0 |
| 2 | 7 | 17.5 | 13 | 32.5 |
| 3 | 5 | 12.5 | 18 | 45.0 |
| 4 | 22 | 55.0 | 40 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 20.5 | 8 | 20.5 |
| 1 | 9 | 23.1 | 17 | 43.6 |
| 2 | 9 | 23.1 | 26 | 66.7 |
| 3 | 9 | 23.1 | 35 | 89.7 |
| 4 | 4 | 10.3 | 39 | 100.0 |

Frequency Missing = 1

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 10.0 | 4 | 10.0 |
| 1 | 9 | 22.5 | 13 | 32.5 |
| 2 | 9 | 22.5 | 22 | 55.0 |
| 3 | 4 | 10.0 | 26 | 65.0 |
| 4 | 14 | 35.0 | 40 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 7.7 | 3 | 7.7 |
| 1 | 8 | 20.5 | 11 | 28.2 |
| 2 | 10 | 25.6 | 21 | 53.8 |
| 3 | 7 | 17.9 | 28 | 71.8 |
| 4 | 11 | 28.2 | 39 | 100.0 |

Frequency Missing = 1

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 34.2 | 13 | 34.2 |
| 1 | 6 | 15.8 | 19 | 50.0 |
| 2 | 10 | 26.3 | 29 | 76.3 |
| 3 | 8 | 21.1 | 37 | 97.4 |
| 4 | 1 | 2.6 | 38 | 100.0 |

Frequency Missing = 2

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 18.4 | 7 | 18.4 |
| 1 | 13 | 34.2 | 20 | 52.6 |
| 2 | 15 | 39.5 | 35 | 92.1 |
| 3 | 2 | 5.3 | 37 | 97.4 |
| 4 | 1 | 2.6 | 38 | 100.0 |

Frequency Missing = 2

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 2.6 | 1 | 2.6 |
| 1 | 3 | 7.7 | 4 | 10.3 |
| 2 | 5 | 12.8 | 9 | 23.1 |
| 3 | 6 | 15.4 | 15 | 38.5 |
| 4 | 24 | 61.5 | 39 | 100.0 |

Frequency Missing = 1



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 10.5 | 4 | 10.5 |
| 1 | 8 | 21.1 | 12 | 31.6 |
| 2 | 13 | 34.2 | 25 | 65.8 |
| 3 | 5 | 13.2 | 30 | 78.9 |
| 4 | 8 | 21.1 | 38 | 100.0 |

Frequency Missing = 2

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 5.1 | 2 | 5.1 |
| 1 | 8 | 20.5 | 10 | 25.6 |

| | | | | |
|---|---|---|---|---|
| 2 | 6 | 15.4 | 16 | 41.0 |
| 3 | 9 | 23.1 | 25 | 64.1 |
| 4 | 14 | 35.9 | 39 | 100.0 |

Frequency Missing = 1

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 7.7 | 3 | 7.7 |
| 1 | 9 | 23.1 | 12 | 30.8 |
| 2 | 4 | 10.3 | 16 | 41.0 |
| 3 | 12 | 30.8 | 28 | 71.8 |
| 4 | 11 | 28.2 | 39 | 100.0 |

Frequency Missing = 1

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 7.9 | 3 | 7.9 |
| 1 | 10 | 26.3 | 13 | 34.2 |
| 2 | 6 | 15.8 | 19 | 50.0 |
| 3 | 9 | 23.7 | 28 | 73.7 |
| 4 | 10 | 26.3 | 38 | 100.0 |

Frequency Missing = 2



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 5.3 | 2 | 5.3 |
| 1 | 3 | 7.9 | 5 | 13.2 |
| 2 | 8 | 21.1 | 13 | 34.2 |
| 3 | 6 | 15.8 | 19 | 50.0 |
| 4 | 19 | 50.0 | 38 | 100.0 |

Frequency Missing = 2

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 15.8 | 6 | 15.8 |
| 1 | 4 | 10.5 | 10 | 26.3 |
| 2 | 11 | 28.9 | 21 | 55.3 |
| 3 | 7 | 18.4 | 28 | 73.7 |
| 4 | 10 | 26.3 | 38 | 100.0 |

Frequency Missing = 2

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 7 | 17.5 | 7 | 17.5 |
| 1 | 9 | 22.5 | 16 | 40.0 |
| 2 | 16 | 40.0 | 32 | 80.0 |
| 3 | 5 | 12.5 | 37 | 92.5 |
| 4 | 3 | 7.5 | 40 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 10.3 | 4 | 10.3 |
| 1 | 22 | 56.4 | 26 | 66.7 |
| 2 | 6 | 15.4 | 32 | 82.1 |
| 3 | 5 | 12.8 | 37 | 94.9 |
| 4 | 2 | 5.1 | 39 | 100.0 |

Frequency Missing = 1



| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 12.5 | 5 | 12.5 |
| 1 | 5 | 12.5 | 10 | 25.0 |
| 2 | 4 | 10.0 | 14 | 35.0 |
| 3 | 13 | 32.5 | 27 | 67.5 |
| 4 | 13 | 32.5 | 40 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 27.5 | 11 | 27.5 |
| 1 | 4 | 10.0 | 15 | 37.5 |
| 2 | 2 | 5.0 | 17 | 42.5 |
| 3 | 12 | 30.0 | 29 | 72.5 |
| 4 | 11 | 27.5 | 40 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 15.4 | 6 | 15.4 |
| 1 | 26 | 66.7 | 32 | 82.1 |
| 2 | 4 | 10.3 | 36 | 92.3 |
| 3 | 3 | 7.7 | 39 | 100.0 |

Frequency Missing = 1

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 46.2 | 18 | 46.2 |

| | | | | |
|---|---|---|---|---|
| 1 | 14 | 35.9 | 32 | 82.1 |
| 2 | 4 | 10.3 | 36 | 92.3 |
| 3 | 3 | 7.7 | 39 | 100.0 |

Frequency Missing = 1



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 25.6 | 10 | 25.6 |
| 1 | 21 | 53.8 | 31 | 79.5 |
| 2 | 5 | 12.8 | 36 | 92.3 |
| 3 | 3 | 7.7 | 39 | 100.0 |

Frequency Missing = 1

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 50.0 | 20 | 50.0 |
| 1 | 13 | 32.5 | 33 | 82.5 |
| 2 | 4 | 10.0 | 37 | 92.5 |
| 3 | 3 | 7.5 | 40 | 100.0 |

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 43.6 | 17 | 43.6 |
| 1 | 7 | 17.9 | 24 | 61.5 |
| 2 | 6 | 15.4 | 30 | 76.9 |
| 3 | 9 | 23.1 | 39 | 100.0 |

Frequency Missing = 1

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 57.5 | 23 | 57.5 |
| 1 | 7 | 17.5 | 30 | 75.0 |
| 2 | 5 | 12.5 | 35 | 87.5 |
| 3 | 5 | 12.5 | 40 | 100.0 |



| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 35.9 | 14 | 35.9 |
| 1 | 14 | 35.9 | 28 | 71.8 |
| 2 | 9 | 23.1 | 37 | 94.9 |

| | | | | |
|---|---|---|---|---|
| 3 | 2 | 5.1 | 39 | 100.0 |

Frequency Missing = 1

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 32.5 | 13 | 32.5 |
| 1 | 18 | 45.0 | 31 | 77.5 |
| 2 | 5 | 12.5 | 36 | 90.0 |
| 3 | 4 | 10.0 | 40 | 100.0 |

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 35.9 | 14 | 35.9 |
| 1 | 14 | 35.9 | 28 | 71.8 |
| 2 | 7 | 17.9 | 35 | 89.7 |
| 3 | 4 | 10.3 | 39 | 100.0 |

Frequency Missing = 1

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 61.5 | 24 | 61.5 |
| 1 | 11 | 28.2 | 35 | 89.7 |
| 2 | 2 | 5.1 | 37 | 94.9 |
| 3 | 2 | 5.1 | 39 | 100.0 |

Frequency Missing = 1



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 7.9 | 3 | 7.9 |
| 1 | 12 | 31.6 | 15 | 39.5 |
| 2 | 9 | 23.7 | 24 | 63.2 |
| 3 | 13 | 34.2 | 37 | 97.4 |
| 4 | 1 | 2.6 | 38 | 100.0 |

Frequency Missing = 2

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 27.5 | 11 | 27.5 |
| 1 | 9 | 22.5 | 20 | 50.0 |
| 2 | 6 | 15.0 | 26 | 65.0 |

| | | | | |
|---|---|---|---|---|
| 3 | 2 | 5.0 | 28 | 70.0 |
| 4 | 6 | 15.0 | 34 | 85.0 |
| 5 | 2 | 5.0 | 36 | 90.0 |
| 6 | 2 | 5.0 | 38 | 95.0 |
| 7 | 1 | 2.5 | 39 | 97.5 |
| 10 | 1 | 2.5 | 40 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 35.0 | 14 | 35.0 |
| 1 | 1 | 2.5 | 15 | 37.5 |
| 2 | 3 | 7.5 | 18 | 45.0 |
| 3 | 1 | 2.5 | 19 | 47.5 |
| 4 | 4 | 10.0 | 23 | 57.5 |
| 6 | 3 | 7.5 | 26 | 65.0 |
| 8 | 1 | 2.5 | 27 | 67.5 |
| 10 | 2 | 5.0 | 29 | 72.5 |
| 12 | 1 | 2.5 | 30 | 75.0 |
| 13 | 1 | 2.5 | 31 | 77.5 |
| 14 | 1 | 2.5 | 32 | 80.0 |
| 15 | 2 | 5.0 | 34 | 85.0 |
| 16 | 2 | 5.0 | 36 | 90.0 |
| 20 | 2 | 5.0 | 38 | 95.0 |
| 24 | 1 | 2.5 | 39 | 97.5 |
| 30 | 1 | 2.5 | 40 | 100.0 |

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 137 | 1.6423358 | 0.4810715 | 1.0000000 | 2.0000000 |
| X3 | 137 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X4 | 137 | 2.2481752 | 0.6505769 | 1.0000000 | 4.0000000 |
| X5 | 137 | 2.2043796 | 0.9004793 | 1.0000000 | 4.0000000 |
| X6 | 136 | 4.3750000 | 1.1478644 | 1.0000000 | 5.0000000 |
| X7 | 137 | 1.3211679 | 0.8569294 | 1.0000000 | 4.0000000 |
| X8 | 137 | 1.5547445 | 0.5133470 | 1.0000000 | 3.0000000 |
| X9 | 134 | 1.1791045 | 0.3848786 | 1.0000000 | 2.0000000 |
| X10 | 136 | 1.4411765 | 0.4983633 | 1.0000000 | 2.0000000 |
| X11 | 137 | 1.2846715 | 0.4529139 | 1.0000000 | 2.0000000 |
| X12 | 136 | 1.8970588 | 1.1500687 | 0 | 4.0000000 |
| X13 | 136 | 2.1176471 | 1.2769108 | 0 | 4.0000000 |
| X14 | 137 | 1.9051095 | 1.2711922 | 0 | 4.0000000 |
| X15 | 137 | 1.9489051 | 1.3629616 | 0 | 4.0000000 |
| X16 | 137 | 1.6423358 | 1.3324967 | 0 | 4.0000000 |
| X17 | 137 | 2.2481752 | 1.3048609 | 0 | 4.0000000 |
| X18 | 137 | 1.7153285 | 1.2657764 | 0 | 4.0000000 |
| X19 | 137 | 1.8905109 | 1.2228152 | 0 | 4.0000000 |
| X20 | 137 | 1.7372263 | 1.2143146 | 0 | 4.0000000 |
| X21 | 137 | 2.8175182 | 1.2320415 | 0 | 4.0000000 |
| X22 | 137 | 2.3649635 | 1.3110162 | 0 | 4.0000000 |
| X23 | 137 | 1.6861314 | 1.2292503 | 0 | 4.0000000 |
| X24 | 137 | 1.7810219 | 1.2931683 | 0 | 4.0000000 |
| X25 | 137 | 2.8102190 | 1.2098423 | 0 | 4.0000000 |
| X26 | 137 | 2.0145985 | 1.1630677 | 0 | 4.0000000 |
| X27 | 137 | 2.3576642 | 1.4589341 | 0 | 4.0000000 |
| X28 | 137 | 2.2116788 | 1.3796347 | 0 | 4.0000000 |
| X29 | 137 | 1.6058394 | 1.3304006 | 0 | 4.0000000 |
| X30 | 137 | 1.4452555 | 1.1240663 | 0 | 4.0000000 |
| X31 | 136 | 2.8676471 | 1.3098421 | 0 | 4.0000000 |
| X32 | 137 | 1.7226277 | 1.1096497 | 0 | 4.0000000 |
| X33 | 137 | 2.3649635 | 1.3387654 | 0 | 4.0000000 |
| X34 | 136 | 2.1250000 | 1.3686300 | 0 | 4.0000000 |
| X35 | 136 | 1.9558824 | 1.3546499 | 0 | 4.0000000 |
| X36 | 136 | 2.4044118 | 1.2011024 | 0 | 4.0000000 |
| X37 | 137 | 2.1605839 | 1.5822247 | 0 | 4.0000000 |
| X38 | 137 | 1.7153285 | 1.0910660 | 0 | 4.0000000 |
| X39 | 137 | 1.5474453 | 0.9699212 | 0 | 4.0000000 |
| X40 | 137 | 2.3138686 | 1.2876782 | 0 | 4.0000000 |
| X41 | 137 | 2.1678832 | 1.5270567 | 0 | 4.0000000 |
| X42 | 135 | 1.2296296 | 0.8098345 | 0 | 4.0000000 |
| X43 | 136 | 1.0220588 | 0.9772745 | 0 | 3.0000000 |
| X44 | 135 | 0.8296296 | 0.7778725 | 0 | 3.0000000 |
| X45 | 135 | 0.7407407 | 0.7326395 | 0 | 3.0000000 |
| X46 | 136 | 1.2205882 | 0.9865103 | 0 | 3.0000000 |
| X47 | 134 | 0.9179104 | 0.9737032 | 0 | 3.0000000 |
| X48 | 135 | 1.1629630 | 0.7551555 | 0 | 3.0000000 |
| X49 | 135 | 0.9777778 | 0.8592488 | 0 | 4.0000000 |
| X50 | 134 | 1.2985075 | 0.9341463 | 0 | 3.0000000 |
| X51 | 135 | 0.6222222 | 0.9131434 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X52 | 134 | 1.7985075 | 1.0095771 | 0 | 3.0000000 |
| X53 | 136 | 2.5441176 | 5.8485423 | 0 | 50.0000000 |
| X54 | 136 | 6.6617647 | 9.9138665 | 0 | 78.0000000 |

| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 49 | 35.8 | 49 | 35.8 |
| 2 | 88 | 64.2 | 137 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 137 | 100.0 | 137 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 11 | 8.0 | 11 | 8.0 |
| 2 | 86 | 62.8 | 97 | 70.8 |
| 3 | 35 | 25.5 | 132 | 96.4 |
| 4 | 5 | 3.6 | 137 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 26 | 19.0 | 26 | 19.0 |
| 2 | 75 | 54.7 | 101 | 73.7 |
| 3 | 18 | 13.1 | 119 | 86.9 |
| 4 | 18 | 13.1 | 137 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 5 | 3.7 | 5 | 3.7 |
| 2 | 10 | 7.4 | 15 | 11.0 |
| 3 | 13 | 9.6 | 28 | 20.6 |
| 4 | 9 | 6.6 | 37 | 27.2 |
| 5 | 99 | 72.8 | 136 | 100.0 |

Frequency Missing = 1



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 117 | 85.4 | 117 | 85.4 |
| 2 | 7 | 5.1 | 124 | 90.5 |
| 3 | 2 | 1.5 | 126 | 92.0 |
| 4 | 11 | 8.0 | 137 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 62 | 45.3 | 62 | 45.3 |
| 2 | 74 | 54.0 | 136 | 99.3 |
| 3 | 1 | 0.7 | 137 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 110 | 82.1 | 110 | 82.1 |
| 2 | 24 | 17.9 | 134 | 100.0 |

Frequency Missing = 3

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 76 | 55.9 | 76 | 55.9 |
| 2 | 60 | 44.1 | 136 | 100.0 |

Frequency Missing = 1

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 98 | 71.5 | 98 | 71.5 |
| 2 | 39 | 28.5 | 137 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 13.2 | 18 | 13.2 |
| 1 | 32 | 23.5 | 50 | 36.8 |
| 2 | 43 | 31.6 | 93 | 68.4 |
| 3 | 32 | 23.5 | 125 | 91.9 |
| 4 | 11 | 8.1 | 136 | 100.0 |

Frequency Missing = 1

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 14.0 | 19 | 14.0 |
| 1 | 24 | 17.6 | 43 | 31.6 |
| 2 | 37 | 27.2 | 80 | 58.8 |
| 3 | 34 | 25.0 | 114 | 83.8 |
| 4 | 22 | 16.2 | 136 | 100.0 |

Frequency Missing = 1

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 16.1 | 22 | 16.1 |
| 1 | 35 | 25.5 | 57 | 41.6 |
| 2 | 30 | 21.9 | 87 | 63.5 |
| 3 | 34 | 24.8 | 121 | 88.3 |
| 4 | 16 | 11.7 | 137 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 28 | 20.4 | 28 | 20.4 |
| 1 | 27 | 19.7 | 55 | 40.1 |
| 2 | 25 | 18.2 | 80 | 58.4 |
| 3 | 38 | 27.7 | 118 | 86.1 |
| 4 | 19 | 13.9 | 137 | 100.0 |



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 35 | 25.5 | 35 | 25.5 |
| 1 | 33 | 24.1 | 68 | 49.6 |
| 2 | 31 | 22.6 | 99 | 72.3 |
| 3 | 22 | 16.1 | 121 | 88.3 |
| 4 | 16 | 11.7 | 137 | 100.0 |

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 16 | 11.7 | 16 | 11.7 |
| 1 | 27 | 19.7 | 43 | 31.4 |
| 2 | 29 | 21.2 | 72 | 52.6 |
| 3 | 37 | 27.0 | 109 | 79.6 |
| 4 | 28 | 20.4 | 137 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 31 | 22.6 | 31 | 22.6 |
| 1 | 28 | 20.4 | 59 | 43.1 |
| 2 | 40 | 29.2 | 99 | 72.3 |
| 3 | 25 | 18.2 | 124 | 90.5 |
| 4 | 13 | 9.5 | 137 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 13.1 | 18 | 13.1 |
| 1 | 40 | 29.2 | 58 | 42.3 |
| 2 | 34 | 24.8 | 92 | 67.2 |
| 3 | 29 | 21.2 | 121 | 88.3 |
| 4 | 16 | 11.7 | 137 | 100.0 |



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 16.1 | 22 | 16.1 |
| 1 | 44 | 32.1 | 66 | 48.2 |
| 2 | 32 | 23.4 | 98 | 71.5 |
| 3 | 26 | 19.0 | 124 | 90.5 |
| 4 | 13 | 9.5 | 137 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 6.6 | 9 | 6.6 |
| 1 | 12 | 8.8 | 21 | 15.3 |
| 2 | 28 | 20.4 | 49 | 35.8 |
| 3 | 34 | 24.8 | 83 | 60.6 |
| 4 | 54 | 39.4 | 137 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 12.4 | 17 | 12.4 |
| 1 | 19 | 13.9 | 36 | 26.3 |
| 2 | 29 | 21.2 | 65 | 47.4 |
| 3 | 41 | 29.9 | 106 | 77.4 |
| 4 | 31 | 22.6 | 137 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 17.5 | 24 | 17.5 |
| 1 | 44 | 32.1 | 68 | 49.6 |
| 2 | 35 | 25.5 | 103 | 75.2 |
| 3 | 19 | 13.9 | 122 | 89.1 |
| 4 | 15 | 10.9 | 137 | 100.0 |



| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 26 | 19.0 | 26 | 19.0 |
| 1 | 36 | 26.3 | 62 | 45.3 |
| 2 | 35 | 25.5 | 97 | 70.8 |
| 3 | 22 | 16.1 | 119 | 86.9 |
| 4 | 18 | 13.1 | 137 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 5.8 | 8 | 5.8 |
| 1 | 13 | 9.5 | 21 | 15.3 |
| 2 | 28 | 20.4 | 49 | 35.8 |
| 3 | 36 | 26.3 | 85 | 62.0 |
| 4 | 52 | 38.0 | 137 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 10.2 | 14 | 10.2 |
| 1 | 31 | 22.6 | 45 | 32.8 |
| 2 | 49 | 35.8 | 94 | 68.6 |
| 3 | 25 | 18.2 | 119 | 86.9 |
| 4 | 18 | 13.1 | 137 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 14.6 | 20 | 14.6 |
| 1 | 26 | 19.0 | 46 | 33.6 |
| 2 | 19 | 13.9 | 65 | 47.4 |
| 3 | 29 | 21.2 | 94 | 68.6 |
| 4 | 43 | 31.4 | 137 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 21 | 15.3 | 21 | 15.3 |
| 1 | 23 | 16.8 | 44 | 32.1 |
| 2 | 31 | 22.6 | 75 | 54.7 |
| 3 | 30 | 21.9 | 105 | 76.6 |
| 4 | 32 | 23.4 | 137 | 100.0 |

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 37 | 27.0 | 37 | 27.0 |
| 1 | 34 | 24.8 | 71 | 51.8 |
| 2 | 25 | 18.2 | 96 | 70.1 |
| 3 | 28 | 20.4 | 124 | 90.5 |
| 4 | 13 | 9.5 | 137 | 100.0 |

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 21.9 | 30 | 21.9 |
| 1 | 48 | 35.0 | 78 | 56.9 |
| 2 | 34 | 24.8 | 112 | 81.8 |
| 3 | 18 | 13.1 | 130 | 94.9 |
| 4 | 7 | 5.1 | 137 | 100.0 |

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 8.1 | 11 | 8.1 |
| 1 | 13 | 9.6 | 24 | 17.6 |
| 2 | 21 | 15.4 | 45 | 33.1 |
| 3 | 29 | 21.3 | 74 | 54.4 |
| 4 | 62 | 45.6 | 136 | 100.0 |

Frequency Missing = 1



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 13.1 | 18 | 13.1 |
| 1 | 45 | 32.8 | 63 | 46.0 |
| 2 | 40 | 29.2 | 103 | 75.2 |
| 3 | 25 | 18.2 | 128 | 93.4 |
| 4 | 9 | 6.6 | 137 | 100.0 |

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 12.4 | 17 | 12.4 |
| 1 | 19 | 13.9 | 36 | 26.3 |
| 2 | 34 | 24.8 | 70 | 51.1 |
| 3 | 31 | 22.6 | 101 | 73.7 |
| 4 | 36 | 26.3 | 137 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 14.7 | 20 | 14.7 |
| 1 | 30 | 22.1 | 50 | 36.8 |
| 2 | 28 | 20.6 | 78 | 57.4 |
| 3 | 29 | 21.3 | 107 | 78.7 |
| 4 | 29 | 21.3 | 136 | 100.0 |

Frequency Missing = 1

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 16.2 | 22 | 16.2 |
| 1 | 35 | 25.7 | 57 | 41.9 |
| 2 | 32 | 23.5 | 89 | 65.4 |
| 3 | 21 | 15.4 | 110 | 80.9 |
| 4 | 26 | 19.1 | 136 | 100.0 |

Frequency Missing = 1



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 5.1 | 7 | 5.1 |
| 1 | 28 | 20.6 | 35 | 25.7 |
| 2 | 36 | 26.5 | 71 | 52.2 |
| 3 | 33 | 24.3 | 104 | 76.5 |
| 4 | 32 | 23.5 | 136 | 100.0 |

Frequency Missing = 1

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 33 | 24.1 | 33 | 24.1 |
| 1 | 19 | 13.9 | 52 | 38.0 |
| 2 | 21 | 15.3 | 73 | 53.3 |
| 3 | 21 | 15.3 | 94 | 68.6 |
| 4 | 43 | 31.4 | 137 | 100.0 |

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 16.8 | 23 | 16.8 |
| 1 | 31 | 22.6 | 54 | 39.4 |
| 2 | 51 | 37.2 | 105 | 76.6 |
| 3 | 26 | 19.0 | 131 | 95.6 |
| 4 | 6 | 4.4 | 137 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 2.2 | 3 | 2.2 |
| 1 | 91 | 66.4 | 94 | 68.6 |
| 2 | 17 | 12.4 | 111 | 81.0 |
| 3 | 17 | 12.4 | 128 | 93.4 |
| 4 | 9 | 6.6 | 137 | 100.0 |

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 10.2 | 14 | 10.2 |
| 1 | 29 | 21.2 | 43 | 31.4 |
| 2 | 21 | 15.3 | 64 | 46.7 |
| 3 | 46 | 33.6 | 110 | 80.3 |
| 4 | 27 | 19.7 | 137 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 29 | 21.2 | 29 | 21.2 |
| 1 | 25 | 18.2 | 54 | 39.4 |
| 2 | 14 | 10.2 | 68 | 49.6 |
| 3 | 32 | 23.4 | 100 | 73.0 |
| 4 | 37 | 27.0 | 137 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 16.3 | 22 | 16.3 |
| 1 | 68 | 50.4 | 90 | 66.7 |
| 2 | 39 | 28.9 | 129 | 95.6 |
| 3 | 4 | 3.0 | 133 | 98.5 |
| 4 | 2 | 1.5 | 135 | 100.0 |

Frequency Missing = 2

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 49 | 36.0 | 49 | 36.0 |
| 1 | 49 | 36.0 | 98 | 72.1 |
| 2 | 24 | 17.6 | 122 | 89.7 |
| 3 | 14 | 10.3 | 136 | 100.0 |

Frequency Missing = 1



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 49 | 36.3 | 49 | 36.3 |
| 1 | 65 | 48.1 | 114 | 84.4 |
| 2 | 16 | 11.9 | 130 | 96.3 |
| 3 | 5 | 3.7 | 135 | 100.0 |

Frequency Missing = 2

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 57 | 42.2 | 57 | 42.2 |
| 1 | 57 | 42.2 | 114 | 84.4 |
| 2 | 20 | 14.8 | 134 | 99.3 |
| 3 | 1 | 0.7 | 135 | 100.0 |

Frequency Missing = 2

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 39 | 28.7 | 39 | 28.7 |
| 1 | 43 | 31.6 | 82 | 60.3 |
| 2 | 39 | 28.7 | 121 | 89.0 |
| 3 | 15 | 11.0 | 136 | 100.0 |

Frequency Missing = 1

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 56 | 41.8 | 56 | 41.8 |
| 1 | 46 | 34.3 | 102 | 76.1 |
| 2 | 19 | 14.2 | 121 | 90.3 |
| 3 | 13 | 9.7 | 134 | 100.0 |

Frequency Missing = 3



| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 25 | 18.5 | 25 | 18.5 |
| 1 | 67 | 49.6 | 92 | 68.1 |
| 2 | 39 | 28.9 | 131 | 97.0 |
| 3 | 4 | 3.0 | 135 | 100.0 |

Frequency Missing = 2

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 42 | 31.1 | 42 | 31.1 |
| 1 | 62 | 45.9 | 104 | 77.0 |
| 2 | 24 | 17.8 | 128 | 94.8 |
| 3 | 6 | 4.4 | 134 | 99.3 |
| 4 | 1 | 0.7 | 135 | 100.0 |

Frequency Missing = 2

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 22.4 | 30 | 22.4 |
| 1 | 48 | 35.8 | 78 | 58.2 |
| 2 | 42 | 31.3 | 120 | 89.6 |
| 3 | 14 | 10.4 | 134 | 100.0 |

Frequency Missing = 3

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 81 | 60.0 | 81 | 60.0 |
| 1 | 34 | 25.2 | 115 | 85.2 |
| 2 | 10 | 7.4 | 125 | 92.6 |
| 3 | 10 | 7.4 | 135 | 100.0 |

Frequency Missing = 2



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 11.2 | 15 | 11.2 |
| 1 | 39 | 29.1 | 54 | 40.3 |
| 2 | 38 | 28.4 | 92 | 68.7 |
| 3 | 42 | 31.3 | 134 | 100.0 |

Frequency Missing = 3

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 74 | 54.4 | 74 | 54.4 |
| 1 | 8 | 5.9 | 82 | 60.3 |
| 2 | 14 | 10.3 | 96 | 70.6 |
| 3 | 11 | 8.1 | 107 | 78.7 |
| 4 | 5 | 3.7 | 112 | 82.4 |
| 5 | 7 | 5.1 | 119 | 87.5 |
| 6 | 3 | 2.2 | 122 | 89.7 |
| 7 | 3 | 2.2 | 125 | 91.9 |
| 8 | 3 | 2.2 | 128 | 94.1 |
| 10 | 4 | 2.9 | 132 | 97.1 |
| 15 | 1 | 0.7 | 133 | 97.8 |
| 22 | 1 | 0.7 | 134 | 98.5 |
| 32 | 1 | 0.7 | 135 | 99.3 |
| 50 | 1 | 0.7 | 136 | 100.0 |

Frequency Missing = 1

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 47 | 34.6 | 47 | 34.6 |
| 1 | 1 | 0.7 | 48 | 35.3 |
| 2 | 6 | 4.4 | 54 | 39.7 |
| 3 | 9 | 6.6 | 63 | 46.3 |
| 4 | 6 | 4.4 | 69 | 50.7 |
| 5 | 10 | 7.4 | 79 | 58.1 |
| 6 | 13 | 9.6 | 92 | 67.6 |
| 7 | 3 | 2.2 | 95 | 69.9 |
| 8 | 6 | 4.4 | 101 | 74.3 |
| 10 | 7 | 5.1 | 108 | 79.4 |
| 12 | 6 | 4.4 | 114 | 83.8 |
| 13 | 3 | 2.2 | 117 | 86.0 |
| 14 | 2 | 1.5 | 119 | 87.5 |
| 15 | 5 | 3.7 | 124 | 91.2 |

gender group x3=1



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 16 | 1 | 0.7 | 125 | 91.9 |
| 17 | 1 | 0.7 | 126 | 92.6 |
| 20 | 3 | 2.2 | 129 | 94.9 |
| 24 | 2 | 1.5 | 131 | 96.3 |
| 28 | 1 | 0.7 | 132 | 97.1 |
| 30 | 1 | 0.7 | 133 | 97.8 |
| 36 | 1 | 0.7 | 134 | 98.5 |
| 48 | 1 | 0.7 | 135 | 99.3 |
| 78 | 1 | 0.7 | 136 | 100.0 |

Frequency Missing = 1

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 26 | 1.6923077 | 0.4706787 | 1.0000000 | 2.0000000 |
| X3 | 26 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X4 | 26 | 1.6923077 | 0.5491252 | 1.0000000 | 3.0000000 |
| X5 | 26 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X6 | 26 | 2.5000000 | 0.9899495 | 1.0000000 | 4.0000000 |
| X7 | 26 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X8 | 26 | 1.5384615 | 0.5083911 | 1.0000000 | 2.0000000 |
| X9 | 26 | 1.2692308 | 0.4523443 | 1.0000000 | 2.0000000 |
| X10 | 25 | 1.4800000 | 0.5099020 | 1.0000000 | 2.0000000 |
| X11 | 26 | 1.2692308 | 0.4523443 | 1.0000000 | 2.0000000 |
| X12 | 26 | 1.8461538 | 1.1204395 | 0 | 4.0000000 |
| X13 | 25 | 2.1600000 | 1.2476645 | 0 | 4.0000000 |
| X14 | 26 | 1.7692308 | 1.1766968 | 0 | 4.0000000 |
| X15 | 26 | 2.0000000 | 1.3856406 | 0 | 4.0000000 |
| X16 | 26 | 1.8461538 | 1.3473621 | 0 | 4.0000000 |
| X17 | 26 | 2.2692308 | 1.1851647 | 0 | 4.0000000 |
| X18 | 26 | 2.3461538 | 1.3249093 | 0 | 4.0000000 |
| X19 | 26 | 1.8076923 | 1.1668498 | 0 | 4.0000000 |
| X20 | 26 | 2.0000000 | 1.0954451 | 0 | 4.0000000 |
| X21 | 26 | 2.9230769 | 1.4120362 | 0 | 4.0000000 |
| X22 | 26 | 2.6153846 | 1.3878594 | 0 | 4.0000000 |
| X23 | 26 | 2.0000000 | 1.0954451 | 1.0000000 | 4.0000000 |
| X24 | 26 | 1.8076923 | 1.4427538 | 0 | 4.0000000 |
| X25 | 26 | 2.8076923 | 1.2335066 | 0 | 4.0000000 |
| X26 | 26 | 2.1923077 | 1.1320506 | 0 | 4.0000000 |
| X27 | 26 | 2.4615385 | 1.5292029 | 0 | 4.0000000 |
| X28 | 26 | 2.3461538 | 1.4406195 | 0 | 4.0000000 |
| X29 | 26 | 2.0000000 | 1.2328828 | 0 | 4.0000000 |
| X30 | 26 | 1.5769231 | 1.1374736 | 0 | 4.0000000 |
| X31 | 26 | 2.5769231 | 1.4191005 | 0 | 4.0000000 |
| X32 | 26 | 1.5384615 | 0.7605666 | 0 | 3.0000000 |
| X33 | 26 | 2.4230769 | 1.2384854 | 0 | 4.0000000 |
| X34 | 25 | 2.4000000 | 1.1547005 | 0 | 4.0000000 |
| X35 | 26 | 1.5769231 | 1.3014784 | 0 | 4.0000000 |
| X36 | 26 | 2.4615385 | 1.4486068 | 0 | 4.0000000 |
| X37 | 26 | 2.3846154 | 1.5511782 | 0 | 4.0000000 |
| X38 | 26 | 1.6923077 | 0.9281910 | 0 | 4.0000000 |
| X39 | 26 | 1.6538462 | 1.1293293 | 0 | 4.0000000 |
| X40 | 26 | 2.4615385 | 1.3335897 | 0 | 4.0000000 |
| X41 | 26 | 2.3076923 | 1.5170822 | 0 | 4.0000000 |
| X42 | 25 | 1.1600000 | 0.6244998 | 0 | 2.0000000 |
| X43 | 26 | 0.9615385 | 1.0384900 | 0 | 3.0000000 |
| X44 | 26 | 0.8461538 | 0.6748219 | 0 | 2.0000000 |
| X45 | 25 | 0.7600000 | 0.7234178 | 0 | 2.0000000 |
| X46 | 26 | 0.8076923 | 0.9389028 | 0 | 3.0000000 |
| X47 | 24 | 0.9583333 | 0.9990938 | 0 | 3.0000000 |
| X48 | 25 | 1.0000000 | 0.7071068 | 0 | 2.0000000 |
| X49 | 25 | 1.1600000 | 1.0279429 | 0 | 4.0000000 |
| X50 | 24 | 1.2083333 | 0.9315329 | 0 | 3.0000000 |
| X51 | 25 | 0.6400000 | 0.8602325 | 0 | 3.0000000 |
| X52 | 24 | 1.2916667 | 0.9545847 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 25 | 3.4400000 | 10.0377620 | 0 | 50.0000000 |
| X54 | 25 | 5.8400000 | 6.0393156 | 0 | 20.0000000 |



| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 8 | 30.8 | 8 | 30.8 |
| 2 | 18 | 69.2 | 26 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 26 | 100.0 | 26 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 34.6 | 9 | 34.6 |
| 2 | 16 | 61.5 | 25 | 96.2 |
| 3 | 1 | 3.8 | 26 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 26 | 100.0 | 26 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 5 | 19.2 | 5 | 19.2 |
| 2 | 7 | 26.9 | 12 | 46.2 |
| 3 | 10 | 38.5 | 22 | 84.6 |
| 4 | 4 | 15.4 | 26 | 100.0 |

| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 26 | 100.0 | 26 | 100.0 |



| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 12 | 46.2 | 12 | 46.2 |
| 2 | 14 | 53.8 | 26 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 19 | 73.1 | 19 | 73.1 |
| 2 | 7 | 26.9 | 26 | 100.0 |

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 13 | 52.0 | 13 | 52.0 |
| 2 | 12 | 48.0 | 25 | 100.0 |

Frequency Missing = 1

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 19 | 73.1 | 19 | 73.1 |
| 2 | 7 | 26.9 | 26 | 100.0 |

| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 6 | 23.1 | 9 | 34.6 |
| 2 | 12 | 46.2 | 21 | 80.8 |
| 3 | 2 | 7.7 | 23 | 88.5 |
| 4 | 3 | 11.5 | 26 | 100.0 |



| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 12.0 | 3 | 12.0 |
| 1 | 5 | 20.0 | 8 | 32.0 |
| 2 | 5 | 20.0 | 13 | 52.0 |
| 3 | 9 | 36.0 | 22 | 88.0 |
| 4 | 3 | 12.0 | 25 | 100.0 |

Frequency Missing = 1

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 19.2 | 5 | 19.2 |
| 1 | 5 | 19.2 | 10 | 38.5 |
| 2 | 8 | 30.8 | 18 | 69.2 |
| 3 | 7 | 26.9 | 25 | 96.2 |
| 4 | 1 | 3.8 | 26 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 5 | 19.2 | 5 | 19.2 |
| 1 | 5 | 19.2 | 10 | 38.5 |
| 2 | 5 | 19.2 | 15 | 57.7 |
| 3 | 7 | 26.9 | 22 | 84.6 |
| 4 | 4 | 15.4 | 26 | 100.0 |

| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 19.2 | 5 | 19.2 |
| 1 | 6 | 23.1 | 11 | 42.3 |
| 2 | 7 | 26.9 | 18 | 69.2 |
| 3 | 4 | 15.4 | 22 | 84.6 |
| 4 | 4 | 15.4 | 26 | 100.0 |



| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.8 | 1 | 3.8 |
| 1 | 8 | 30.8 | 9 | 34.6 |
| 2 | 4 | 15.4 | 13 | 50.0 |
| 3 | 9 | 34.6 | 22 | 84.6 |
| 4 | 4 | 15.4 | 26 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 4 | 15.4 | 7 | 26.9 |
| 2 | 6 | 23.1 | 13 | 50.0 |
| 3 | 7 | 26.9 | 20 | 76.9 |
| 4 | 6 | 23.1 | 26 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 9 | 34.6 | 12 | 46.2 |
| 2 | 6 | 23.1 | 18 | 69.2 |
| 3 | 6 | 23.1 | 24 | 92.3 |
| 4 | 2 | 7.7 | 26 | 100.0 |

| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.7 | 2 | 7.7 |
| 1 | 7 | 26.9 | 9 | 34.6 |
| 2 | 8 | 30.8 | 17 | 65.4 |
| 3 | 7 | 26.9 | 24 | 92.3 |
| 4 | 2 | 7.7 | 26 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.7 | 2 | 7.7 |
| 1 | 4 | 15.4 | 6 | 23.1 |
| 2 | 2 | 7.7 | 8 | 30.8 |
| 3 | 4 | 15.4 | 12 | 46.2 |
| 4 | 14 | 53.8 | 26 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 3 | 11.5 | 6 | 23.1 |
| 2 | 4 | 15.4 | 10 | 38.5 |
| 3 | 7 | 26.9 | 17 | 65.4 |
| 4 | 9 | 34.6 | 26 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 10 | 38.5 | 10 | 38.5 |
| 2 | 11 | 42.3 | 21 | 80.8 |
| 4 | 5 | 19.2 | 26 | 100.0 |

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 23.1 | 6 | 23.1 |
| 1 | 6 | 23.1 | 12 | 46.2 |
| 2 | 6 | 23.1 | 18 | 69.2 |
| 3 | 3 | 11.5 | 21 | 80.8 |
| 4 | 5 | 19.2 | 26 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.8 | 1 | 3.8 |
| 1 | 4 | 15.4 | 5 | 19.2 |
| 2 | 4 | 15.4 | 9 | 34.6 |
| 3 | 7 | 26.9 | 16 | 61.5 |
| 4 | 10 | 38.5 | 26 | 100.0 |



| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.7 | 2 | 7.7 |
| 1 | 4 | 15.4 | 6 | 23.1 |
| 2 | 11 | 42.3 | 17 | 65.4 |

| | | | | |
|---|---|---|---|---|
| 3 | 5 | 19.2 | 22 | 84.6 |
| 4 | 4 | 15.4 | 26 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 7 | 26.9 | 10 | 38.5 |
| 2 | 1 | 3.8 | 11 | 42.3 |
| 3 | 5 | 19.2 | 16 | 61.5 |
| 4 | 10 | 38.5 | 26 | 100.0 |

| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 15.4 | 4 | 15.4 |
| 1 | 4 | 15.4 | 8 | 30.8 |
| 2 | 4 | 15.4 | 12 | 46.2 |
| 3 | 7 | 26.9 | 19 | 73.1 |
| 4 | 7 | 26.9 | 26 | 100.0 |

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 15.4 | 4 | 15.4 |
| 1 | 5 | 19.2 | 9 | 34.6 |
| 2 | 6 | 23.1 | 15 | 57.7 |
| 3 | 9 | 34.6 | 24 | 92.3 |
| 4 | 2 | 7.7 | 26 | 100.0 |



| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 15.4 | 4 | 15.4 |
| 1 | 10 | 38.5 | 14 | 53.8 |
| 2 | 7 | 26.9 | 21 | 80.8 |
| 3 | 3 | 11.5 | 24 | 92.3 |
| 4 | 2 | 7.7 | 26 | 100.0 |

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 3 | 11.5 | 6 | 23.1 |
| 2 | 6 | 23.1 | 12 | 46.2 |
| 3 | 4 | 15.4 | 16 | 61.5 |
| 4 | 10 | 38.5 | 26 | 100.0 |

| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.7 | 2 | 7.7 |
| 1 | 10 | 38.5 | 12 | 46.2 |
| 2 | 12 | 46.2 | 24 | 92.3 |
| 3 | 2 | 7.7 | 26 | 100.0 |

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.7 | 2 | 7.7 |
| 1 | 4 | 15.4 | 6 | 23.1 |
| 2 | 7 | 26.9 | 13 | 50.0 |
| 3 | 7 | 26.9 | 20 | 76.9 |
| 4 | 6 | 23.1 | 26 | 100.0 |



| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 4.0 | 1 | 4.0 |
| 1 | 5 | 20.0 | 6 | 24.0 |
| 2 | 7 | 28.0 | 13 | 52.0 |
| 3 | 7 | 28.0 | 20 | 80.0 |
| 4 | 5 | 20.0 | 25 | 100.0 |

Frequency Missing = 1

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 23.1 | 6 | 23.1 |
| 1 | 8 | 30.8 | 14 | 53.8 |
| 2 | 6 | 23.1 | 20 | 76.9 |
| 3 | 3 | 11.5 | 23 | 88.5 |
| 4 | 3 | 11.5 | 26 | 100.0 |

| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 5 | 19.2 | 8 | 30.8 |
| 2 | 4 | 15.4 | 12 | 46.2 |
| 3 | 5 | 19.2 | 17 | 65.4 |
| 4 | 9 | 34.6 | 26 | 100.0 |

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 5 | 19.2 | 5 | 19.2 |
| 1 | 2 | 7.7 | 7 | 26.9 |
| 2 | 7 | 26.9 | 14 | 53.8 |
| 3 | 2 | 7.7 | 16 | 61.5 |
| 4 | 10 | 38.5 | 26 | 100.0 |



| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 6 | 23.1 | 9 | 34.6 |
| 2 | 14 | 53.8 | 23 | 88.5 |
| 3 | 2 | 7.7 | 25 | 96.2 |
| 4 | 1 | 3.8 | 26 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.8 | 1 | 3.8 |
| 1 | 16 | 61.5 | 17 | 65.4 |
| 2 | 3 | 11.5 | 20 | 76.9 |
| 3 | 3 | 11.5 | 23 | 88.5 |
| 4 | 3 | 11.5 | 26 | 100.0 |

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 11.5 | 3 | 11.5 |
| 1 | 3 | 11.5 | 6 | 23.1 |
| 2 | 6 | 23.1 | 12 | 46.2 |
| 3 | 7 | 26.9 | 19 | 73.1 |
| 4 | 7 | 26.9 | 26 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 19.2 | 5 | 19.2 |
| 1 | 4 | 15.4 | 9 | 34.6 |
| 2 | 2 | 7.7 | 11 | 42.3 |
| 3 | 8 | 30.8 | 19 | 73.1 |
| 4 | 7 | 26.9 | 26 | 100.0 |



| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 12.0 | 3 | 12.0 |
| 1 | 15 | 60.0 | 18 | 72.0 |
| 2 | 7 | 28.0 | 25 | 100.0 |

Frequency Missing = 1

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 42.3 | 11 | 42.3 |
| 1 | 8 | 30.8 | 19 | 73.1 |
| 2 | 4 | 15.4 | 23 | 88.5 |
| 3 | 3 | 11.5 | 26 | 100.0 |

| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 30.8 | 8 | 30.8 |
| 1 | 14 | 53.8 | 22 | 84.6 |
| 2 | 4 | 15.4 | 26 | 100.0 |

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 40.0 | 10 | 40.0 |
| 1 | 11 | 44.0 | 21 | 84.0 |
| 2 | 4 | 16.0 | 25 | 100.0 |

Frequency Missing = 1

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 50.0 | 13 | 50.0 |
| 1 | 6 | 23.1 | 19 | 73.1 |
| 2 | 6 | 23.1 | 25 | 96.2 |
| 3 | 1 | 3.8 | 26 | 100.0 |



| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 41.7 | 10 | 41.7 |
| 1 | 7 | 29.2 | 17 | 70.8 |
| 2 | 5 | 20.8 | 22 | 91.7 |
| 3 | 2 | 8.3 | 24 | 100.0 |

Frequency Missing = 2

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 24.0 | 6 | 24.0 |
| 1 | 13 | 52.0 | 19 | 76.0 |
| 2 | 6 | 24.0 | 25 | 100.0 |

Frequency Missing = 1

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 28.0 | 7 | 28.0 |
| 1 | 10 | 40.0 | 17 | 68.0 |
| 2 | 6 | 24.0 | 23 | 92.0 |
| 3 | 1 | 4.0 | 24 | 96.0 |
| 4 | 1 | 4.0 | 25 | 100.0 |

Frequency Missing = 1

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 25.0 | 6 | 25.0 |
| 1 | 9 | 37.5 | 15 | 62.5 |
| 2 | 7 | 29.2 | 22 | 91.7 |
| 3 | 2 | 8.3 | 24 | 100.0 |

Frequency Missing = 2



| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 52.0 | 13 | 52.0 |
| 1 | 10 | 40.0 | 23 | 92.0 |
| 3 | 2 | 8.0 | 25 | 100.0 |

Frequency Missing = 1

| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 20.8 | 5 | 20.8 |
| 1 | 10 | 41.7 | 15 | 62.5 |
| 2 | 6 | 25.0 | 21 | 87.5 |
| 3 | 3 | 12.5 | 24 | 100.0 |

Frequency Missing = 2

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 60.0 | 15 | 60.0 |
| 1 | 2 | 8.0 | 17 | 68.0 |
| 2 | 1 | 4.0 | 18 | 72.0 |
| 3 | 2 | 8.0 | 20 | 80.0 |
| 4 | 1 | 4.0 | 21 | 84.0 |

| | | | | |
|---|---|---|---|---|
| 5 | 1 | 4.0 | 22 | 88.0 |
| 7 | 1 | 4.0 | 23 | 92.0 |
| 10 | 1 | 4.0 | 24 | 96.0 |
| 50 | 1 | 4.0 | 25 | 100.0 |

Frequency Missing = 1

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 32.0 | 8 | 32.0 |
| 1 | 1 | 4.0 | 9 | 36.0 |
| 2 | 1 | 4.0 | 10 | 40.0 |
| 3 | 2 | 8.0 | 12 | 48.0 |
| 5 | 2 | 8.0 | 14 | 56.0 |
| 6 | 3 | 12.0 | 17 | 68.0 |
| 10 | 1 | 4.0 | 18 | 72.0 |
| 12 | 2 | 8.0 | 20 | 80.0 |



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 13 | 2 | 8.0 | 22 | 88.0 |
| 14 | 1 | 4.0 | 23 | 92.0 |
| 15 | 1 | 4.0 | 24 | 96.0 |
| 20 | 1 | 4.0 | 25 | 100.0 |

Frequency Missing = 1

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 75 | 1.6266667 | 0.4869467 | 1.0000000 | 2.0000000 |
| X3 | 75 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X4 | 75 | 2.0666667 | 0.3796632 | 1.0000000 | 4.0000000 |
| X5 | 75 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X6 | 74 | 4.8243243 | 0.6049591 | 2.0000000 | 5.0000000 |
| X7 | 75 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X8 | 75 | 1.7333333 | 0.4745790 | 1.0000000 | 3.0000000 |
| X9 | 72 | 1.1805556 | 0.3873488 | 1.0000000 | 2.0000000 |
| X10 | 75 | 1.4533333 | 0.5011698 | 1.0000000 | 2.0000000 |
| X11 | 75 | 1.2800000 | 0.4520225 | 1.0000000 | 2.0000000 |
| X12 | 74 | 1.7702703 | 1.1413438 | 0 | 4.0000000 |
| X13 | 75 | 2.0266667 | 1.2942005 | 0 | 4.0000000 |
| X14 | 75 | 1.9466667 | 1.3445921 | 0 | 4.0000000 |
| X15 | 75 | 1.7466667 | 1.4055232 | 0 | 4.0000000 |
| X16 | 75 | 1.4533333 | 1.2975375 | 0 | 4.0000000 |
| X17 | 75 | 2.0666667 | 1.3589874 | 0 | 4.0000000 |
| X18 | 75 | 1.4266667 | 1.1410443 | 0 | 4.0000000 |
| X19 | 75 | 1.8533333 | 1.2046457 | 0 | 4.0000000 |
| X20 | 75 | 1.6400000 | 1.1813872 | 0 | 4.0000000 |
| X21 | 75 | 2.6666667 | 1.2339054 | 0 | 4.0000000 |
| X22 | 75 | 2.1200000 | 1.3351789 | 0 | 4.0000000 |
| X23 | 75 | 1.5600000 | 1.2546131 | 0 | 4.0000000 |
| X24 | 75 | 1.7200000 | 1.2793579 | 0 | 4.0000000 |
| X25 | 75 | 2.7600000 | 1.1950348 | 0 | 4.0000000 |
| X26 | 75 | 1.8666667 | 1.1547005 | 0 | 4.0000000 |
| X27 | 75 | 2.2000000 | 1.4704292 | 0 | 4.0000000 |
| X28 | 75 | 2.1333333 | 1.3884984 | 0 | 4.0000000 |
| X29 | 75 | 1.3466667 | 1.3605775 | 0 | 4.0000000 |
| X30 | 75 | 1.3333333 | 1.0822066 | 0 | 4.0000000 |
| X31 | 75 | 2.8266667 | 1.3087371 | 0 | 4.0000000 |
| X32 | 75 | 1.6533333 | 1.1681972 | 0 | 4.0000000 |
| X33 | 75 | 2.2266667 | 1.3312596 | 0 | 4.0000000 |
| X34 | 75 | 1.8933333 | 1.3810820 | 0 | 4.0000000 |
| X35 | 75 | 2.0266667 | 1.3353138 | 0 | 4.0000000 |
| X36 | 74 | 2.3243243 | 1.1360603 | 0 | 4.0000000 |
| X37 | 75 | 2.2000000 | 1.5421992 | 0 | 4.0000000 |
| X38 | 75 | 1.7733333 | 1.1219353 | 0 | 4.0000000 |
| X39 | 75 | 1.5466667 | 0.9766647 | 0 | 4.0000000 |
| X40 | 75 | 2.3333333 | 1.2979540 | 0 | 4.0000000 |
| X41 | 75 | 2.1866667 | 1.5129471 | 0 | 4.0000000 |
| X42 | 74 | 1.2837838 | 0.8839555 | 0 | 4.0000000 |
| X43 | 74 | 1.0135135 | 0.9861124 | 0 | 3.0000000 |
| X44 | 74 | 0.8108108 | 0.8053873 | 0 | 3.0000000 |
| X45 | 74 | 0.7567568 | 0.7905401 | 0 | 3.0000000 |
| X46 | 74 | 1.3243243 | 0.9946171 | 0 | 3.0000000 |
| X47 | 74 | 0.9459459 | 1.0188886 | 0 | 3.0000000 |
| X48 | 74 | 1.1891892 | 0.7342068 | 0 | 3.0000000 |
| X49 | 74 | 0.9189189 | 0.7541076 | 0 | 3.0000000 |
| X50 | 74 | 1.3378378 | 1.0105882 | 0 | 3.0000000 |
| X51 | 74 | 0.6486486 | 0.9990740 | 0 | 3.0000000 |
| X52 | 74 | 1.9594595 | 0.9571532 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 75 | 2.6400000 | 5.0554760 | 0 | 32.0000000 |
| X54 | 75 | 6.7600000 | 11.4665671 | 0 | 78.0000000 |



| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 28 | 37.3 | 28 | 37.3 |
| 2 | 47 | 62.7 | 75 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 75 | 100.0 | 75 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 2.7 | 2 | 2.7 |
| 2 | 67 | 89.3 | 69 | 92.0 |
| 3 | 5 | 6.7 | 74 | 98.7 |
| 4 | 1 | 1.3 | 75 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 75 | 100.0 | 75 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 2 | 2.7 | 2 | 2.7 |
| 3 | 2 | 2.7 | 4 | 5.4 |
| 4 | 3 | 4.1 | 7 | 9.5 |
| 5 | 67 | 90.5 | 74 | 100.0 |

Frequency Missing = 1



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 75 | 100.0 | 75 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 21 | 28.0 | 21 | 28.0 |
| 2 | 53 | 70.7 | 74 | 98.7 |
| 3 | 1 | 1.3 | 75 | 100.0 |

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X9 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 1 | 59 | 81.9 | 59 | 81.9 |
| 2 | 13 | 18.1 | 72 | 100.0 |

Frequency Missing = 3

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 41 | 54.7 | 41 | 54.7 |
| 2 | 34 | 45.3 | 75 | 100.0 |

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 54 | 72.0 | 54 | 72.0 |
| 2 | 21 | 28.0 | 75 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 14.9 | 11 | 14.9 |
| 1 | 21 | 28.4 | 32 | 43.2 |
| 2 | 20 | 27.0 | 52 | 70.3 |
| 3 | 18 | 24.3 | 70 | 94.6 |
| 4 | 4 | 5.4 | 74 | 100.0 |

Frequency Missing = 1

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 16.0 | 12 | 16.0 |
| 1 | 13 | 17.3 | 25 | 33.3 |
| 2 | 23 | 30.7 | 48 | 64.0 |
| 3 | 15 | 20.0 | 63 | 84.0 |
| 4 | 12 | 16.0 | 75 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 17.3 | 13 | 17.3 |
| 1 | 19 | 25.3 | 32 | 42.7 |
| 2 | 13 | 17.3 | 45 | 60.0 |
| 3 | 19 | 25.3 | 64 | 85.3 |
| 4 | 11 | 14.7 | 75 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 25.3 | 19 | 25.3 |
| 1 | 17 | 22.7 | 36 | 48.0 |
| 2 | 14 | 18.7 | 50 | 66.7 |
| 3 | 14 | 18.7 | 64 | 85.3 |
| 4 | 11 | 14.7 | 75 | 100.0 |



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 30.7 | 23 | 30.7 |
| 1 | 19 | 25.3 | 42 | 56.0 |
| 2 | 15 | 20.0 | 57 | 76.0 |
| 3 | 12 | 16.0 | 69 | 92.0 |
| 4 | 6 | 8.0 | 75 | 100.0 |

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 18.7 | 14 | 18.7 |
| 1 | 12 | 16.0 | 26 | 34.7 |
| 2 | 16 | 21.3 | 42 | 56.0 |
| 3 | 21 | 28.0 | 63 | 84.0 |
| 4 | 12 | 16.0 | 75 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 26.7 | 20 | 26.7 |
| 1 | 19 | 25.3 | 39 | 52.0 |
| 2 | 23 | 30.7 | 62 | 82.7 |
| 3 | 10 | 13.3 | 72 | 96.0 |
| 4 | 3 | 4.0 | 75 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 12.0 | 9 | 12.0 |
| 1 | 25 | 33.3 | 34 | 45.3 |
| 2 | 17 | 22.7 | 51 | 68.0 |
| 3 | 16 | 21.3 | 67 | 89.3 |
| 4 | 8 | 10.7 | 75 | 100.0 |



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 17.3 | 13 | 17.3 |
| 1 | 25 | 33.3 | 38 | 50.7 |
| 2 | 19 | 25.3 | 57 | 76.0 |

| | | | | |
|---|---|---|---|---|
| 3 | 12 | 16.0 | 69 | 92.0 |
| 4 | 6 | 8.0 | 75 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 9.3 | 7 | 9.3 |
| 1 | 4 | 5.3 | 11 | 14.7 |
| 2 | 19 | 25.3 | 30 | 40.0 |
| 3 | 22 | 29.3 | 52 | 69.3 |
| 4 | 23 | 30.7 | 75 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 16.0 | 12 | 16.0 |
| 1 | 14 | 18.7 | 26 | 34.7 |
| 2 | 14 | 18.7 | 40 | 53.3 |
| 3 | 23 | 30.7 | 63 | 84.0 |
| 4 | 12 | 16.0 | 75 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 24.0 | 18 | 24.0 |
| 1 | 22 | 29.3 | 40 | 53.3 |
| 2 | 16 | 21.3 | 56 | 74.7 |
| 3 | 13 | 17.3 | 69 | 92.0 |
| 4 | 6 | 8.0 | 75 | 100.0 |



| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 20.0 | 15 | 20.0 |
| 1 | 20 | 26.7 | 35 | 46.7 |
| 2 | 20 | 26.7 | 55 | 73.3 |
| 3 | 11 | 14.7 | 66 | 88.0 |
| 4 | 9 | 12.0 | 75 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 6.7 | 5 | 6.7 |
| 1 | 5 | 6.7 | 10 | 13.3 |
| 2 | 19 | 25.3 | 29 | 38.7 |
| 3 | 20 | 26.7 | 49 | 65.3 |
| 4 | 26 | 34.7 | 75 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 13.3 | 10 | 13.3 |
| 1 | 18 | 24.0 | 28 | 37.3 |
| 2 | 26 | 34.7 | 54 | 72.0 |
| 3 | 14 | 18.7 | 68 | 90.7 |
| 4 | 7 | 9.3 | 75 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 17.3 | 13 | 17.3 |
| 1 | 14 | 18.7 | 27 | 36.0 |
| 2 | 14 | 18.7 | 41 | 54.7 |
| 3 | 13 | 17.3 | 54 | 72.0 |
| 4 | 21 | 28.0 | 75 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 16.0 | 12 | 16.0 |
| 1 | 14 | 18.7 | 26 | 34.7 |
| 2 | 18 | 24.0 | 44 | 58.7 |
| 3 | 14 | 18.7 | 58 | 77.3 |
| 4 | 17 | 22.7 | 75 | 100.0 |

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 27 | 36.0 | 27 | 36.0 |
| 1 | 21 | 28.0 | 48 | 64.0 |
| 2 | 8 | 10.7 | 56 | 74.7 |
| 3 | 12 | 16.0 | 68 | 90.7 |
| 4 | 7 | 9.3 | 75 | 100.0 |

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 25.3 | 19 | 25.3 |
| 1 | 26 | 34.7 | 45 | 60.0 |
| 2 | 18 | 24.0 | 63 | 84.0 |
| 3 | 10 | 13.3 | 73 | 97.3 |
| 4 | 2 | 2.7 | 75 | 100.0 |

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 6.7 | 5 | 6.7 |
| 1 | 10 | 13.3 | 15 | 20.0 |
| 2 | 11 | 14.7 | 26 | 34.7 |

| | | | | |
|---|---|---|---|---|
| 3 | 16 | 21.3 | 42 | 56.0 |
| 4 | 33 | 44.0 | 75 | 100.0 |



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 14.7 | 11 | 14.7 |
| 1 | 29 | 38.7 | 40 | 53.3 |
| 2 | 16 | 21.3 | 56 | 74.7 |
| 3 | 13 | 17.3 | 69 | 92.0 |
| 4 | 6 | 8.0 | 75 | 100.0 |

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 13.3 | 10 | 13.3 |
| 1 | 12 | 16.0 | 22 | 29.3 |
| 2 | 21 | 28.0 | 43 | 57.3 |
| 3 | 15 | 20.0 | 58 | 77.3 |
| 4 | 17 | 22.7 | 75 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 18.7 | 14 | 18.7 |
| 1 | 20 | 26.7 | 34 | 45.3 |
| 2 | 14 | 18.7 | 48 | 64.0 |
| 3 | 14 | 18.7 | 62 | 82.7 |
| 4 | 13 | 17.3 | 75 | 100.0 |

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 13.3 | 10 | 13.3 |
| 1 | 20 | 26.7 | 30 | 40.0 |
| 2 | 18 | 24.0 | 48 | 64.0 |
| 3 | 12 | 16.0 | 60 | 80.0 |
| 4 | 15 | 20.0 | 75 | 100.0 |



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 2.7 | 2 | 2.7 |
| 1 | 18 | 24.3 | 20 | 27.0 |
| 2 | 23 | 31.1 | 43 | 58.1 |
| 3 | 16 | 21.6 | 59 | 79.7 |
| 4 | 15 | 20.3 | 74 | 100.0 |

Frequency Missing = 1

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 16 | 21.3 | 16 | 21.3 |
| 1 | 12 | 16.0 | 28 | 37.3 |
| 2 | 10 | 13.3 | 38 | 50.7 |
| 3 | 15 | 20.0 | 53 | 70.7 |
| 4 | 22 | 29.3 | 75 | 100.0 |

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 16.0 | 12 | 16.0 |
| 1 | 17 | 22.7 | 29 | 38.7 |
| 2 | 26 | 34.7 | 55 | 73.3 |
| 3 | 16 | 21.3 | 71 | 94.7 |
| 4 | 4 | 5.3 | 75 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 2.7 | 2 | 2.7 |
| 1 | 49 | 65.3 | 51 | 68.0 |
| 2 | 10 | 13.3 | 61 | 81.3 |
| 3 | 9 | 12.0 | 70 | 93.3 |
| 4 | 5 | 6.7 | 75 | 100.0 |



| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 8.0 | 6 | 8.0 |
| 1 | 20 | 26.7 | 26 | 34.7 |
| 2 | 8 | 10.7 | 34 | 45.3 |
| 3 | 25 | 33.3 | 59 | 78.7 |
| 4 | 16 | 21.3 | 75 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 18.7 | 14 | 18.7 |
| 1 | 16 | 21.3 | 30 | 40.0 |
| 2 | 8 | 10.7 | 38 | 50.7 |
| 3 | 16 | 21.3 | 54 | 72.0 |
| 4 | 21 | 28.0 | 75 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 12 | 16.2 | 12 | 16.2 |
| 1 | 36 | 48.6 | 48 | 64.9 |
| 2 | 21 | 28.4 | 69 | 93.2 |
| 3 | 3 | 4.1 | 72 | 97.3 |
| 4 | 2 | 2.7 | 74 | 100.0 |

Frequency Missing = 1

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 27 | 36.5 | 27 | 36.5 |
| 1 | 27 | 36.5 | 54 | 73.0 |
| 2 | 12 | 16.2 | 66 | 89.2 |
| 3 | 8 | 10.8 | 74 | 100.0 |

Frequency Missing = 1



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 29 | 39.2 | 29 | 39.2 |
| 1 | 33 | 44.6 | 62 | 83.8 |
| 2 | 9 | 12.2 | 71 | 95.9 |
| 3 | 3 | 4.1 | 74 | 100.0 |

Frequency Missing = 1

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 33 | 44.6 | 33 | 44.6 |
| 1 | 27 | 36.5 | 60 | 81.1 |
| 2 | 13 | 17.6 | 73 | 98.6 |
| 3 | 1 | 1.4 | 74 | 100.0 |

Frequency Missing = 1

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 23.0 | 17 | 23.0 |
| 1 | 27 | 36.5 | 44 | 59.5 |
| 2 | 19 | 25.7 | 63 | 85.1 |
| 3 | 11 | 14.9 | 74 | 100.0 |

Frequency Missing = 1

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 31 | 41.9 | 31 | 41.9 |
| 1 | 25 | 33.8 | 56 | 75.7 |
| 2 | 9 | 12.2 | 65 | 87.8 |
| 3 | 9 | 12.2 | 74 | 100.0 |

Frequency Missing = 1



| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 16.2 | 12 | 16.2 |
| 1 | 38 | 51.4 | 50 | 67.6 |
| 2 | 22 | 29.7 | 72 | 97.3 |
| 3 | 2 | 2.7 | 74 | 100.0 |

Frequency Missing = 1

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 31.1 | 23 | 31.1 |
| 1 | 35 | 47.3 | 58 | 78.4 |
| 2 | 15 | 20.3 | 73 | 98.6 |
| 3 | 1 | 1.4 | 74 | 100.0 |

Frequency Missing = 1

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 24.3 | 18 | 24.3 |
| 1 | 24 | 32.4 | 42 | 56.8 |
| 2 | 21 | 28.4 | 63 | 85.1 |
| 3 | 11 | 14.9 | 74 | 100.0 |

Frequency Missing = 1

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 47 | 63.5 | 47 | 63.5 |
| 1 | 13 | 17.6 | 60 | 81.1 |
| 2 | 7 | 9.5 | 67 | 90.5 |
| 3 | 7 | 9.5 | 74 | 100.0 |

Frequency Missing = 1



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 5 | 6.8 | 5 | 6.8 |
| 1 | 20 | 27.0 | 25 | 33.8 |
| 2 | 22 | 29.7 | 47 | 63.5 |
| 3 | 27 | 36.5 | 74 | 100.0 |

Frequency Missing = 1

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 37 | 49.3 | 37 | 49.3 |
| 1 | 5 | 6.7 | 42 | 56.0 |
| 2 | 10 | 13.3 | 52 | 69.3 |
| 3 | 6 | 8.0 | 58 | 77.3 |
| 4 | 3 | 4.0 | 61 | 81.3 |
| 5 | 4 | 5.3 | 65 | 86.7 |
| 6 | 2 | 2.7 | 67 | 89.3 |
| 7 | 2 | 2.7 | 69 | 92.0 |
| 8 | 1 | 1.3 | 70 | 93.3 |
| 10 | 2 | 2.7 | 72 | 96.0 |
| 15 | 1 | 1.3 | 73 | 97.3 |
| 22 | 1 | 1.3 | 74 | 98.7 |
| 32 | 1 | 1.3 | 75 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 40.0 | 30 | 40.0 |
| 2 | 4 | 5.3 | 34 | 45.3 |
| 3 | 2 | 2.7 | 36 | 48.0 |
| 4 | 2 | 2.7 | 38 | 50.7 |
| 5 | 4 | 5.3 | 42 | 56.0 |
| 6 | 8 | 10.7 | 50 | 66.7 |
| 7 | 3 | 4.0 | 53 | 70.7 |
| 8 | 5 | 6.7 | 58 | 77.3 |
| 10 | 3 | 4.0 | 61 | 81.3 |
| 12 | 3 | 4.0 | 64 | 85.3 |
| 13 | 1 | 1.3 | 65 | 86.7 |
| 15 | 2 | 2.7 | 67 | 89.3 |
| 16 | 1 | 1.3 | 68 | 90.7 |
| 17 | 1 | 1.3 | 69 | 92.0 |
| 20 | 2 | 2.7 | 71 | 94.7 |
| 24 | 2 | 2.7 | 73 | 97.3 |
| 48 | 1 | 1.3 | 74 | 98.7 |
| 78 | 1 | 1.3 | 75 | 100.0 |

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 18 | 1.5000000 | 0.5144958 | 1.0000000 | 2.0000000 |
| X3 | 18 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X4 | 18 | 2.9444444 | 0.4161762 | 2.0000000 | 4.0000000 |
| X5 | 18 | 3.0000000 | 0 | 3.0000000 | 3.0000000 |
| X6 | 18 | 4.8333333 | 0.5144958 | 3.0000000 | 5.0000000 |
| X7 | 18 | 1.7777778 | 1.0602750 | 1.0000000 | 4.0000000 |
| X8 | 18 | 1.3333333 | 0.4850713 | 1.0000000 | 2.0000000 |
| X9 | 18 | 1.1111111 | 0.3233808 | 1.0000000 | 2.0000000 |
| X10 | 18 | 1.2222222 | 0.4277926 | 1.0000000 | 2.0000000 |
| X11 | 18 | 1.4444444 | 0.5113100 | 1.0000000 | 2.0000000 |
| X12 | 18 | 2.0000000 | 1.2366939 | 0 | 4.0000000 |
| X13 | 18 | 2.0555556 | 1.3491706 | 0 | 4.0000000 |
| X14 | 18 | 1.4444444 | 0.9835244 | 0 | 3.0000000 |
| X15 | 18 | 2.2222222 | 1.4371359 | 0 | 4.0000000 |
| X16 | 18 | 1.7777778 | 1.5167906 | 0 | 4.0000000 |
| X17 | 18 | 2.3888889 | 1.2897281 | 0 | 4.0000000 |
| X18 | 18 | 1.5000000 | 1.1504475 | 0 | 3.0000000 |
| X19 | 18 | 1.7777778 | 1.3956047 | 0 | 4.0000000 |
| X20 | 18 | 1.5000000 | 1.4652846 | 0 | 4.0000000 |
| X21 | 18 | 2.7777778 | 1.2628425 | 1.0000000 | 4.0000000 |
| X22 | 18 | 2.7222222 | 1.1785113 | 0 | 4.0000000 |
| X23 | 18 | 1.7222222 | 1.4061025 | 0 | 4.0000000 |
| X24 | 18 | 1.7777778 | 1.3956047 | 0 | 4.0000000 |
| X25 | 18 | 2.8333333 | 1.2947859 | 0 | 4.0000000 |
| X26 | 18 | 1.7222222 | 1.0178152 | 0 | 4.0000000 |
| X27 | 18 | 2.4444444 | 1.5038078 | 0 | 4.0000000 |
| X28 | 18 | 2.2222222 | 1.4775001 | 0 | 4.0000000 |
| X29 | 18 | 1.7777778 | 1.3956047 | 0 | 4.0000000 |
| X30 | 18 | 1.2222222 | 1.1659662 | 0 | 4.0000000 |
| X31 | 17 | 2.7647059 | 1.5218990 | 0 | 4.0000000 |
| X32 | 18 | 1.7222222 | 1.1785113 | 0 | 3.0000000 |
| X33 | 18 | 2.4444444 | 1.5424283 | 0 | 4.0000000 |
| X34 | 18 | 2.0555556 | 1.4741786 | 0 | 4.0000000 |
| X35 | 17 | 1.9411765 | 1.5600716 | 0 | 4.0000000 |
| X36 | 18 | 2.3888889 | 1.2432826 | 0 | 4.0000000 |
| X37 | 18 | 1.2222222 | 1.6647047 | 0 | 4.0000000 |
| X38 | 18 | 1.4444444 | 1.1490263 | 0 | 3.0000000 |
| X39 | 18 | 1.6111111 | 0.9785276 | 1.0000000 | 4.0000000 |
| X40 | 18 | 2.3888889 | 1.1950333 | 0 | 4.0000000 |
| X41 | 18 | 2.2777778 | 1.5645167 | 0 | 4.0000000 |
| X42 | 18 | 1.3333333 | 0.7669650 | 0 | 3.0000000 |
| X43 | 18 | 0.9444444 | 0.9983647 | 0 | 3.0000000 |
| X44 | 17 | 0.7058824 | 0.4696682 | 0 | 1.0000000 |
| X45 | 18 | 0.7777778 | 0.6467617 | 0 | 2.0000000 |
| X46 | 18 | 1.1666667 | 0.9851844 | 0 | 3.0000000 |
| X47 | 18 | 0.7222222 | 0.8264421 | 0 | 3.0000000 |
| X48 | 18 | 1.3333333 | 0.8401681 | 0 | 3.0000000 |
| X49 | 18 | 1.0555556 | 1.0556416 | 0 | 3.0000000 |
| X50 | 18 | 1.1666667 | 0.9235481 | 0 | 3.0000000 |
| X51 | 18 | 0.3888889 | 0.6076850 | 0 | 2.0000000 |
| X52 | 18 | 1.6111111 | 1.1447522 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 18 | 2.0000000 | 2.5437351 | 0 | 8.0000000 |
| X54 | 18 | 8.8888889 | 9.8152875 | 0 | 36.0000000 |



| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 9 | 50.0 | 9 | 50.0 |
| 2 | 9 | 50.0 | 18 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 18 | 100.0 | 18 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 2 | 11.1 | 2 | 11.1 |
| 3 | 15 | 83.3 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 3 | 18 | 100.0 | 18 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 3 | 1 | 5.6 | 1 | 5.6 |
| 4 | 1 | 5.6 | 2 | 11.1 |
| 5 | 16 | 88.9 | 18 | 100.0 |

| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 10 | 55.6 | 10 | 55.6 |
| 2 | 4 | 22.2 | 14 | 77.8 |
| 3 | 2 | 11.1 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |



| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 12 | 66.7 | 12 | 66.7 |
| 2 | 6 | 33.3 | 18 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 16 | 88.9 | 16 | 88.9 |

| | | | | |
|---|---|---|---|---|
| 2 | 2 | 11.1 | 18 | 100.0 |

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 14 | 77.8 | 14 | 77.8 |
| 2 | 4 | 22.2 | 18 | 100.0 |

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 10 | 55.6 | 10 | 55.6 |
| 2 | 8 | 44.4 | 18 | 100.0 |

| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 3 | 16.7 | 6 | 33.3 |
| 2 | 4 | 22.2 | 10 | 55.6 |
| 3 | 7 | 38.9 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |



| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 3 | 16.7 | 6 | 33.3 |
| 2 | 5 | 27.8 | 11 | 61.1 |
| 3 | 4 | 22.2 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 7 | 38.9 | 10 | 55.6 |
| 2 | 5 | 27.8 | 15 | 83.3 |
| 3 | 3 | 16.7 | 18 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 1 | 5.6 | 5 | 27.8 |
| 2 | 3 | 16.7 | 8 | 44.4 |
| 3 | 7 | 38.9 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 3 | 16.7 | 8 | 44.4 |
| 2 | 5 | 27.8 | 13 | 72.2 |
| 3 | 1 | 5.6 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |



| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 4 | 22.2 | 5 | 27.8 |
| 2 | 5 | 27.8 | 10 | 55.6 |
| 3 | 3 | 16.7 | 13 | 72.2 |
| 4 | 5 | 27.8 | 18 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 3 | 16.7 | 8 | 44.4 |
| 2 | 6 | 33.3 | 14 | 77.8 |
| 3 | 4 | 22.2 | 18 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 4 | 22.2 | 8 | 44.4 |
| 2 | 5 | 27.8 | 13 | 72.2 |
| 3 | 2 | 11.1 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 5 | 27.8 | 11 | 61.1 |
| 2 | 1 | 5.6 | 12 | 66.7 |
| 3 | 4 | 22.2 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |



| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 4 | 22.2 | 4 | 22.2 |
| 2 | 4 | 22.2 | 8 | 44.4 |
| 3 | 2 | 11.1 | 10 | 55.6 |
| 4 | 8 | 44.4 | 18 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 1 | 5.6 | 2 | 11.1 |
| 2 | 6 | 33.3 | 8 | 44.4 |
| 3 | 4 | 22.2 | 12 | 66.7 |
| 4 | 6 | 33.3 | 18 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 5 | 27.8 | 9 | 50.0 |
| 2 | 4 | 22.2 | 13 | 72.2 |
| 3 | 2 | 11.1 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 5 | 27.8 | 9 | 50.0 |
| 2 | 2 | 11.1 | 11 | 61.1 |
| 3 | 5 | 27.8 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |



| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 2 | 11.1 | 3 | 16.7 |
| 2 | 4 | 22.2 | 7 | 38.9 |
| 3 | 3 | 16.7 | 10 | 55.6 |
| 4 | 8 | 44.4 | 18 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 8 | 44.4 | 9 | 50.0 |
| 2 | 5 | 27.8 | 14 | 77.8 |
| 3 | 3 | 16.7 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 2 | 11.1 | 5 | 27.8 |
| 2 | 3 | 16.7 | 8 | 44.4 |
| 3 | 4 | 22.2 | 12 | 66.7 |
| 4 | 6 | 33.3 | 18 | 100.0 |

| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 3 | 16.7 | 6 | 33.3 |
| 2 | 4 | 22.2 | 10 | 55.6 |
| 3 | 3 | 16.7 | 13 | 72.2 |
| 4 | 5 | 27.8 | 18 | 100.0 |



| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 5 | 27.8 | 9 | 50.0 |
| 2 | 2 | 11.1 | 11 | 61.1 |
| 3 | 5 | 27.8 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 8 | 44.4 | 13 | 72.2 |
| 2 | 2 | 11.1 | 15 | 83.3 |
| 3 | 2 | 11.1 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 17.6 | 3 | 17.6 |
| 2 | 3 | 17.6 | 6 | 35.3 |
| 3 | 3 | 17.6 | 9 | 52.9 |
| 4 | 8 | 47.1 | 17 | 100.0 |

Frequency Missing = 1

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X32 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 3 | 16.7 | 7 | 38.9 |
| 2 | 5 | 27.8 | 12 | 66.7 |
| 3 | 6 | 33.3 | 18 | 100.0 |



| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 2 | 11.1 | 5 | 27.8 |
| 2 | 4 | 22.2 | 9 | 50.0 |
| 3 | 2 | 11.1 | 11 | 61.1 |
| 4 | 7 | 38.9 | 18 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 2 | 11.1 | 6 | 33.3 |
| 2 | 5 | 27.8 | 11 | 61.1 |
| 3 | 3 | 16.7 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 23.5 | 4 | 23.5 |
| 1 | 4 | 23.5 | 8 | 47.1 |
| 2 | 2 | 11.8 | 10 | 58.8 |
| 3 | 3 | 17.6 | 13 | 76.5 |
| 4 | 4 | 23.5 | 17 | 100.0 |

Frequency Missing = 1

| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 4 | 22.2 | 5 | 27.8 |
| 2 | 4 | 22.2 | 9 | 50.0 |
| 3 | 5 | 27.8 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |



| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 55.6 | 10 | 55.6 |
| 1 | 2 | 11.1 | 12 | 66.7 |

| | | | | |
|---|---|---|---|---|
| 2 | 2 | 11.1 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 4 | 22.2 | 9 | 50.0 |
| 2 | 5 | 27.8 | 14 | 77.8 |
| 3 | 4 | 22.2 | 18 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 12 | 66.7 | 12 | 66.7 |
| 2 | 2 | 11.1 | 14 | 77.8 |
| 3 | 3 | 16.7 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 2 | 11.1 | 4 | 22.2 |
| 2 | 3 | 16.7 | 7 | 38.9 |
| 3 | 9 | 50.0 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 2 | 11.1 | 6 | 33.3 |
| 2 | 2 | 11.1 | 8 | 44.4 |
| 3 | 5 | 27.8 | 13 | 72.2 |
| 4 | 5 | 27.8 | 18 | 100.0 |



| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 9 | 50.0 | 11 | 61.1 |
| 2 | 6 | 33.3 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 38.9 | 7 | 38.9 |
| 1 | 7 | 38.9 | 14 | 77.8 |

| | | | | |
|---|---|---|---|---|
| 2 | 2 | 11.1 | 16 | 88.9 |
| 3 | 2 | 11.1 | 18 | 100.0 |

| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 29.4 | 5 | 29.4 |
| 1 | 12 | 70.6 | 17 | 100.0 |

Frequency Missing = 1

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 10 | 55.6 | 16 | 88.9 |
| 2 | 2 | 11.1 | 18 | 100.0 |

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 4 | 22.2 | 10 | 55.6 |
| 2 | 7 | 38.9 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |



| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 44.4 | 8 | 44.4 |
| 1 | 8 | 44.4 | 16 | 88.9 |
| 2 | 1 | 5.6 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 7 | 38.9 | 10 | 55.6 |
| 2 | 7 | 38.9 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 8 | 44.4 | 14 | 77.8 |
| 2 | 1 | 5.6 | 15 | 83.3 |

| | | | | |
|---|---|---|---|---|
| 3 | 3 | 16.7 | 18 | 100.0 |

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 6 | 33.3 | 11 | 61.1 |
| 2 | 6 | 33.3 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 66.7 | 12 | 66.7 |
| 1 | 5 | 27.8 | 17 | 94.4 |
| 2 | 1 | 5.6 | 18 | 100.0 |



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 4 | 22.2 | 8 | 44.4 |
| 2 | 5 | 27.8 | 13 | 72.2 |
| 3 | 5 | 27.8 | 18 | 100.0 |

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 50.0 | 9 | 50.0 |
| 1 | 1 | 5.6 | 10 | 55.6 |
| 2 | 1 | 5.6 | 11 | 61.1 |
| 3 | 3 | 16.7 | 14 | 77.8 |
| 5 | 2 | 11.1 | 16 | 88.9 |
| 6 | 1 | 5.6 | 17 | 94.4 |
| 8 | 1 | 5.6 | 18 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 2 | 1 | 5.6 | 5 | 27.8 |
| 4 | 2 | 11.1 | 7 | 38.9 |
| 5 | 2 | 11.1 | 9 | 50.0 |
| 6 | 1 | 5.6 | 10 | 55.6 |
| 8 | 1 | 5.6 | 11 | 61.1 |
| 10 | 2 | 11.1 | 13 | 72.2 |
| 12 | 1 | 5.6 | 14 | 77.8 |
| 15 | 2 | 11.1 | 16 | 88.9 |
| 28 | 1 | 5.6 | 17 | 94.4 |
| 36 | 1 | 5.6 | 18 | 100.0 |

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 18 | 1.7777778 | 0.4277926 | 1.0000000 | 2.0000000 |
| X3 | 18 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X4 | 18 | 3.1111111 | 0.4714045 | 2.0000000 | 4.0000000 |
| X5 | 18 | 4.0000000 | 0 | 4.0000000 | 4.0000000 |
| X6 | 18 | 4.7777778 | 0.7320845 | 2.0000000 | 5.0000000 |
| X7 | 18 | 2.6666667 | 1.4142136 | 1.0000000 | 4.0000000 |
| X8 | 18 | 1.0555556 | 0.2357023 | 1.0000000 | 2.0000000 |
| X9 | 18 | 1.1111111 | 0.3233808 | 1.0000000 | 2.0000000 |
| X10 | 18 | 1.5555556 | 0.5113100 | 1.0000000 | 2.0000000 |
| X11 | 18 | 1.1666667 | 0.3834825 | 1.0000000 | 2.0000000 |
| X12 | 18 | 2.3888889 | 1.0921586 | 0 | 4.0000000 |
| X13 | 18 | 2.5000000 | 1.2004901 | 0 | 4.0000000 |
| X14 | 18 | 2.3888889 | 1.2432826 | 0 | 4.0000000 |
| X15 | 18 | 2.4444444 | 0.9217772 | 1.0000000 | 4.0000000 |
| X16 | 18 | 2.0000000 | 1.2366939 | 0 | 4.0000000 |
| X17 | 18 | 2.8333333 | 1.1504475 | 1.0000000 | 4.0000000 |
| X18 | 18 | 2.2222222 | 1.3956047 | 0 | 4.0000000 |
| X19 | 18 | 2.2777778 | 1.2274103 | 0 | 4.0000000 |
| X20 | 18 | 2.0000000 | 1.2366939 | 0 | 4.0000000 |
| X21 | 18 | 3.3333333 | 0.7669650 | 2.0000000 | 4.0000000 |
| X22 | 18 | 2.6666667 | 1.0846523 | 0 | 4.0000000 |
| X23 | 18 | 1.7222222 | 1.1274936 | 0 | 4.0000000 |
| X24 | 18 | 2.0000000 | 1.0846523 | 0 | 4.0000000 |
| X25 | 18 | 3.0000000 | 1.2366939 | 0 | 4.0000000 |
| X26 | 18 | 2.6666667 | 1.1881771 | 0 | 4.0000000 |
| X27 | 18 | 2.7777778 | 1.2628425 | 0 | 4.0000000 |
| X28 | 18 | 2.3333333 | 1.2366939 | 0 | 4.0000000 |
| X29 | 18 | 1.9444444 | 1.1099667 | 0 | 4.0000000 |
| X30 | 18 | 1.9444444 | 1.1617544 | 0 | 4.0000000 |
| X31 | 18 | 3.5555556 | 0.6156988 | 2.0000000 | 4.0000000 |
| X32 | 18 | 2.2777778 | 1.1274936 | 0 | 4.0000000 |
| X33 | 18 | 2.7777778 | 1.3085940 | 0 | 4.0000000 |
| X34 | 18 | 2.7777778 | 1.3085940 | 0 | 4.0000000 |
| X35 | 18 | 2.2222222 | 1.3085940 | 0 | 4.0000000 |
| X36 | 18 | 2.6666667 | 1.0846523 | 0 | 4.0000000 |
| X37 | 18 | 2.6111111 | 1.4608172 | 0 | 4.0000000 |
| X38 | 18 | 1.7777778 | 1.1659662 | 0 | 4.0000000 |
| X39 | 18 | 1.3333333 | 0.6859943 | 1.0000000 | 3.0000000 |
| X40 | 18 | 1.9444444 | 1.3048427 | 0 | 4.0000000 |
| X41 | 18 | 1.7777778 | 1.6289858 | 0 | 4.0000000 |
| X42 | 18 | 1.0000000 | 0.7669650 | 0 | 2.0000000 |
| X43 | 18 | 1.2222222 | 0.8782038 | 0 | 3.0000000 |
| X44 | 18 | 1.0000000 | 1.0289915 | 0 | 3.0000000 |
| X45 | 18 | 0.6111111 | 0.6076850 | 0 | 2.0000000 |
| X46 | 18 | 1.4444444 | 0.9217772 | 0 | 3.0000000 |
| X47 | 18 | 0.9444444 | 0.9375953 | 0 | 3.0000000 |
| X48 | 18 | 1.1111111 | 0.8323524 | 0 | 3.0000000 |
| X49 | 18 | 0.8888889 | 0.8323524 | 0 | 3.0000000 |
| X50 | 18 | 1.3888889 | 0.6076850 | 0 | 2.0000000 |
| X51 | 18 | 0.7222222 | 0.8947925 | 0 | 3.0000000 |
| X52 | 18 | 2.0000000 | 0.9701425 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 18 | 1.4444444 | 2.9748400 | 0 | 10.0000000 |
| X54 | 18 | 5.1666667 | 7.1886348 | 0 | 30.0000000 |



| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 4 | 22.2 | 4 | 22.2 |
| 2 | 14 | 77.8 | 18 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 18 | 100.0 | 18 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 1 | 5.6 | 1 | 5.6 |
| 3 | 14 | 77.8 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 4 | 18 | 100.0 | 18 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 1 | 5.6 | 1 | 5.6 |
| 4 | 1 | 5.6 | 2 | 11.1 |
| 5 | 16 | 88.9 | 18 | 100.0 |

| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 6 | 33.3 | 6 | 33.3 |
| 2 | 3 | 16.7 | 9 | 50.0 |
| 4 | 9 | 50.0 | 18 | 100.0 |



| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 17 | 94.4 | 17 | 94.4 |
| 2 | 1 | 5.6 | 18 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 16 | 88.9 | 16 | 88.9 |
| 2 | 2 | 11.1 | 18 | 100.0 |

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 8 | 44.4 | 8 | 44.4 |
| 2 | 10 | 55.6 | 18 | 100.0 |

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 15 | 83.3 | 15 | 83.3 |
| 2 | 3 | 16.7 | 18 | 100.0 |

| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 2 | 11.1 | 3 | 16.7 |
| 2 | 7 | 38.9 | 10 | 55.6 |
| 3 | 5 | 27.8 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |



| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 3 | 16.7 | 4 | 22.2 |
| 2 | 4 | 22.2 | 8 | 44.4 |
| 3 | 6 | 33.3 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 4 | 22.2 | 5 | 27.8 |
| 2 | 4 | 22.2 | 9 | 50.0 |
| 3 | 5 | 27.8 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 4 | 22.2 | 4 | 22.2 |
| 2 | 3 | 16.7 | 7 | 38.9 |
| 3 | 10 | 55.6 | 17 | 94.4 |

| | | | | |
|---|---|---|---|---|
| 4 | 1 | 5.6 | 18 | 100.0 |

| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 5 | 27.8 | 7 | 38.9 |
| 2 | 4 | 22.2 | 11 | 61.1 |
| 3 | 5 | 27.8 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |



| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 16.7 | 3 | 16.7 |
| 2 | 4 | 22.2 | 7 | 38.9 |
| 3 | 4 | 22.2 | 11 | 61.1 |
| 4 | 7 | 38.9 | 18 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 2 | 11.1 | 5 | 27.8 |
| 2 | 5 | 27.8 | 10 | 55.6 |
| 3 | 4 | 22.2 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 2 | 11.1 | 4 | 22.2 |
| 2 | 6 | 33.3 | 10 | 55.6 |
| 3 | 5 | 27.8 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 7 | 38.9 | 8 | 44.4 |
| 2 | 4 | 22.2 | 12 | 66.7 |
| 3 | 3 | 16.7 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |



| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X21 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 2 | 3 | 16.7 | 3 | 16.7 |
| 3 | 6 | 33.3 | 9 | 50.0 |
| 4 | 9 | 50.0 | 18 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 1 | 5.6 | 2 | 11.1 |
| 2 | 5 | 27.8 | 7 | 38.9 |
| 3 | 7 | 38.9 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 7 | 38.9 | 9 | 50.0 |
| 2 | 4 | 22.2 | 13 | 72.2 |
| 3 | 4 | 22.2 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 5 | 27.8 | 6 | 33.3 |
| 2 | 7 | 38.9 | 13 | 72.2 |
| 3 | 3 | 16.7 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 2 | 11.1 | 3 | 16.7 |
| 2 | 1 | 5.6 | 4 | 22.2 |
| 3 | 6 | 33.3 | 10 | 55.6 |
| 4 | 8 | 44.4 | 18 | 100.0 |



| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 1 | 5.6 | 2 | 11.1 |
| 2 | 7 | 38.9 | 9 | 50.0 |
| 3 | 3 | 16.7 | 12 | 66.7 |
| 4 | 6 | 33.3 | 18 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 3 | 16.7 | 4 | 22.2 |
| 2 | 1 | 5.6 | 5 | 27.8 |
| 3 | 7 | 38.9 | 12 | 66.7 |
| 4 | 6 | 33.3 | 18 | 100.0 |

| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 2 | 11.1 | 4 | 22.2 |
| 2 | 5 | 27.8 | 9 | 50.0 |
| 3 | 6 | 33.3 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 3 | 16.7 | 5 | 27.8 |
| 2 | 9 | 50.0 | 14 | 77.8 |
| 3 | 2 | 11.1 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |



| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 4 | 22.2 | 6 | 33.3 |
| 2 | 7 | 38.9 | 13 | 72.2 |
| 3 | 3 | 16.7 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 1 | 5.6 | 1 | 5.6 |
| 3 | 6 | 33.3 | 7 | 38.9 |
| 4 | 11 | 61.1 | 18 | 100.0 |

| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 3 | 16.7 | 4 | 22.2 |
| 2 | 7 | 38.9 | 11 | 61.1 |
| 3 | 4 | 22.2 | 15 | 83.3 |
| 4 | 3 | 16.7 | 18 | 100.0 |

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 1 | 5.6 | 3 | 16.7 |
| 2 | 2 | 11.1 | 5 | 27.8 |
| 3 | 7 | 38.9 | 12 | 66.7 |
| 4 | 6 | 33.3 | 18 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 3 | 16.7 | 4 | 22.2 |
| 2 | 2 | 11.1 | 6 | 33.3 |
| 3 | 5 | 27.8 | 11 | 61.1 |
| 4 | 7 | 38.9 | 18 | 100.0 |



| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 3 | 16.7 | 5 | 27.8 |
| 2 | 6 | 33.3 | 11 | 61.1 |
| 3 | 3 | 16.7 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 1 | 5.6 | 2 | 11.1 |
| 2 | 5 | 27.8 | 7 | 38.9 |
| 3 | 7 | 38.9 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 11.1 | 2 | 11.1 |
| 1 | 3 | 16.7 | 5 | 27.8 |
| 2 | 2 | 11.1 | 7 | 38.9 |
| 3 | 4 | 22.2 | 11 | 61.1 |
| 4 | 7 | 38.9 | 18 | 100.0 |

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 4 | 22.2 | 7 | 38.9 |

| | | | | |
|---|---|---|---|---|
| 2 | 6 | 33.3 | 13 | 72.2 |
| 3 | 4 | 22.2 | 17 | 94.4 |
| 4 | 1 | 5.6 | 18 | 100.0 |



| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 14 | 77.8 | 14 | 77.8 |
| 2 | 2 | 11.1 | 16 | 88.9 |
| 3 | 2 | 11.1 | 18 | 100.0 |

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 4 | 22.2 | 7 | 38.9 |
| 2 | 4 | 22.2 | 11 | 61.1 |
| 3 | 5 | 27.8 | 16 | 88.9 |
| 4 | 2 | 11.1 | 18 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 3 | 16.7 | 9 | 50.0 |
| 2 | 2 | 11.1 | 11 | 61.1 |
| 3 | 3 | 16.7 | 14 | 77.8 |
| 4 | 4 | 22.2 | 18 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 1 | 8 | 44.4 | 13 | 72.2 |
| 2 | 5 | 27.8 | 18 | 100.0 |

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 7 | 38.9 | 11 | 61.1 |
| 2 | 6 | 33.3 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 7 | 38.9 | 7 | 38.9 |
| 1 | 6 | 33.3 | 13 | 72.2 |
| 2 | 3 | 16.7 | 16 | 88.9 |
| 3 | 2 | 11.1 | 18 | 100.0 |

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 44.4 | 8 | 44.4 |
| 1 | 9 | 50.0 | 17 | 94.4 |
| 2 | 1 | 5.6 | 18 | 100.0 |

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 16.7 | 3 | 16.7 |
| 1 | 6 | 33.3 | 9 | 50.0 |
| 2 | 7 | 38.9 | 16 | 88.9 |
| 3 | 2 | 11.1 | 18 | 100.0 |

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 38.9 | 7 | 38.9 |
| 1 | 6 | 33.3 | 13 | 72.2 |
| 2 | 4 | 22.2 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 22.2 | 4 | 22.2 |
| 1 | 9 | 50.0 | 13 | 72.2 |
| 2 | 4 | 22.2 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |



| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 33.3 | 6 | 33.3 |
| 1 | 9 | 50.0 | 15 | 83.3 |
| 2 | 2 | 11.1 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |

| | | | | |
|---|---|---|---|---|
| 1 | 9 | 50.0 | 10 | 55.6 |
| 2 | 8 | 44.4 | 18 | 100.0 |

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 50.0 | 9 | 50.0 |
| 1 | 6 | 33.3 | 15 | 83.3 |
| 2 | 2 | 11.1 | 17 | 94.4 |
| 3 | 1 | 5.6 | 18 | 100.0 |

| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 5.6 | 1 | 5.6 |
| 1 | 5 | 27.8 | 6 | 33.3 |
| 2 | 5 | 27.8 | 11 | 61.1 |
| 3 | 7 | 38.9 | 18 | 100.0 |

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 72.2 | 13 | 72.2 |
| 2 | 2 | 11.1 | 15 | 83.3 |
| 4 | 1 | 5.6 | 16 | 88.9 |
| 8 | 1 | 5.6 | 17 | 94.4 |
| 10 | 1 | 5.6 | 18 | 100.0 |



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 27.8 | 5 | 27.8 |
| 3 | 5 | 27.8 | 10 | 55.6 |
| 4 | 2 | 11.1 | 12 | 66.7 |
| 5 | 2 | 11.1 | 14 | 77.8 |
| 6 | 1 | 5.6 | 15 | 83.3 |
| 10 | 1 | 5.6 | 16 | 88.9 |
| 14 | 1 | 5.6 | 17 | 94.4 |
| 30 | 1 | 5.6 | 18 | 100.0 |

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 9 | 1.6666667 | 0.5000000 | 1.0000000 | 2.0000000 |
| X3 | 9 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X4 | 9 | 1.6666667 | 0.5000000 | 1.0000000 | 2.0000000 |
| X5 | 9 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X6 | 8 | 2.2500000 | 1.2817399 | 1.0000000 | 4.0000000 |
| X7 | 9 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X8 | 9 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X9 | 8 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X10 | 8 | 1.7500000 | 0.4629100 | 1.0000000 | 2.0000000 |
| X11 | 9 | 1.2222222 | 0.4409586 | 1.0000000 | 2.0000000 |
| X12 | 9 | 1.8888889 | 1.0540926 | 1.0000000 | 4.0000000 |
| X13 | 9 | 1.2222222 | 0.9718253 | 0 | 3.0000000 |
| X14 | 9 | 1.6666667 | 1.0000000 | 0 | 3.0000000 |
| X15 | 9 | 1.5555556 | 1.5092309 | 0 | 4.0000000 |
| X16 | 8 | 1.7500000 | 1.0350983 | 1.0000000 | 3.0000000 |
| X17 | 9 | 2.0000000 | 0.7071068 | 1.0000000 | 3.0000000 |
| X18 | 9 | 2.2222222 | 1.3944334 | 0 | 4.0000000 |
| X19 | 9 | 2.0000000 | 1.3228757 | 0 | 4.0000000 |
| X20 | 9 | 1.8888889 | 1.2692955 | 0 | 3.0000000 |
| X21 | 9 | 2.7777778 | 1.2018504 | 1.0000000 | 4.0000000 |
| X22 | 9 | 2.5555556 | 1.2360331 | 1.0000000 | 4.0000000 |
| X23 | 9 | 2.1111111 | 0.7817360 | 1.0000000 | 3.0000000 |
| X24 | 9 | 1.1111111 | 1.2692955 | 0 | 4.0000000 |
| X25 | 9 | 3.3333333 | 0.8660254 | 2.0000000 | 4.0000000 |
| X26 | 9 | 1.5555556 | 1.1303883 | 0 | 3.0000000 |
| X27 | 9 | 2.7777778 | 1.4813657 | 1.0000000 | 4.0000000 |
| X28 | 8 | 2.7500000 | 1.1649647 | 1.0000000 | 4.0000000 |
| X29 | 8 | 0.7500000 | 1.1649647 | 0 | 3.0000000 |
| X30 | 8 | 1.5000000 | 0.9258201 | 0 | 3.0000000 |
| X31 | 8 | 3.7500000 | 0.7071068 | 2.0000000 | 4.0000000 |
| X32 | 8 | 2.2500000 | 1.3887301 | 0 | 4.0000000 |
| X33 | 8 | 2.6250000 | 1.5059406 | 0 | 4.0000000 |
| X34 | 8 | 2.1250000 | 1.3562027 | 0 | 4.0000000 |
| X35 | 8 | 2.1250000 | 1.4577380 | 0 | 4.0000000 |
| X36 | 8 | 2.8750000 | 1.4577380 | 0 | 4.0000000 |
| X37 | 8 | 2.7500000 | 1.0350983 | 1.0000000 | 4.0000000 |
| X38 | 9 | 1.8888889 | 1.1666667 | 0 | 4.0000000 |
| X39 | 9 | 1.5555556 | 1.0137938 | 1.0000000 | 4.0000000 |
| X40 | 9 | 2.7777778 | 1.6414763 | 0 | 4.0000000 |
| X41 | 9 | 2.0000000 | 1.9364917 | 0 | 4.0000000 |
| X42 | 8 | 1.0000000 | 0.9258201 | 0 | 3.0000000 |
| X43 | 9 | 0.6666667 | 1.0000000 | 0 | 3.0000000 |
| X44 | 9 | 0.7777778 | 0.4409586 | 0 | 1.0000000 |
| X45 | 9 | 0.3333333 | 0.5000000 | 0 | 1.0000000 |
| X46 | 9 | 1.3333333 | 1.2247449 | 0 | 3.0000000 |
| X47 | 9 | 0.5555556 | 0.7264832 | 0 | 2.0000000 |
| X48 | 9 | 0.7777778 | 0.8333333 | 0 | 2.0000000 |
| X49 | 9 | 0.6666667 | 0.7071068 | 0 | 2.0000000 |
| X50 | 9 | 1.0000000 | 1.1180340 | 0 | 3.0000000 |
| X51 | 9 | 0.4444444 | 0.5270463 | 0 | 1.0000000 |
| X52 | 9 | 2.3333333 | 0.8660254 | 1.0000000 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 9 | 2.5555556 | 2.2422707 | 0 | 6.0000000 |
| X54 | 9 | 4.0000000 | 6.4031242 | 0 | 16.0000000 |



| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 3 | 33.3 | 3 | 33.3 |
| 2 | 6 | 66.7 | 9 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 9 | 100.0 | 9 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 33.3 | 3 | 33.3 |
| 2 | 6 | 66.7 | 9 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 100.0 | 9 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 37.5 | 3 | 37.5 |
| 2 | 2 | 25.0 | 5 | 62.5 |
| 3 | 1 | 12.5 | 6 | 75.0 |
| 4 | 2 | 25.0 | 8 | 100.0 |

Frequency Missing = 1



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 100.0 | 9 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 9 | 100.0 | 9 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 8 | 100.0 | 8 | 100.0 |

Frequency Missing = 1

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 25.0 | 2 | 25.0 |
| 2 | 6 | 75.0 | 8 | 100.0 |

Frequency Missing = 1

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 7 | 77.8 | 7 | 77.8 |
| 2 | 2 | 22.2 | 9 | 100.0 |

| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 4 | 44.4 | 4 | 44.4 |
| 2 | 3 | 33.3 | 7 | 77.8 |
| 3 | 1 | 11.1 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |



| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 22.2 | 2 | 22.2 |
| 1 | 4 | 44.4 | 6 | 66.7 |
| 2 | 2 | 22.2 | 8 | 88.9 |
| 3 | 1 | 11.1 | 9 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 11.1 | 1 | 11.1 |
| 1 | 3 | 33.3 | 4 | 44.4 |
| 2 | 3 | 33.3 | 7 | 77.8 |
| 3 | 2 | 22.2 | 9 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 33.3 | 3 | 33.3 |
| 1 | 2 | 22.2 | 5 | 55.6 |
| 2 | 1 | 11.1 | 6 | 66.7 |
| 3 | 2 | 22.2 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |

| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 5 | 62.5 | 5 | 62.5 |
| 3 | 3 | 37.5 | 8 | 100.0 |

Frequency Missing = 1

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 22.2 | 2 | 22.2 |
| 2 | 5 | 55.6 | 7 | 77.8 |
| 3 | 2 | 22.2 | 9 | 100.0 |



| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 11.1 | 1 | 11.1 |
| 1 | 2 | 22.2 | 3 | 33.3 |
| 2 | 2 | 22.2 | 5 | 55.6 |
| 3 | 2 | 22.2 | 7 | 77.8 |
| 4 | 2 | 22.2 | 9 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 11.1 | 1 | 11.1 |
| 1 | 3 | 33.3 | 4 | 44.4 |
| 2 | 1 | 11.1 | 5 | 55.6 |
| 3 | 3 | 33.3 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |

| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 22.2 | 2 | 22.2 |
| 1 | 1 | 11.1 | 3 | 33.3 |
| 2 | 2 | 22.2 | 5 | 55.6 |
| 3 | 4 | 44.4 | 9 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 22.2 | 2 | 22.2 |
| 2 | 1 | 11.1 | 3 | 33.3 |
| 3 | 3 | 33.3 | 6 | 66.7 |
| 4 | 3 | 33.3 | 9 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 22.2 | 2 | 22.2 |
| 2 | 3 | 33.3 | 5 | 55.6 |
| 3 | 1 | 11.1 | 6 | 66.7 |
| 4 | 3 | 33.3 | 9 | 100.0 |



| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 22.2 | 2 | 22.2 |
| 2 | 4 | 44.4 | 6 | 66.7 |
| 3 | 3 | 33.3 | 9 | 100.0 |

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 33.3 | 3 | 33.3 |
| 1 | 4 | 44.4 | 7 | 77.8 |
| 2 | 1 | 11.1 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 2 | 22.2 | 2 | 22.2 |
| 3 | 2 | 22.2 | 4 | 44.4 |
| 4 | 5 | 55.6 | 9 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 22.2 | 2 | 22.2 |
| 1 | 2 | 22.2 | 4 | 44.4 |
| 2 | 3 | 33.3 | 7 | 77.8 |
| 3 | 2 | 22.2 | 9 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 33.3 | 3 | 33.3 |
| 2 | 1 | 11.1 | 4 | 44.4 |
| 4 | 5 | 55.6 | 9 | 100.0 |

| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 1 | 12.5 | 1 | 12.5 |
| 2 | 3 | 37.5 | 4 | 50.0 |
| 3 | 1 | 12.5 | 5 | 62.5 |
| 4 | 3 | 37.5 | 8 | 100.0 |

Frequency Missing = 1

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 62.5 | 5 | 62.5 |
| 1 | 1 | 12.5 | 6 | 75.0 |
| 2 | 1 | 12.5 | 7 | 87.5 |
| 3 | 1 | 12.5 | 8 | 100.0 |

Frequency Missing = 1

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 1 | 3 | 37.5 | 4 | 50.0 |
| 2 | 3 | 37.5 | 7 | 87.5 |
| 3 | 1 | 12.5 | 8 | 100.0 |

Frequency Missing = 1

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 1 | 12.5 | 1 | 12.5 |
| 4 | 7 | 87.5 | 8 | 100.0 |

Frequency Missing = 1



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 1 | 1 | 12.5 | 2 | 25.0 |
| 2 | 3 | 37.5 | 5 | 62.5 |
| 3 | 1 | 12.5 | 6 | 75.0 |
| 4 | 2 | 25.0 | 8 | 100.0 |

Frequency Missing = 1

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 1 | 1 | 12.5 | 2 | 25.0 |
| 2 | 1 | 12.5 | 3 | 37.5 |
| 3 | 2 | 25.0 | 5 | 62.5 |
| 4 | 3 | 37.5 | 8 | 100.0 |

Frequency Missing = 1

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 1 | 2 | 25.0 | 3 | 37.5 |
| 2 | 1 | 12.5 | 4 | 50.0 |
| 3 | 3 | 37.5 | 7 | 87.5 |
| 4 | 1 | 12.5 | 8 | 100.0 |

Frequency Missing = 1

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 1 | 2 | 25.0 | 3 | 37.5 |
| 2 | 2 | 25.0 | 5 | 62.5 |
| 3 | 1 | 12.5 | 6 | 75.0 |
| 4 | 2 | 25.0 | 8 | 100.0 |

Frequency Missing = 1



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 12.5 | 1 | 12.5 |
| 2 | 2 | 25.0 | 3 | 37.5 |
| 3 | 1 | 12.5 | 4 | 50.0 |
| 4 | 4 | 50.0 | 8 | 100.0 |

Frequency Missing = 1

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 1 | 12.5 | 1 | 12.5 |
| 2 | 2 | 25.0 | 3 | 37.5 |
| 3 | 3 | 37.5 | 6 | 75.0 |
| 4 | 2 | 25.0 | 8 | 100.0 |

Frequency Missing = 1

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 11.1 | 1 | 11.1 |
| 1 | 2 | 22.2 | 3 | 33.3 |
| 2 | 4 | 44.4 | 7 | 77.8 |
| 3 | 1 | 11.1 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 6 | 66.7 | 6 | 66.7 |
| 2 | 2 | 22.2 | 8 | 88.9 |
| 4 | 1 | 11.1 | 9 | 100.0 |



| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 11.1 | 1 | 11.1 |
| 1 | 2 | 22.2 | 3 | 33.3 |
| 3 | 1 | 11.1 | 4 | 44.4 |
| 4 | 5 | 55.6 | 9 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 44.4 | 4 | 44.4 |
| 3 | 2 | 22.2 | 6 | 66.7 |
| 4 | 3 | 33.3 | 9 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 25.0 | 2 | 25.0 |
| 1 | 5 | 62.5 | 7 | 87.5 |
| 3 | 1 | 12.5 | 8 | 100.0 |

Frequency Missing = 1

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 55.6 | 5 | 55.6 |
| 1 | 3 | 33.3 | 8 | 88.9 |
| 3 | 1 | 11.1 | 9 | 100.0 |

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X44 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 0 | 2 | 22.2 | 2 | 22.2 |
| 1 | 7 | 77.8 | 9 | 100.0 |



| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 66.7 | 6 | 66.7 |
| 1 | 3 | 33.3 | 9 | 100.0 |

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 33.3 | 3 | 33.3 |
| 1 | 2 | 22.2 | 5 | 55.6 |
| 2 | 2 | 22.2 | 7 | 77.8 |
| 3 | 2 | 22.2 | 9 | 100.0 |

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 55.6 | 5 | 55.6 |
| 1 | 3 | 33.3 | 8 | 88.9 |
| 2 | 1 | 11.1 | 9 | 100.0 |

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 44.4 | 4 | 44.4 |
| 1 | 3 | 33.3 | 7 | 77.8 |
| 2 | 2 | 22.2 | 9 | 100.0 |

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 44.4 | 4 | 44.4 |
| 1 | 4 | 44.4 | 8 | 88.9 |
| 2 | 1 | 11.1 | 9 | 100.0 |



| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 44.4 | 4 | 44.4 |
| 1 | 2 | 22.2 | 6 | 66.7 |
| 2 | 2 | 22.2 | 8 | 88.9 |
| 3 | 1 | 11.1 | 9 | 100.0 |

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 55.6 | 5 | 55.6 |
| 1 | 4 | 44.4 | 9 | 100.0 |

| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 2 | 22.2 | 2 | 22.2 |
| 2 | 2 | 22.2 | 4 | 44.4 |
| 3 | 5 | 55.6 | 9 | 100.0 |

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 22.2 | 2 | 22.2 |
| 1 | 2 | 22.2 | 4 | 44.4 |
| 2 | 1 | 11.1 | 5 | 55.6 |
| 4 | 2 | 22.2 | 7 | 77.8 |
| 5 | 1 | 11.1 | 8 | 88.9 |
| 6 | 1 | 11.1 | 9 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 55.6 | 5 | 55.6 |
| 2 | 1 | 11.1 | 6 | 66.7 |
| 4 | 1 | 11.1 | 7 | 77.8 |
| 14 | 1 | 11.1 | 8 | 88.9 |
| 16 | 1 | 11.1 | 9 | 100.0 |

APPENDIX F.9



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 29 | 1.6206897 | 0.4938040 | 1.0000000 | 2.0000000 |
| X3 | 29 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X4 | 29 | 2.0689655 | 0.2578807 | 2.0000000 | 3.0000000 |
| X5 | 29 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X6 | 29 | 4.6551724 | 0.8567322 | 1.0000000 | 5.0000000 |
| X7 | 29 | 1.0689655 | 0.3713907 | 1.0000000 | 3.0000000 |
| X8 | 29 | 1.6896552 | 0.4708236 | 1.0000000 | 2.0000000 |
| X9 | 28 | 1.1785714 | 0.3900210 | 1.0000000 | 2.0000000 |
| X10 | 28 | 1.5000000 | 0.5091751 | 1.0000000 | 2.0000000 |
| X11 | 29 | 1.2068966 | 0.4122508 | 1.0000000 | 2.0000000 |
| X12 | 29 | 1.6896552 | 1.0386615 | 0 | 4.0000000 |
| X13 | 29 | 1.8965517 | 1.1447029 | 0 | 4.0000000 |
| X14 | 28 | 2.3928571 | 1.3427249 | 0 | 4.0000000 |
| X15 | 27 | 2.0000000 | 1.3867505 | 0 | 4.0000000 |
| X16 | 28 | 1.6785714 | 1.1239339 | 0 | 4.0000000 |
| X17 | 29 | 1.8620690 | 1.0255360 | 0 | 4.0000000 |
| X18 | 28 | 1.6071429 | 1.4742050 | 0 | 4.0000000 |
| X19 | 28 | 2.1071429 | 1.3968028 | 0 | 4.0000000 |
| X20 | 29 | 1.9655172 | 1.1489983 | 0 | 4.0000000 |
| X21 | 29 | 2.9310345 | 1.1628485 | 0 | 4.0000000 |
| X22 | 28 | 2.2500000 | 1.5545632 | 0 | 4.0000000 |
| X23 | 28 | 2.0000000 | 1.4656562 | 0 | 4.0000000 |
| X24 | 28 | 1.8214286 | 1.4156159 | 0 | 4.0000000 |
| X25 | 29 | 3.0344828 | 1.2951216 | 0 | 4.0000000 |
| X26 | 28 | 1.8571429 | 1.3801311 | 0 | 4.0000000 |
| X27 | 29 | 2.1724138 | 1.4159541 | 0 | 4.0000000 |
| X28 | 29 | 2.2068966 | 1.3464055 | 0 | 4.0000000 |
| X29 | 28 | 1.6071429 | 1.2572541 | 0 | 4.0000000 |
| X30 | 28 | 1.2857143 | 0.9371803 | 0 | 4.0000000 |
| X31 | 29 | 3.0689655 | 1.1931661 | 0 | 4.0000000 |
| X32 | 28 | 2.0000000 | 1.2472191 | 0 | 4.0000000 |
| X33 | 29 | 2.5517241 | 1.2701577 | 0 | 4.0000000 |
| X34 | 29 | 2.5517241 | 1.3780475 | 0 | 4.0000000 |
| X35 | 28 | 2.3928571 | 1.3148521 | 0 | 4.0000000 |
| X36 | 28 | 2.9285714 | 1.2149858 | 0 | 4.0000000 |
| X37 | 28 | 2.1428571 | 1.4584184 | 0 | 4.0000000 |
| X38 | 29 | 1.6206897 | 1.1775821 | 0 | 4.0000000 |
| X39 | 28 | 1.5000000 | 1.0363755 | 0 | 4.0000000 |
| X40 | 29 | 2.6206897 | 1.2932184 | 0 | 4.0000000 |
| X41 | 29 | 2.3103448 | 1.5377035 | 0 | 4.0000000 |
| X42 | 29 | 1.1034483 | 0.7243138 | 0 | 3.0000000 |
| X43 | 28 | 0.8214286 | 0.9048663 | 0 | 3.0000000 |
| X44 | 28 | 1.0000000 | 0.8606630 | 0 | 3.0000000 |
| X45 | 29 | 0.7931034 | 0.9403385 | 0 | 3.0000000 |
| X46 | 28 | 1.0000000 | 1.1863420 | 0 | 3.0000000 |
| X47 | 29 | 0.8275862 | 1.1360636 | 0 | 3.0000000 |
| X48 | 28 | 0.9642857 | 0.8811669 | 0 | 3.0000000 |
| X49 | 29 | 1.0344828 | 0.9813532 | 0 | 3.0000000 |
| X50 | 28 | 1.0357143 | 0.9993384 | 0 | 3.0000000 |
| X51 | 28 | 0.5357143 | 0.8811669 | 0 | 3.0000000 |





| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X52 | 27 | 1.8518519 | 1.0635103 | 0 | 4.0000000 |
| X53 | 29 | 2.3103448 | 2.4216796 | 0 | 10.0000000 |
| X54 | 29 | 7.8620690 | 8.3054377 | 0 | 30.0000000 |

| X2 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 11 | 37.9 | 11 | 37.9 |
| 2 | 18 | 62.1 | 29 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 29 | 100.0 | 29 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 27 | 93.1 | 27 | 93.1 |
| 3 | 2 | 6.9 | 29 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 29 | 100.0 | 29 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 1 | 3.4 | 1 | 3.4 |
| 3 | 1 | 3.4 | 2 | 6.9 |
| 4 | 4 | 13.8 | 6 | 20.7 |
| 5 | 23 | 79.3 | 29 | 100.0 |

| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 28 | 96.6 | 28 | 96.6 |
| 3 | 1 | 3.4 | 29 | 100.0 |



| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 31.0 | 9 | 31.0 |
| 2 | 20 | 69.0 | 29 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 23 | 82.1 | 23 | 82.1 |
| 2 | 5 | 17.9 | 28 | 100.0 |

Frequency Missing = 1

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 14 | 50.0 | 14 | 50.0 |
| 2 | 14 | 50.0 | 28 | 100.0 |

Frequency Missing = 1

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 23 | 79.3 | 23 | 79.3 |
| 2 | 6 | 20.7 | 29 | 100.0 |

| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.3 | 3 | 10.3 |
| 1 | 10 | 34.5 | 13 | 44.8 |
| 2 | 11 | 37.9 | 24 | 82.8 |
| 3 | 3 | 10.3 | 27 | 93.1 |
| 4 | 2 | 6.9 | 29 | 100.0 |



| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 6.9 | 2 | 6.9 |
| 1 | 11 | 37.9 | 13 | 44.8 |
| 2 | 7 | 24.1 | 20 | 69.0 |
| 3 | 6 | 20.7 | 26 | 89.7 |
| 4 | 3 | 10.3 | 29 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.7 | 3 | 10.7 |
| 1 | 4 | 14.3 | 7 | 25.0 |
| 2 | 8 | 28.6 | 15 | 53.6 |
| 3 | 5 | 17.9 | 20 | 71.4 |
| 4 | 8 | 28.6 | 28 | 100.0 |

Frequency Missing = 1

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 18.5 | 5 | 18.5 |
| 1 | 5 | 18.5 | 10 | 37.0 |
| 2 | 7 | 25.9 | 17 | 63.0 |
| 3 | 5 | 18.5 | 22 | 81.5 |
| 4 | 5 | 18.5 | 27 | 100.0 |

Frequency Missing = 2

| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 17.9 | 5 | 17.9 |
| 1 | 7 | 25.0 | 12 | 42.9 |
| 2 | 9 | 32.1 | 21 | 75.0 |
| 3 | 6 | 21.4 | 27 | 96.4 |
| 4 | 1 | 3.6 | 28 | 100.0 |

Frequency Missing = 1



| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 6.9 | 2 | 6.9 |
| 1 | 9 | 31.0 | 11 | 37.9 |
| 2 | 11 | 37.9 | 22 | 75.9 |
| 3 | 5 | 17.2 | 27 | 93.1 |
| 4 | 2 | 6.9 | 29 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 32.1 | 9 | 32.1 |
| 1 | 5 | 17.9 | 14 | 50.0 |
| 2 | 7 | 25.0 | 21 | 75.0 |
| 3 | 2 | 7.1 | 23 | 82.1 |
| 4 | 5 | 17.9 | 28 | 100.0 |

Frequency Missing = 1

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 14.3 | 4 | 14.3 |
| 1 | 7 | 25.0 | 11 | 39.3 |

| | | | | |
|---|---|---|---|---|
| 2 | 5 | 17.9 | 16 | 57.1 |
| 3 | 6 | 21.4 | 22 | 78.6 |
| 4 | 6 | 21.4 | 28 | 100.0 |

Frequency Missing = 1

| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 13.8 | 4 | 13.8 |
| 1 | 5 | 17.2 | 9 | 31.0 |
| 2 | 10 | 34.5 | 19 | 65.5 |
| 3 | 8 | 27.6 | 27 | 93.1 |
| 4 | 2 | 6.9 | 29 | 100.0 |



| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.4 | 1 | 3.4 |
| 1 | 2 | 6.9 | 3 | 10.3 |
| 2 | 8 | 27.6 | 11 | 37.9 |
| 3 | 5 | 17.2 | 16 | 55.2 |
| 4 | 13 | 44.8 | 29 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 17.9 | 5 | 17.9 |
| 1 | 6 | 21.4 | 11 | 39.3 |
| 2 | 3 | 10.7 | 14 | 50.0 |
| 3 | 5 | 17.9 | 19 | 67.9 |
| 4 | 9 | 32.1 | 28 | 100.0 |

Frequency Missing = 1

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 17.9 | 5 | 17.9 |
| 1 | 7 | 25.0 | 12 | 42.9 |
| 2 | 6 | 21.4 | 18 | 64.3 |
| 3 | 3 | 10.7 | 21 | 75.0 |
| 4 | 7 | 25.0 | 28 | 100.0 |

Frequency Missing = 1

| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 0 | 8 | 28.6 | 8 | 28.6 |
| 1 | 3 | 10.7 | 11 | 39.3 |
| 2 | 6 | 21.4 | 17 | 60.7 |
| 3 | 8 | 28.6 | 25 | 89.3 |
| 4 | 3 | 10.7 | 28 | 100.0 |

Frequency Missing = 1



| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.4 | 1 | 3.4 |
| 1 | 4 | 13.8 | 5 | 17.2 |
| 2 | 5 | 17.2 | 10 | 34.5 |
| 3 | 2 | 6.9 | 12 | 41.4 |
| 4 | 17 | 58.6 | 29 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 21.4 | 6 | 21.4 |
| 1 | 6 | 21.4 | 12 | 42.9 |
| 2 | 6 | 21.4 | 18 | 64.3 |
| 3 | 6 | 21.4 | 24 | 85.7 |
| 4 | 4 | 14.3 | 28 | 100.0 |

Frequency Missing = 1

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 13.8 | 4 | 13.8 |
| 1 | 6 | 20.7 | 10 | 34.5 |
| 2 | 8 | 27.6 | 18 | 62.1 |
| 3 | 3 | 10.3 | 21 | 72.4 |
| 4 | 8 | 27.6 | 29 | 100.0 |

| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.3 | 3 | 10.3 |
| 1 | 7 | 24.1 | 10 | 34.5 |
| 2 | 7 | 24.1 | 17 | 58.6 |
| 3 | 5 | 17.2 | 22 | 75.9 |
| 4 | 7 | 24.1 | 29 | 100.0 |



Cumulative Cumulative

| X29 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 0 | 8 | 28.6 | 8 | 28.6 |
| 1 | 4 | 14.3 | 12 | 42.9 |
| 2 | 8 | 28.6 | 20 | 71.4 |
| 3 | 7 | 25.0 | 27 | 96.4 |
| 4 | 1 | 3.6 | 28 | 100.0 |

Frequency Missing = 1

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 21.4 | 6 | 21.4 |
| 1 | 10 | 35.7 | 16 | 57.1 |
| 2 | 11 | 39.3 | 27 | 96.4 |
| 4 | 1 | 3.6 | 28 | 100.0 |

Frequency Missing = 1

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.4 | 1 | 3.4 |
| 1 | 3 | 10.3 | 4 | 13.8 |
| 2 | 4 | 13.8 | 8 | 27.6 |
| 3 | 6 | 20.7 | 14 | 48.3 |
| 4 | 15 | 51.7 | 29 | 100.0 |

| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.7 | 3 | 10.7 |
| 1 | 7 | 25.0 | 10 | 35.7 |
| 2 | 10 | 35.7 | 20 | 71.4 |
| 3 | 3 | 10.7 | 23 | 82.1 |
| 4 | 5 | 17.9 | 28 | 100.0 |

Frequency Missing = 1



| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.4 | 1 | 3.4 |
| 1 | 7 | 24.1 | 8 | 27.6 |
| 2 | 5 | 17.2 | 13 | 44.8 |
| 3 | 7 | 24.1 | 20 | 69.0 |
| 4 | 9 | 31.0 | 29 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 6.9 | 2 | 6.9 |
| 1 | 7 | 24.1 | 9 | 31.0 |
| 2 | 3 | 10.3 | 12 | 41.4 |
| 3 | 7 | 24.1 | 19 | 65.5 |
| 4 | 10 | 34.5 | 29 | 100.0 |

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.1 | 2 | 7.1 |
| 1 | 7 | 25.0 | 9 | 32.1 |
| 2 | 4 | 14.3 | 13 | 46.4 |
| 3 | 8 | 28.6 | 21 | 75.0 |
| 4 | 7 | 25.0 | 28 | 100.0 |

Frequency Missing = 1

| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 1 | 3.6 | 1 | 3.6 |
| 1 | 3 | 10.7 | 4 | 14.3 |
| 2 | 6 | 21.4 | 10 | 35.7 |
| 3 | 5 | 17.9 | 15 | 53.6 |
| 4 | 13 | 46.4 | 28 | 100.0 |

Frequency Missing = 1



| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 21.4 | 6 | 21.4 |
| 1 | 2 | 7.1 | 8 | 28.6 |
| 2 | 9 | 32.1 | 17 | 60.7 |
| 3 | 4 | 14.3 | 21 | 75.0 |
| 4 | 7 | 25.0 | 28 | 100.0 |

Frequency Missing = 1

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 20.7 | 6 | 20.7 |
| 1 | 7 | 24.1 | 13 | 44.8 |
| 2 | 10 | 34.5 | 23 | 79.3 |
| 3 | 4 | 13.8 | 27 | 93.1 |
| 4 | 2 | 6.9 | 29 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.7 | 3 | 10.7 |
| 1 | 15 | 53.6 | 18 | 64.3 |
| 2 | 4 | 14.3 | 22 | 78.6 |
| 3 | 5 | 17.9 | 27 | 96.4 |
| 4 | 1 | 3.6 | 28 | 100.0 |

Frequency Missing = 1

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 10.3 | 3 | 10.3 |
| 1 | 3 | 10.3 | 6 | 20.7 |
| 2 | 4 | 13.8 | 10 | 34.5 |
| 3 | 11 | 37.9 | 21 | 72.4 |
| 4 | 8 | 27.6 | 29 | 100.0 |



| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 20.7 | 6 | 20.7 |
| 1 | 4 | 13.8 | 10 | 34.5 |
| 2 | 2 | 6.9 | 12 | 41.4 |
| 3 | 9 | 31.0 | 21 | 72.4 |
| 4 | 8 | 27.6 | 29 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 13.8 | 4 | 13.8 |
| 1 | 20 | 69.0 | 24 | 82.8 |
| 2 | 3 | 10.3 | 27 | 93.1 |
| 3 | 2 | 6.9 | 29 | 100.0 |

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 42.9 | 12 | 42.9 |
| 1 | 11 | 39.3 | 23 | 82.1 |
| 2 | 3 | 10.7 | 26 | 92.9 |
| 3 | 2 | 7.1 | 28 | 100.0 |

Frequency Missing = 1

| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 28.6 | 8 | 28.6 |
| 1 | 14 | 50.0 | 22 | 78.6 |
| 2 | 4 | 14.3 | 26 | 92.9 |
| 3 | 2 | 7.1 | 28 | 100.0 |

Frequency Missing = 1



| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 48.3 | 14 | 48.3 |
| 1 | 9 | 31.0 | 23 | 79.3 |
| 2 | 4 | 13.8 | 27 | 93.1 |
| 3 | 2 | 6.9 | 29 | 100.0 |

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 50.0 | 14 | 50.0 |
| 1 | 5 | 17.9 | 19 | 67.9 |
| 2 | 4 | 14.3 | 23 | 82.1 |
| 3 | 5 | 17.9 | 28 | 100.0 |

Frequency Missing = 1

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 58.6 | 17 | 58.6 |
| 1 | 4 | 13.8 | 21 | 72.4 |
| 2 | 4 | 13.8 | 25 | 86.2 |
| 3 | 4 | 13.8 | 29 | 100.0 |

| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 35.7 | 10 | 35.7 |
| 1 | 10 | 35.7 | 20 | 71.4 |
| 2 | 7 | 25.0 | 27 | 96.4 |
| 3 | 1 | 3.6 | 28 | 100.0 |

Frequency Missing = 1



Cumulative Cumulative

| X49 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 0 | 9 | 31.0 | 9 | 31.0 |
| 1 | 14 | 48.3 | 23 | 79.3 |
| 2 | 2 | 6.9 | 25 | 86.2 |
| 3 | 4 | 13.8 | 29 | 100.0 |

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 35.7 | 10 | 35.7 |
| 1 | 10 | 35.7 | 20 | 71.4 |
| 2 | 5 | 17.9 | 25 | 89.3 |
| 3 | 3 | 10.7 | 28 | 100.0 |

Frequency Missing = 1

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 64.3 | 18 | 64.3 |
| 1 | 7 | 25.0 | 25 | 89.3 |
| 2 | 1 | 3.6 | 26 | 92.9 |
| 3 | 2 | 7.1 | 28 | 100.0 |

Frequency Missing = 1

| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 2 | 7.4 | 2 | 7.4 |
| 1 | 10 | 37.0 | 12 | 44.4 |
| 2 | 6 | 22.2 | 18 | 66.7 |
| 3 | 8 | 29.6 | 26 | 96.3 |
| 4 | 1 | 3.7 | 27 | 100.0 |

Frequency Missing = 2



| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 24.1 | 7 | 24.1 |
| 1 | 7 | 24.1 | 14 | 48.3 |
| 2 | 5 | 17.2 | 19 | 65.5 |
| 3 | 2 | 6.9 | 21 | 72.4 |
| 4 | 4 | 13.8 | 25 | 86.2 |
| 5 | 1 | 3.4 | 26 | 89.7 |
| 6 | 1 | 3.4 | 27 | 93.1 |
| 7 | 1 | 3.4 | 28 | 96.6 |
| 10 | 1 | 3.4 | 29 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 27.6 | 8 | 27.6 |
| 1 | 1 | 3.4 | 9 | 31.0 |
| 2 | 2 | 6.9 | 11 | 37.9 |
| 4 | 3 | 10.3 | 14 | 48.3 |
| 6 | 3 | 10.3 | 17 | 58.6 |
| 8 | 1 | 3.4 | 18 | 62.1 |
| 10 | 2 | 6.9 | 20 | 69.0 |
| 12 | 1 | 3.4 | 21 | 72.4 |
| 13 | 1 | 3.4 | 22 | 75.9 |
| 15 | 2 | 6.9 | 24 | 82.8 |
| 16 | 1 | 3.4 | 25 | 86.2 |
| 20 | 2 | 6.9 | 27 | 93.1 |
| 24 | 1 | 3.4 | 28 | 96.6 |
| 30 | 1 | 3.4 | 29 | 100.0 |

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 93 | 1.6881720 | 0.4657508 | 1.0000000 | 2.0000000 |
| X3 | 93 | 1.1827957 | 0.3885938 | 1.0000000 | 2.0000000 |
| X4 | 93 | 2.2580645 | 0.6061860 | 1.0000000 | 4.0000000 |
| X5 | 93 | 2.1720430 | 0.8024914 | 1.0000000 | 4.0000000 |
| X6 | 92 | 4.5108696 | 1.0216832 | 1.0000000 | 5.0000000 |
| X7 | 93 | 1.1505376 | 0.5506170 | 1.0000000 | 4.0000000 |
| X8 | 93 | 1.5483871 | 0.5216222 | 1.0000000 | 3.0000000 |
| X9 | 90 | 1.0888889 | 0.2861776 | 1.0000000 | 2.0000000 |
| X10 | 93 | 1.0000000 | 0 | 1.0000000 | 1.0000000 |
| X11 | 93 | 1.4838710 | 0.5024484 | 1.0000000 | 2.0000000 |
| X12 | 93 | 1.8494624 | 1.1604557 | 0 | 4.0000000 |
| X13 | 93 | 2.1612903 | 1.3456074 | 0 | 4.0000000 |
| X14 | 93 | 1.9677419 | 1.3306717 | 0 | 4.0000000 |
| X15 | 92 | 2.0000000 | 1.3342488 | 0 | 4.0000000 |
| X16 | 92 | 1.6847826 | 1.3822211 | 0 | 4.0000000 |
| X17 | 93 | 2.1182796 | 1.2925326 | 0 | 4.0000000 |
| X18 | 92 | 1.7717391 | 1.2675429 | 0 | 4.0000000 |
| X19 | 93 | 1.9032258 | 1.2859146 | 0 | 4.0000000 |
| X20 | 93 | 1.6451613 | 1.2036643 | 0 | 4.0000000 |
| X21 | 93 | 2.8602151 | 1.2031787 | 0 | 4.0000000 |
| X22 | 92 | 2.2608696 | 1.3331741 | 0 | 4.0000000 |
| X23 | 92 | 1.6956522 | 1.2380340 | 0 | 4.0000000 |
| X24 | 92 | 1.7391304 | 1.2827646 | 0 | 4.0000000 |
| X25 | 93 | 2.8064516 | 1.2446238 | 0 | 4.0000000 |
| X26 | 92 | 1.9565217 | 1.2745440 | 0 | 4.0000000 |
| X27 | 93 | 2.0430108 | 1.4135523 | 0 | 4.0000000 |
| X28 | 93 | 2.0967742 | 1.3437821 | 0 | 4.0000000 |
| X29 | 92 | 1.6521739 | 1.2961039 | 0 | 4.0000000 |
| X30 | 92 | 1.3369565 | 1.1414005 | 0 | 4.0000000 |
| X31 | 93 | 2.8279570 | 1.3320763 | 0 | 4.0000000 |
| X32 | 92 | 1.7934783 | 1.2183401 | 0 | 4.0000000 |
| X33 | 93 | 2.3978495 | 1.2949718 | 0 | 4.0000000 |
| X34 | 93 | 2.1397849 | 1.3318131 | 0 | 4.0000000 |
| X35 | 92 | 1.9347826 | 1.3490277 | 0 | 4.0000000 |
| X36 | 92 | 2.4673913 | 1.2265478 | 0 | 4.0000000 |
| X37 | 92 | 1.4239130 | 1.4467371 | 0 | 4.0000000 |
| X38 | 93 | 1.5483871 | 1.1278696 | 0 | 4.0000000 |
| X39 | 92 | 1.5652174 | 0.9642437 | 0 | 4.0000000 |
| X40 | 93 | 2.3655914 | 1.2492167 | 0 | 4.0000000 |
| X41 | 93 | 2.1397849 | 1.5505357 | 0 | 4.0000000 |
| X42 | 91 | 1.2197802 | 0.8000305 | 0 | 4.0000000 |
| X43 | 91 | 1.0329670 | 1.0049936 | 0 | 3.0000000 |
| X44 | 91 | 0.8791209 | 0.7864854 | 0 | 3.0000000 |
| X45 | 92 | 0.7608696 | 0.7896245 | 0 | 3.0000000 |
| X46 | 91 | 1.1428571 | 1.0389250 | 0 | 3.0000000 |
| X47 | 91 | 0.9230769 | 0.9572039 | 0 | 3.0000000 |
| X48 | 90 | 1.1333333 | 0.7818158 | 0 | 3.0000000 |
| X49 | 92 | 0.9891304 | 0.8319785 | 0 | 3.0000000 |
| X50 | 90 | 1.1777778 | 0.9066270 | 0 | 3.0000000 |
| X51 | 90 | 0.5777778 | 0.8069610 | 0 | 3.0000000 |
| X52 | 90 | 1.7888889 | 0.9772059 | 0 | 3.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 92 | 1.6521739 | 2.8533180 | 0 | 15.0000000 |
| X54 | 92 | 5.7717391 | 8.6977366 | 0 | 48.0000000 |



Cumulative Cumulative

| X2 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 1 | 29 | 31.2 | 29 | 31.2 |
| 2 | 64 | 68.8 | 93 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 76 | 81.7 | 76 | 81.7 |
| 2 | 17 | 18.3 | 93 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 4 | 4.3 | 4 | 4.3 |
| 2 | 65 | 69.9 | 69 | 74.2 |
| 3 | 20 | 21.5 | 89 | 95.7 |
| 4 | 4 | 4.3 | 93 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 15 | 16.1 | 15 | 16.1 |
| 2 | 55 | 59.1 | 70 | 75.3 |
| 3 | 15 | 16.1 | 85 | 91.4 |
| 4 | 8 | 8.6 | 93 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 3 | 3.3 | 3 | 3.3 |
| 2 | 4 | 4.3 | 7 | 7.6 |
| 3 | 6 | 6.5 | 13 | 14.1 |
| 4 | 9 | 9.8 | 22 | 23.9 |
| 5 | 70 | 76.1 | 92 | 100.0 |

Frequency Missing = 1



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 85 | 91.4 | 85 | 91.4 |
| 2 | 4 | 4.3 | 89 | 95.7 |
| 3 | 2 | 2.2 | 91 | 97.8 |
| 4 | 2 | 2.2 | 93 | 100.0 |

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 43 | 46.2 | 43 | 46.2 |
| 2 | 49 | 52.7 | 92 | 98.9 |
| 3 | 1 | 1.1 | 93 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 82 | 91.1 | 82 | 91.1 |
| 2 | 8 | 8.9 | 90 | 100.0 |

Frequency Missing = 3

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 93 | 100.0 | 93 | 100.0 |

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 48 | 51.6 | 48 | 51.6 |
| 2 | 45 | 48.4 | 93 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 12.9 | 12 | 12.9 |
| 1 | 26 | 28.0 | 38 | 40.9 |
| 2 | 27 | 29.0 | 65 | 69.9 |
| 3 | 20 | 21.5 | 85 | 91.4 |
| 4 | 8 | 8.6 | 93 | 100.0 |

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 15.1 | 14 | 15.1 |
| 1 | 16 | 17.2 | 30 | 32.3 |
| 2 | 23 | 24.7 | 53 | 57.0 |
| 3 | 21 | 22.6 | 74 | 79.6 |
| 4 | 19 | 20.4 | 93 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 16.1 | 15 | 16.1 |
| 1 | 23 | 24.7 | 38 | 40.9 |

| | | | | |
|---|---|---|---|---|
| 2 | 20 | 21.5 | 58 | 62.4 |
| 3 | 20 | 21.5 | 78 | 83.9 |
| 4 | 15 | 16.1 | 93 | 100.0 |

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 20.7 | 19 | 20.7 |
| 1 | 13 | 14.1 | 32 | 34.8 |
| 2 | 20 | 21.7 | 52 | 56.5 |
| 3 | 29 | 31.5 | 81 | 88.0 |
| 4 | 11 | 12.0 | 92 | 100.0 |

Frequency Missing = 1



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 26 | 28.3 | 26 | 28.3 |
| 1 | 17 | 18.5 | 43 | 46.7 |
| 2 | 20 | 21.7 | 63 | 68.5 |
| 3 | 18 | 19.6 | 81 | 88.0 |
| 4 | 11 | 12.0 | 92 | 100.0 |

Frequency Missing = 1

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 11.8 | 11 | 11.8 |
| 1 | 22 | 23.7 | 33 | 35.5 |
| 2 | 22 | 23.7 | 55 | 59.1 |
| 3 | 21 | 22.6 | 76 | 81.7 |
| 4 | 17 | 18.3 | 93 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 18.5 | 17 | 18.5 |
| 1 | 23 | 25.0 | 40 | 43.5 |
| 2 | 28 | 30.4 | 68 | 73.9 |
| 3 | 12 | 13.0 | 80 | 87.0 |
| 4 | 12 | 13.0 | 92 | 100.0 |

Frequency Missing = 1

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 12.9 | 12 | 12.9 |
| 1 | 30 | 32.3 | 42 | 45.2 |

| | | | | |
|---|---|---|---|---|
| 2 | 21 | 22.6 | 63 | 67.7 |
| 3 | 15 | 16.1 | 78 | 83.9 |
| 4 | 15 | 16.1 | 93 | 100.0 |



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 16 | 17.2 | 16 | 17.2 |
| 1 | 33 | 35.5 | 49 | 52.7 |
| 2 | 20 | 21.5 | 69 | 74.2 |
| 3 | 16 | 17.2 | 85 | 91.4 |
| 4 | 8 | 8.6 | 93 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 6 | 6.5 | 6 | 6.5 |
| 1 | 6 | 6.5 | 12 | 12.9 |
| 2 | 20 | 21.5 | 32 | 34.4 |
| 3 | 24 | 25.8 | 56 | 60.2 |
| 4 | 37 | 39.8 | 93 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 13.0 | 12 | 13.0 |
| 1 | 16 | 17.4 | 28 | 30.4 |
| 2 | 20 | 21.7 | 48 | 52.2 |
| 3 | 24 | 26.1 | 72 | 78.3 |
| 4 | 20 | 21.7 | 92 | 100.0 |

Frequency Missing = 1

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 17 | 18.5 | 17 | 18.5 |
| 1 | 27 | 29.3 | 44 | 47.8 |
| 2 | 25 | 27.2 | 69 | 75.0 |
| 3 | 13 | 14.1 | 82 | 89.1 |
| 4 | 10 | 10.9 | 92 | 100.0 |

Frequency Missing = 1



| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 21.7 | 20 | 21.7 |
| 1 | 20 | 21.7 | 40 | 43.5 |
| 2 | 26 | 28.3 | 66 | 71.7 |

| | | | | |
|---|---|---|---|---|
| 3 | 16 | 17.4 | 82 | 89.1 |
| 4 | 10 | 10.9 | 92 | 100.0 |

Frequency Missing = 1

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 5.4 | 5 | 5.4 |
| 1 | 12 | 12.9 | 17 | 18.3 |
| 2 | 16 | 17.2 | 33 | 35.5 |
| 3 | 23 | 24.7 | 56 | 60.2 |
| 4 | 37 | 39.8 | 93 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 14.1 | 13 | 14.1 |
| 1 | 23 | 25.0 | 36 | 39.1 |
| 2 | 25 | 27.2 | 61 | 66.3 |
| 3 | 17 | 18.5 | 78 | 84.8 |
| 4 | 14 | 15.2 | 92 | 100.0 |

Frequency Missing = 1

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 18 | 19.4 | 18 | 19.4 |
| 1 | 17 | 18.3 | 35 | 37.6 |
| 2 | 20 | 21.5 | 55 | 59.1 |
| 3 | 19 | 20.4 | 74 | 79.6 |
| 4 | 19 | 20.4 | 93 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 14.0 | 13 | 14.0 |
| 1 | 21 | 22.6 | 34 | 36.6 |
| 2 | 22 | 23.7 | 56 | 60.2 |
| 3 | 18 | 19.4 | 74 | 79.6 |
| 4 | 19 | 20.4 | 93 | 100.0 |

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 21 | 22.8 | 21 | 22.8 |
| 1 | 26 | 28.3 | 47 | 51.1 |
| 2 | 18 | 19.6 | 65 | 70.7 |
| 3 | 18 | 19.6 | 83 | 90.2 |
| 4 | 9 | 9.8 | 92 | 100.0 |

Frequency Missing = 1

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 26.1 | 24 | 26.1 |
| 1 | 32 | 34.8 | 56 | 60.9 |
| 2 | 23 | 25.0 | 79 | 85.9 |
| 3 | 7 | 7.6 | 86 | 93.5 |
| 4 | 6 | 6.5 | 92 | 100.0 |

Frequency Missing = 1

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 8.6 | 8 | 8.6 |
| 1 | 10 | 10.8 | 18 | 19.4 |
| 2 | 13 | 14.0 | 31 | 33.3 |
| 3 | 21 | 22.6 | 52 | 55.9 |
| 4 | 41 | 44.1 | 93 | 100.0 |



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 14.1 | 13 | 14.1 |
| 1 | 29 | 31.5 | 42 | 45.7 |
| 2 | 25 | 27.2 | 67 | 72.8 |
| 3 | 14 | 15.2 | 81 | 88.0 |
| 4 | 11 | 12.0 | 92 | 100.0 |

Frequency Missing = 1

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 9.7 | 9 | 9.7 |
| 1 | 14 | 15.1 | 23 | 24.7 |
| 2 | 26 | 28.0 | 49 | 52.7 |
| 3 | 19 | 20.4 | 68 | 73.1 |
| 4 | 25 | 26.9 | 93 | 100.0 |

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 12.9 | 12 | 12.9 |
| 1 | 22 | 23.7 | 34 | 36.6 |
| 2 | 18 | 19.4 | 52 | 55.9 |
| 3 | 23 | 24.7 | 75 | 80.6 |

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 16.3 | 15 | 16.3 |
| 1 | 24 | 26.1 | 39 | 42.4 |
| 2 | 22 | 23.9 | 61 | 66.3 |
| 3 | 14 | 15.2 | 75 | 81.5 |
| 4 | 17 | 18.5 | 92 | 100.0 |

Frequency Missing = 1



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 4.3 | 4 | 4.3 |
| 1 | 20 | 21.7 | 24 | 26.1 |
| 2 | 22 | 23.9 | 46 | 50.0 |
| 3 | 21 | 22.8 | 67 | 72.8 |
| 4 | 25 | 27.2 | 92 | 100.0 |

Frequency Missing = 1

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 36 | 39.1 | 36 | 39.1 |
| 1 | 15 | 16.3 | 51 | 55.4 |
| 2 | 21 | 22.8 | 72 | 78.3 |
| 3 | 6 | 6.5 | 78 | 84.8 |
| 4 | 14 | 15.2 | 92 | 100.0 |

Frequency Missing = 1

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 22 | 23.7 | 22 | 23.7 |
| 1 | 19 | 20.4 | 41 | 44.1 |
| 2 | 35 | 37.6 | 76 | 81.7 |
| 3 | 13 | 14.0 | 89 | 95.7 |
| 4 | 4 | 4.3 | 93 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 3.3 | 3 | 3.3 |
| 1 | 58 | 63.0 | 61 | 66.3 |
| 2 | 11 | 12.0 | 72 | 78.3 |
| 3 | 16 | 17.4 | 88 | 95.7 |
| 4 | 4 | 4.3 | 92 | 100.0 |

Frequency Missing = 1



| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 7.5 | 7 | 7.5 |
| 1 | 21 | 22.6 | 28 | 30.1 |
| 2 | 15 | 16.1 | 43 | 46.2 |
| 3 | 31 | 33.3 | 74 | 79.6 |
| 4 | 19 | 20.4 | 93 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 21.5 | 20 | 21.5 |
| 1 | 19 | 20.4 | 39 | 41.9 |
| 2 | 8 | 8.6 | 47 | 50.5 |
| 3 | 20 | 21.5 | 67 | 72.0 |
| 4 | 26 | 28.0 | 93 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 15 | 16.5 | 15 | 16.5 |
| 1 | 46 | 50.5 | 61 | 67.0 |
| 2 | 26 | 28.6 | 87 | 95.6 |
| 3 | 3 | 3.3 | 90 | 98.9 |
| 4 | 1 | 1.1 | 91 | 100.0 |

Frequency Missing = 2

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 33 | 36.3 | 33 | 36.3 |
| 1 | 33 | 36.3 | 66 | 72.5 |
| 2 | 14 | 15.4 | 80 | 87.9 |
| 3 | 11 | 12.1 | 91 | 100.0 |

Frequency Missing = 2



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 33.0 | 30 | 33.0 |
| 1 | 46 | 50.5 | 76 | 83.5 |
| 2 | 11 | 12.1 | 87 | 95.6 |
| 3 | 4 | 4.4 | 91 | 100.0 |

Frequency Missing = 2

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 40 | 43.5 | 40 | 43.5 |
| 1 | 36 | 39.1 | 76 | 82.6 |
| 2 | 14 | 15.2 | 90 | 97.8 |
| 3 | 2 | 2.2 | 92 | 100.0 |

Frequency Missing = 1

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 31 | 34.1 | 31 | 34.1 |
| 1 | 28 | 30.8 | 59 | 64.8 |
| 2 | 20 | 22.0 | 79 | 86.8 |
| 3 | 12 | 13.2 | 91 | 100.0 |

Frequency Missing = 2

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 36 | 39.6 | 36 | 39.6 |
| 1 | 35 | 38.5 | 71 | 78.0 |
| 2 | 11 | 12.1 | 82 | 90.1 |
| 3 | 9 | 9.9 | 91 | 100.0 |

Frequency Missing = 2



| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 21.1 | 19 | 21.1 |
| 1 | 43 | 47.8 | 62 | 68.9 |
| 2 | 25 | 27.8 | 87 | 96.7 |
| 3 | 3 | 3.3 | 90 | 100.0 |

Frequency Missing = 3

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 27 | 29.3 | 27 | 29.3 |
| 1 | 44 | 47.8 | 71 | 77.2 |
| 2 | 16 | 17.4 | 87 | 94.6 |
| 3 | 5 | 5.4 | 92 | 100.0 |

Frequency Missing = 1

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 24 | 26.7 | 24 | 26.7 |
| 1 | 32 | 35.6 | 56 | 62.2 |
| 2 | 28 | 31.1 | 84 | 93.3 |
| 3 | 6 | 6.7 | 90 | 100.0 |

Frequency Missing = 3

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 52 | 57.8 | 52 | 57.8 |
| 1 | 28 | 31.1 | 80 | 88.9 |
| 2 | 6 | 6.7 | 86 | 95.6 |
| 3 | 4 | 4.4 | 90 | 100.0 |

Frequency Missing = 3



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 8.9 | 8 | 8.9 |
| 1 | 30 | 33.3 | 38 | 42.2 |
| 2 | 25 | 27.8 | 63 | 70.0 |
| 3 | 27 | 30.0 | 90 | 100.0 |

Frequency Missing = 3

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 53 | 57.6 | 53 | 57.6 |
| 1 | 9 | 9.8 | 62 | 67.4 |
| 2 | 10 | 10.9 | 72 | 78.3 |
| 3 | 5 | 5.4 | 77 | 83.7 |
| 4 | 1 | 1.1 | 78 | 84.8 |
| 5 | 4 | 4.3 | 82 | 89.1 |
| 6 | 4 | 4.3 | 86 | 93.5 |
| 7 | 1 | 1.1 | 87 | 94.6 |
| 8 | 1 | 1.1 | 88 | 95.7 |
| 10 | 3 | 3.3 | 91 | 98.9 |
| 15 | 1 | 1.1 | 92 | 100.0 |

Frequency Missing = 1

| | | | Cumulative | Cumulative |
|---|---|---|---|---|

| X54 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 0 | 38 | 41.3 | 38 | 41.3 |
| 1 | 2 | 2.2 | 40 | 43.5 |
| 2 | 5 | 5.4 | 45 | 48.9 |
| 3 | 6 | 6.5 | 51 | 55.4 |
| 4 | 2 | 2.2 | 53 | 57.6 |
| 5 | 7 | 7.6 | 60 | 65.2 |
| 6 | 8 | 8.7 | 68 | 73.9 |
| 7 | 1 | 1.1 | 69 | 75.0 |
| 8 | 3 | 3.3 | 72 | 78.3 |
| 10 | 2 | 2.2 | 74 | 80.4 |
| 12 | 4 | 4.3 | 78 | 84.8 |
| 13 | 1 | 1.1 | 79 | 85.9 |
| 14 | 1 | 1.1 | 80 | 87.0 |
| 15 | 4 | 4.3 | 84 | 91.3 |
| 16 | 2 | 2.2 | 86 | 93.5 |
| 20 | 1 | 1.1 | 87 | 94.6 |
| 28 | 1 | 1.1 | 88 | 95.7 |
| 30 | 2 | 2.2 | 90 | 97.8 |



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 36 | 1 | 1.1 | 91 | 98.9 |
| 48 | 1 | 1.1 | 92 | 100.0 |

Frequency Missing = 1

| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X2 | 80 | 1.5750000 | 0.4974619 | 1.0000000 | 2.0000000 |
| X3 | 80 | 1.2500000 | 0.4357447 | 1.0000000 | 2.0000000 |
| X4 | 80 | 2.1125000 | 0.5952077 | 1.0000000 | 4.0000000 |
| X5 | 80 | 2.0750000 | 0.8826743 | 1.0000000 | 4.0000000 |
| X6 | 80 | 4.2000000 | 1.2669109 | 1.0000000 | 5.0000000 |
| X7 | 80 | 1.4000000 | 0.9756530 | 1.0000000 | 4.0000000 |
| X8 | 80 | 1.6375000 | 0.4837551 | 1.0000000 | 2.0000000 |
| X9 | 79 | 1.2531646 | 0.4376029 | 1.0000000 | 2.0000000 |
| X10 | 80 | 2.0000000 | 0 | 2.0000000 | 2.0000000 |
| X11 | 80 | 1.0250000 | 0.1571100 | 1.0000000 | 2.0000000 |
| X12 | 79 | 1.8860759 | 1.1207523 | 0 | 4.0000000 |
| X13 | 80 | 1.8625000 | 1.1334249 | 0 | 4.0000000 |
| X14 | 79 | 1.9367089 | 1.2125600 | 0 | 4.0000000 |
| X15 | 79 | 1.8354430 | 1.3721626 | 0 | 4.0000000 |
| X16 | 79 | 1.5569620 | 1.1179977 | 0 | 4.0000000 |
| X17 | 80 | 2.2375000 | 1.2143003 | 0 | 4.0000000 |
| X18 | 80 | 1.6500000 | 1.3321725 | 0 | 4.0000000 |
| X19 | 79 | 1.9367089 | 1.2125600 | 0 | 4.0000000 |
| X20 | 80 | 1.8750000 | 1.1514987 | 0 | 4.0000000 |
| X21 | 80 | 2.7750000 | 1.2322153 | 0 | 4.0000000 |
| X22 | 80 | 2.4000000 | 1.3369150 | 0 | 4.0000000 |
| X23 | 80 | 1.8125000 | 1.2738236 | 0 | 4.0000000 |
| X24 | 80 | 1.7375000 | 1.3095922 | 0 | 4.0000000 |
| X25 | 80 | 2.8875000 | 1.1906147 | 0 | 4.0000000 |
| X26 | 80 | 1.9625000 | 1.1188121 | 0 | 4.0000000 |
| X27 | 80 | 2.7375000 | 1.3847611 | 0 | 4.0000000 |
| X28 | 79 | 2.4177215 | 1.3831179 | 0 | 4.0000000 |
| X29 | 79 | 1.4683544 | 1.3381526 | 0 | 4.0000000 |
| X30 | 79 | 1.5443038 | 1.0227849 | 0 | 4.0000000 |
| X31 | 78 | 3.0512821 | 1.2156708 | 0 | 4.0000000 |
| X32 | 79 | 1.8227848 | 1.1066175 | 0 | 4.0000000 |
| X33 | 79 | 2.3924051 | 1.3813568 | 0 | 4.0000000 |
| X34 | 78 | 2.2692308 | 1.4203811 | 0 | 4.0000000 |
| X35 | 78 | 2.1923077 | 1.3869306 | 0 | 4.0000000 |
| X36 | 78 | 2.5256410 | 1.2244729 | 0 | 4.0000000 |
| X37 | 79 | 3.0126582 | 1.1601688 | 0 | 4.0000000 |
| X38 | 80 | 1.8750000 | 1.0110153 | 0 | 4.0000000 |
| X39 | 80 | 1.4875000 | 0.9935711 | 0 | 4.0000000 |
| X40 | 80 | 2.4250000 | 1.3941560 | 0 | 4.0000000 |
| X41 | 80 | 2.2000000 | 1.5459215 | 0 | 4.0000000 |
| X42 | 79 | 1.1645570 | 0.7914670 | 0 | 4.0000000 |
| X43 | 80 | 0.9000000 | 0.9084693 | 0 | 3.0000000 |
| X44 | 79 | 0.8734177 | 0.8064975 | 0 | 3.0000000 |
| X45 | 79 | 0.7088608 | 0.7704794 | 0 | 3.0000000 |
| X46 | 80 | 1.3000000 | 1.0360587 | 0 | 3.0000000 |
| X47 | 79 | 0.8987342 | 1.0572695 | 0 | 3.0000000 |
| X48 | 80 | 1.1125000 | 0.8266717 | 0 | 3.0000000 |
| X49 | 79 | 0.9620253 | 0.9260204 | 0 | 4.0000000 |
| X50 | 79 | 1.2911392 | 1.0019455 | 0 | 3.0000000 |
| X51 | 80 | 0.6625000 | 0.9929339 | 0 | 3.0000000 |
| X52 | 78 | 1.9102564 | 1.0342938 | 0 | 4.0000000 |



| Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|
| X53 | 80 | 3.4875000 | 7.0567209 | 0 | 50.0000000 |
| X54 | 80 | 7.9375000 | 10.3695559 | 0 | 78.0000000 |



| | Cumulative | Cumulative |
|---|---|---|

| X2 | Frequency | Percent | Frequency | Percent |
|---|---|---|---|---|
| 1 | 34 | 42.5 | 34 | 42.5 |
| 2 | 46 | 57.5 | 80 | 100.0 |

| X3 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 60 | 75.0 | 60 | 75.0 |
| 2 | 20 | 25.0 | 80 | 100.0 |

| X4 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 9 | 11.3 | 9 | 11.3 |
| 2 | 54 | 67.5 | 63 | 78.8 |
| 3 | 16 | 20.0 | 79 | 98.8 |
| 4 | 1 | 1.3 | 80 | 100.0 |

| X5 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 18 | 22.5 | 18 | 22.5 |
| 2 | 48 | 60.0 | 66 | 82.5 |
| 3 | 4 | 5.0 | 70 | 87.5 |
| 4 | 10 | 12.5 | 80 | 100.0 |

| X6 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 4 | 5.0 | 4 | 5.0 |
| 2 | 8 | 10.0 | 12 | 15.0 |
| 3 | 9 | 11.3 | 21 | 26.3 |
| 4 | 6 | 7.5 | 27 | 33.8 |
| 5 | 53 | 66.3 | 80 | 100.0 |



| X7 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 67 | 83.8 | 67 | 83.8 |
| 2 | 3 | 3.8 | 70 | 87.5 |
| 3 | 1 | 1.3 | 71 | 88.8 |
| 4 | 9 | 11.3 | 80 | 100.0 |

| X8 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 29 | 36.3 | 29 | 36.3 |
| 2 | 51 | 63.8 | 80 | 100.0 |

| X9 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 59 | 74.7 | 59 | 74.7 |
| 2 | 20 | 25.3 | 79 | 100.0 |

Frequency Missing = 1

| X10 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 2 | 80 | 100.0 | 80 | 100.0 |

| X11 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 1 | 78 | 97.5 | 78 | 97.5 |
| 2 | 2 | 2.5 | 80 | 100.0 |



| X12 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 11.4 | 9 | 11.4 |
| 1 | 20 | 25.3 | 29 | 36.7 |
| 2 | 28 | 35.4 | 57 | 72.2 |
| 3 | 15 | 19.0 | 72 | 91.1 |
| 4 | 7 | 8.9 | 79 | 100.0 |

Frequency Missing = 1

| X13 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 11.3 | 9 | 11.3 |
| 1 | 24 | 30.0 | 33 | 41.3 |
| 2 | 22 | 27.5 | 55 | 68.8 |
| 3 | 19 | 23.8 | 74 | 92.5 |
| 4 | 6 | 7.5 | 80 | 100.0 |

| X14 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 13.9 | 11 | 13.9 |
| 1 | 19 | 24.1 | 30 | 38.0 |
| 2 | 21 | 26.6 | 51 | 64.6 |

| | | | | |
|---|---|---|---|---|
| 3 | 20 | 25.3 | 71 | 89.9 |
| 4 | 8 | 10.1 | 79 | 100.0 |

Frequency Missing = 1

| X15 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 16 | 20.3 | 16 | 20.3 |
| 1 | 21 | 26.6 | 37 | 46.8 |
| 2 | 14 | 17.7 | 51 | 64.6 |
| 3 | 16 | 20.3 | 67 | 84.8 |
| 4 | 12 | 15.2 | 79 | 100.0 |

Frequency Missing = 1



| X16 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 14 | 17.7 | 14 | 17.7 |
| 1 | 28 | 35.4 | 42 | 53.2 |
| 2 | 20 | 25.3 | 62 | 78.5 |
| 3 | 13 | 16.5 | 75 | 94.9 |
| 4 | 4 | 5.1 | 79 | 100.0 |

Frequency Missing = 1

| X17 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 8.8 | 7 | 8.8 |
| 1 | 16 | 20.0 | 23 | 28.8 |
| 2 | 22 | 27.5 | 45 | 56.3 |
| 3 | 21 | 26.3 | 66 | 82.5 |
| 4 | 14 | 17.5 | 80 | 100.0 |

| X18 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 28.8 | 23 | 28.8 |
| 1 | 13 | 16.3 | 36 | 45.0 |
| 2 | 20 | 25.0 | 56 | 70.0 |
| 3 | 17 | 21.3 | 73 | 91.3 |
| 4 | 7 | 8.8 | 80 | 100.0 |

| X19 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 13.9 | 11 | 13.9 |
| 1 | 20 | 25.3 | 31 | 39.2 |
| 2 | 18 | 22.8 | 49 | 62.0 |

| | | | | |
|---|---|---|---|---|
| 3 | 23 | 29.1 | 72 | 91.1 |
| 4 | 7 | 8.9 | 79 | 100.0 |

Frequency Missing = 1



| X20 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 15.0 | 12 | 15.0 |
| 1 | 17 | 21.3 | 29 | 36.3 |
| 2 | 25 | 31.3 | 54 | 67.5 |
| 3 | 21 | 26.3 | 75 | 93.8 |
| 4 | 5 | 6.3 | 80 | 100.0 |

| X21 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 5.0 | 4 | 5.0 |
| 1 | 10 | 12.5 | 14 | 17.5 |
| 2 | 17 | 21.3 | 31 | 38.8 |
| 3 | 18 | 22.5 | 49 | 61.3 |
| 4 | 31 | 38.8 | 80 | 100.0 |

| X22 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 12.5 | 10 | 12.5 |
| 1 | 11 | 13.8 | 21 | 26.3 |
| 2 | 16 | 20.0 | 37 | 46.3 |
| 3 | 23 | 28.8 | 60 | 75.0 |
| 4 | 20 | 25.0 | 80 | 100.0 |

| X23 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 15.0 | 12 | 15.0 |
| 1 | 26 | 32.5 | 38 | 47.5 |
| 2 | 18 | 22.5 | 56 | 70.0 |
| 3 | 13 | 16.3 | 69 | 86.3 |
| 4 | 11 | 13.8 | 80 | 100.0 |



| X24 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 16 | 20.0 | 16 | 20.0 |
| 1 | 23 | 28.8 | 39 | 48.8 |
| 2 | 17 | 21.3 | 56 | 70.0 |
| 3 | 14 | 17.5 | 70 | 87.5 |
| 4 | 10 | 12.5 | 80 | 100.0 |

| X25 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 5.0 | 4 | 5.0 |
| 1 | 6 | 7.5 | 10 | 12.5 |
| 2 | 19 | 23.8 | 29 | 36.3 |
| 3 | 17 | 21.3 | 46 | 57.5 |
| 4 | 34 | 42.5 | 80 | 100.0 |

| X26 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 11.3 | 9 | 11.3 |
| 1 | 16 | 20.0 | 25 | 31.3 |
| 2 | 32 | 40.0 | 57 | 71.3 |
| 3 | 15 | 18.8 | 72 | 90.0 |
| 4 | 8 | 10.0 | 80 | 100.0 |

| X27 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 6.3 | 5 | 6.3 |
| 1 | 17 | 21.3 | 22 | 27.5 |
| 2 | 8 | 10.0 | 30 | 37.5 |
| 3 | 14 | 17.5 | 44 | 55.0 |
| 4 | 36 | 45.0 | 80 | 100.0 |



| X28 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 13.9 | 11 | 13.9 |
| 1 | 9 | 11.4 | 20 | 25.3 |
| 2 | 18 | 22.8 | 38 | 48.1 |
| 3 | 18 | 22.8 | 56 | 70.9 |
| 4 | 23 | 29.1 | 79 | 100.0 |

Frequency Missing = 1

| X29 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 28 | 35.4 | 28 | 35.4 |
| 1 | 13 | 16.5 | 41 | 51.9 |
| 2 | 16 | 20.3 | 57 | 72.2 |
| 3 | 17 | 21.5 | 74 | 93.7 |
| 4 | 5 | 6.3 | 79 | 100.0 |

Frequency Missing = 1

| X30 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 12 | 15.2 | 12 | 15.2 |
| 1 | 29 | 36.7 | 41 | 51.9 |
| 2 | 23 | 29.1 | 64 | 81.0 |
| 3 | 13 | 16.5 | 77 | 97.5 |
| 4 | 2 | 2.5 | 79 | 100.0 |

Frequency Missing = 1

| X31 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 4 | 5.1 | 4 | 5.1 |
| 1 | 6 | 7.7 | 10 | 12.8 |
| 2 | 13 | 16.7 | 23 | 29.5 |
| 3 | 14 | 17.9 | 37 | 47.4 |
| 4 | 41 | 52.6 | 78 | 100.0 |

Frequency Missing = 2



| X32 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 9 | 11.4 | 9 | 11.4 |
| 1 | 23 | 29.1 | 32 | 40.5 |
| 2 | 26 | 32.9 | 58 | 73.4 |
| 3 | 15 | 19.0 | 73 | 92.4 |
| 4 | 6 | 7.6 | 79 | 100.0 |

Frequency Missing = 1

| X33 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 12.7 | 10 | 12.7 |
| 1 | 13 | 16.5 | 23 | 29.1 |
| 2 | 14 | 17.7 | 37 | 46.8 |
| 3 | 20 | 25.3 | 57 | 72.2 |
| 4 | 22 | 27.8 | 79 | 100.0 |

Frequency Missing = 1

| X34 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 14.1 | 11 | 14.1 |
| 1 | 16 | 20.5 | 27 | 34.6 |
| 2 | 13 | 16.7 | 40 | 51.3 |
| 3 | 17 | 21.8 | 57 | 73.1 |
| 4 | 21 | 26.9 | 78 | 100.0 |

Frequency Missing = 2

| X35 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 10 | 12.8 | 10 | 12.8 |
| 1 | 19 | 24.4 | 29 | 37.2 |
| 2 | 14 | 17.9 | 43 | 55.1 |
| 3 | 16 | 20.5 | 59 | 75.6 |
| 4 | 19 | 24.4 | 78 | 100.0 |

Frequency Missing = 2



| X36 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 5 | 6.4 | 5 | 6.4 |
| 1 | 11 | 14.1 | 16 | 20.5 |
| 2 | 22 | 28.2 | 38 | 48.7 |
| 3 | 18 | 23.1 | 56 | 71.8 |
| 4 | 22 | 28.2 | 78 | 100.0 |

Frequency Missing = 2

| X37 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 3.8 | 3 | 3.8 |
| 1 | 8 | 10.1 | 11 | 13.9 |
| 2 | 10 | 12.7 | 21 | 26.6 |
| 3 | 22 | 27.8 | 43 | 54.4 |
| 4 | 36 | 45.6 | 79 | 100.0 |

Frequency Missing = 1

| X38 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 7 | 8.8 | 7 | 8.8 |
| 1 | 21 | 26.3 | 28 | 35.0 |
| 2 | 31 | 38.8 | 59 | 73.8 |
| 3 | 17 | 21.3 | 76 | 95.0 |
| 4 | 4 | 5.0 | 80 | 100.0 |

| X39 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 3 | 3.8 | 3 | 3.8 |
| 1 | 54 | 67.5 | 57 | 71.3 |
| 2 | 11 | 13.8 | 68 | 85.0 |
| 3 | 5 | 6.3 | 73 | 91.3 |
| 4 | 7 | 8.8 | 80 | 100.0 |

| X40 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 11 | 13.8 | 11 | 13.8 |
| 1 | 13 | 16.3 | 24 | 30.0 |
| 2 | 8 | 10.0 | 32 | 40.0 |
| 3 | 27 | 33.8 | 59 | 73.8 |
| 4 | 21 | 26.3 | 80 | 100.0 |

| X41 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 19 | 23.8 | 19 | 23.8 |
| 1 | 10 | 12.5 | 29 | 36.3 |
| 2 | 8 | 10.0 | 37 | 46.3 |
| 3 | 22 | 27.5 | 59 | 73.8 |
| 4 | 21 | 26.3 | 80 | 100.0 |

| X42 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 13 | 16.5 | 13 | 16.5 |
| 1 | 45 | 57.0 | 58 | 73.4 |
| 2 | 17 | 21.5 | 75 | 94.9 |
| 3 | 3 | 3.8 | 78 | 98.7 |
| 4 | 1 | 1.3 | 79 | 100.0 |

Frequency Missing = 1

| X43 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 32 | 40.0 | 32 | 40.0 |
| 1 | 29 | 36.3 | 61 | 76.3 |
| 2 | 14 | 17.5 | 75 | 93.8 |
| 3 | 5 | 6.3 | 80 | 100.0 |



| X44 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 27 | 34.2 | 27 | 34.2 |
| 1 | 39 | 49.4 | 66 | 83.5 |
| 2 | 9 | 11.4 | 75 | 94.9 |
| 3 | 4 | 5.1 | 79 | 100.0 |

Frequency Missing = 1

| X45 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 36 | 45.6 | 36 | 45.6 |
| 1 | 32 | 40.5 | 68 | 86.1 |
| 2 | 9 | 11.4 | 77 | 97.5 |
| 3 | 2 | 2.5 | 79 | 100.0 |

Frequency Missing = 1

| X46 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 23 | 28.8 | 23 | 28.8 |
| 1 | 21 | 26.3 | 44 | 55.0 |
| 2 | 25 | 31.3 | 69 | 86.3 |
| 3 | 11 | 13.8 | 80 | 100.0 |

| X47 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 39 | 49.4 | 39 | 49.4 |
| 1 | 18 | 22.8 | 57 | 72.2 |
| 2 | 13 | 16.5 | 70 | 88.6 |
| 3 | 9 | 11.4 | 79 | 100.0 |

Frequency Missing = 1



| X48 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 25.0 | 20 | 25.0 |
| 1 | 34 | 42.5 | 54 | 67.5 |
| 2 | 23 | 28.8 | 77 | 96.3 |
| 3 | 3 | 3.8 | 80 | 100.0 |

| X49 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 27 | 34.2 | 27 | 34.2 |
| 1 | 35 | 44.3 | 62 | 78.5 |
| 2 | 11 | 13.9 | 73 | 92.4 |
| 3 | 5 | 6.3 | 78 | 98.7 |
| 4 | 1 | 1.3 | 79 | 100.0 |

Frequency Missing = 1

| X50 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 20 | 25.3 | 20 | 25.3 |
| 1 | 27 | 34.2 | 47 | 59.5 |
| 2 | 21 | 26.6 | 68 | 86.1 |
| 3 | 11 | 13.9 | 79 | 100.0 |

Frequency Missing = 1

| X51 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 49 | 61.3 | 49 | 61.3 |
| 1 | 17 | 21.3 | 66 | 82.5 |
| 2 | 6 | 7.5 | 72 | 90.0 |
| 3 | 8 | 10.0 | 80 | 100.0 |



| X52 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 8 | 10.3 | 8 | 10.3 |
| 1 | 20 | 25.6 | 28 | 35.9 |
| 2 | 22 | 28.2 | 50 | 64.1 |
| 3 | 27 | 34.6 | 77 | 98.7 |
| 4 | 1 | 1.3 | 78 | 100.0 |

Frequency Missing = 2

| X53 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 30 | 37.5 | 30 | 37.5 |
| 1 | 7 | 8.8 | 37 | 46.3 |
| 2 | 10 | 12.5 | 47 | 58.8 |
| 3 | 8 | 10.0 | 55 | 68.8 |
| 4 | 9 | 11.3 | 64 | 80.0 |
| 5 | 5 | 6.3 | 69 | 86.3 |
| 6 | 1 | 1.3 | 70 | 87.5 |
| 7 | 3 | 3.8 | 73 | 91.3 |
| 8 | 2 | 2.5 | 75 | 93.8 |
| 10 | 2 | 2.5 | 77 | 96.3 |
| 22 | 1 | 1.3 | 78 | 97.5 |
| 32 | 1 | 1.3 | 79 | 98.8 |
| 50 | 1 | 1.3 | 80 | 100.0 |

| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 0 | 21 | 26.3 | 21 | 26.3 |
| 2 | 4 | 5.0 | 25 | 31.3 |
| 3 | 3 | 3.8 | 28 | 35.0 |
| 4 | 7 | 8.8 | 35 | 43.8 |

| | | | | |
|---|---|---|---|---|
| 5 | 3 | 3.8 | 38 | 47.5 |
| 6 | 8 | 10.0 | 46 | 57.5 |
| 7 | 2 | 2.5 | 48 | 60.0 |
| 8 | 4 | 5.0 | 52 | 65.0 |
| 10 | 7 | 8.8 | 59 | 73.8 |
| 12 | 3 | 3.8 | 62 | 77.5 |
| 13 | 3 | 3.8 | 65 | 81.3 |
| 14 | 2 | 2.5 | 67 | 83.8 |
| 15 | 3 | 3.8 | 70 | 87.5 |
| 16 | 1 | 1.3 | 71 | 88.8 |
| 17 | 1 | 1.3 | 72 | 90.0 |
| 20 | 4 | 5.0 | 76 | 95.0 |
| 24 | 3 | 3.8 | 79 | 98.8 |



| X54 | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---|---|---|---|---|
| 78 | 1 | 1.3 | 80 | 100.0 |