AN ASSESSMENT OF TEACHER BURNOUT LEVELS
AS ASSOCIATED WITH CONTEXTUAL AND DIVERSITY FACTORS
IN RURAL APPALACHIAN SCHOOL DISTRICTS

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IN RURAL APPALACHIAN SCHOOL DISTRICTS

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ABSTRACT

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AN ASSESSMENT OF TEACHER BURNOUT LEVELS AS ASSOCIATED WITH CONTEXTUAL AND DIVERSITY FACTORS IN RURAL APPALACHIAN SCHOOL DISTRICTS (125 pp.)

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The present study investigated factors influencing teacher burnout in an Appalachian region of rural Southeastern Ohio. Following the Social-Ecological Theory, the present study considered the contributions of individual factors, school climate and environment factors, as well as Appalachian cultural identity as variables that all play a part in predicting levels of teacher burnout within the region. An overview of past research is presented, as well as historical, social, and educational trends and issues pertaining specifically to teachers within the Appalachian region. In the study, self-report data was collected from five rural school districts in Southeastern Ohio. Results revealed strong relationships between school-level variables and burnout scores. Further, the inverse relationship between school climate and emotional exhaustion is strengthened by the addition of teacher satisfaction as a mediating factor. Though cultural variables did not directly influence burnout scores, they were likely referenced via the school-level variables in the study. Regional findings and suggestions were presented to each school upon completion of data analyses.

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I. INTRODUCTION AND OVERVIEW OF GENERAL ISSUES

Educator burnout has presented itself as an emerging problem in the mental health field over the past 50 years (Aluja, Blanch & Garcia, 2005; Abel & Sewell, 1999; Blasé, 1982). This type of burnout results in notable consequences, both to teachers’ personal lives and professional functioning (Burke, Greenglass, & Schwarzer, 1996; Byrne, 1991). Past studies have often investigated individual-level characteristics and school factors associated with teacher burnout. Unfortunately, the influences of community and culture have been relatively neglected. Though the literature is growing, very little research exists exploring this issue among teachers in rural settings. Furthermore, no studies have been centered on teacher burnout specifically in the Appalachian region. For these reasons, the present study focuses on these unique cultural factors that may contribute to burnout, adhering to a social-ecological theory.

A concise summary of regional historical events is important in understanding the particular research context at hand. For example, recent educational trends such as consolidation and community/school instability may account for a significant degree of educator burnout (Appalachian Regional Commission, 2003; Reck, Reck, & Keefe, 1993). In addition, the Appalachian region has undergone a population shift within the past century; namely, the young native Appalachians have moved out of the region, resulting in the need for teacher recruitment from outside the area (Reck et al., 1993). Because these professionals may potentially be facing students from a new culture with distinct and unique values, norms, and community life, this likely creates a remarkable new stress on the teacher. The present study sought to investigate multicultural factors such as alignment with the Appalachian culture, regional origin, and attitudes about diversity within the classroom to assess the affect that these contextual factors exert on teacher burnout levels. This “diversity-related burnout” is a phenomenon that has been
piloted in a study in Israel, but has not yet been investigated in the United States (Tatar & Horenczyk, 2003).

Because regional norms and values have such a rich and specific niche in Southeastern Ohio, this study will contribute to the existing literature by discussing specific factors that play into rural educators’ unique roles. Past educational trends as well a glimpse of the present state of rural Appalachian schools will be presented, followed by the direct consequences and effects of these developments on teacher stress and burnout. In addition, a growing body of research has studied multiculturalism within schools, but studies have yet to investigate the ways in which Appalachian teachers’ personal cultural alignment affects their level of stress. Also, many of the empirical investigations within the Appalachian region are outdated or based on poorly designed or subjective qualitative reports. This lack of rural representation in previous studies therefore provides further rationale for continued examination of these issues. The present study was intended to address these current limitations in extant literature and contribute to educational professionals’ understanding of the specific contextual factors affecting teachers in the Appalachian area. Further research in the cohort of Appalachian teachers across all grade levels will likely inform the development of more culturally-sensitive intervention efforts to address occupational stress and burnout.
II. TEACHER BURNOUT

The phenomenon of “burning out” in an occupation has been a well-reviewed topic in the past half century. Initial studies of this construct began in the late 1960’s and investigated human service jobs. In 1972, Freudenberger first applied the scientific concept of “burnout” to service workers (as cited in Byrne, 1991). As evidenced by an extant literature base, those in caring professions are at highest risk for burnout due to the development of unrealistic expectations of their ability to make a positive impact. As applied to the field of education, McGuire (1979) first warned that public school teacher occupations were being significantly affected by burnout. Recently noted by the Alliance for Excellent Education (2005), teachers note a lack of support and poor working conditions as primary factors in their decisions to leave the profession, both variables closely linked to burnout. Though the relationship between attrition and burnout has been highly scrutinized, to date no accurate national prevalence rates exist. This issue is a highly relevant area of concern. The demand for quality educational instructors is increasing, in part due to high turnover. In response, schools have increased the number of pre-professionals in the classroom, particularly in the high-risk/high need areas, resulting in educators with less experience and preparation (Christie, 2005; Chopra, 2004). As clearly demonstrated, investigating the symptoms, factors and coping mechanisms involved in teacher burnout is an important endeavor for building possible intervention strategies.

Phenomenology

Originally, Maslach & Jackson (1981) defined burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment. First, the facet of emotional exhaustion occurs when teachers are unable to physically and emotionally provide for students due to overwhelming feelings of fatigue and stress (Byrne, 1991). Depersonalization
occurs when teachers develop negative and cynical attitudes toward their work situation, including interactions with students, parents, and colleagues (Burke et al., 1996). Diminished feelings of personal accomplishment are especially pertinent to the teaching profession in that teachers do not enter the field of education for financial gain, but instead they strive to make a positive difference in children’s lives (Schwab, 2001). Combining all three facets of burnout, it is evident that there are both behavioral and mental aspects involved (Evers, Tomic, & Brouwers, 2004). Thereby, burnout encompasses emotional, attitudinal, and physical exhaustion resulting from a host of occupational stressors (Blasé, 1982).

Teacher burnout stems from the inability to adequately cope with stresses of work and personal lives (Huberman & Vandenberghe, 1999). It occurs over time when accumulating occupational stressors combine with a lack of coping skills (Greenglass, Burke & Konarski, 1998). The process of becoming burned out has been summarized as a “progressive downward spiral” that ultimately leads to teachers’ needs remaining unmet for a long duration of time (Nuccio, 1987, pp. 113). Teachers, despite their efforts, are essentially dissatisfied, unmotivated, exhausted and much more prone to experiencing chronic stress. In turn, burnout is thought to occur as the result of chronic and unmediated stress (Burke et al., 1996; Burke & Greenglass, 1998). From a phenomenological perspective, experiencing stress is only one aspect of a large repertoire of precipitants that occurs in the development of burnout.

Burnout is also heavily influenced by attitudes, expectations of achievable outcomes, and teacher motivations (Vanheule & Verhaeghe, 2004). When teachers feel as if they have failed, it often results in thoughts of depression, entrapment, inadequacy, incompetence, suicidal ideation, negative views toward themselves, their work and personal life, and low self-concept (Byrne, 1991). Recent research suggests burnout may be the outcome of both trigger contextual variables and either facilitating or inhibiting personality variables (Cano-Garcia, Padilla-Munoz, & Carrasco-Ortiz, 2005). The literature as a whole reveals that, ultimately, burnout results in the
breakdown in basic needs of teachers: helping others to grow as well as growing personally. As can be imagined, the problem of burnout among educators has costly consequences for both the teacher and those with whom she/he works.

Consequences

Numerous consequences of teacher burnout are found at both the individual and contextual levels. Individual consequences of burnout include physiological, psychological and psychosocial problems. For example, evidence has linked burnout to lack of self-confidence, low self-esteem and significant depression (Schonfeld, 2001). Further, teachers who are burned out report loss of humor, imagination, creativity, disregard of personal priorities and decreased insight into assessments of problems and situations. In addition, individuals who feel particularly ineffective report low job satisfaction accompanied by resentment, frustration, boredom, irritability, anger, and helplessness (Blasé, 1982). Burnout can further lead to psychopathology and deterioration in social and family relations (Cano-Garcia et al., 2005).

Physical well-being can also suffer as a result of burnout among teachers. As early as 1979, teachers were noted to report physical maladies that were closely related to feeling incompetent, less effective, and having low self concept (Byrne, 1991). Burnout has since been discovered to increase susceptibility to illness, tension, nausea, back pain, accident proneness, viruses, fatigue and sleep disturbances. Most commonly reported symptoms include headache and frequent colds and flu, but consequences as serious as cardiovascular symptoms have been linked to burnout as well (Hock, 1988; Schonfeld, 2001).

In addition to the personal ramifications of burnout to the individual, substantial costs are also incurred by the school including teacher absenteeism, turnover, career change, mental/physical health claims, and early retirement (Leithwood, Menzies, Jantzi, & Leithwood, 1999). Burnout often leads to deteriorating performance and changes in attitude and personality.
(Burke et al., 1996). Additionally, these unmediated stressors can result in poorer job performance and a blunting of ability to the social caring aspects of teaching (Freudenberger, 1975 and Maslach, 1976; as cited in Davis, 2003). Because teachers are role models, their psychological states affect the psychological state of the students around them as well (Blasé 1982; Byrne, 1991; Schonfeld, 2001). As reported by Evers, Tomic and Brouwers (2004), both students and teachers rated burned-out teachers as more irritable and apathetic to students, resulting in less involvement and motivation in the classroom and other school environments. Within this cycle, issues with high turnover often lead to increased need for substitute teachers, resulting in less consistent and poorer quality teaching for the students (Simpson, LaCava, & Graner, 2004). As evidenced, when teachers experience burnout, students, coworkers, and the entire school community is ultimately affected.
III. FACTORS RELATED TO TEACHER BURNOUT

Social Ecological Theory

As will be examined extensively in the following section, the literature base regarding factors associated with teacher burnout emphasizes both personal and school-based issues. Unfortunately, community and culture effects have been neglected in past studies. In response, many researchers advocate for the application of the social ecological model to both research and clinical practice as it places importance on in the broader social, institutional, and cultural contexts of people-environment relations. This model has informed a wide range of clinical research studies in areas of health and medicine (e.g., Whittemore, Melkus, & Grey, 2004; Bull, Eakin, Reeves, & Riley, 2006). Also, the newfound mindset of including more distal variables in preventing unhealthy behaviors has been extended to the schools. For instance, Birnbaum, Lytle, Perry, Murray, & Story (2003) tested multiple school-level indicators to determine the effectiveness of a healthy eating habits promotion. As a basis for the present study, and to explain the importance of including factors at all levels, the social ecological theory is a useful guide to understand and interpret predicted findings.

The concept of social ecology as related to wellness promotion entails a number of assumptions. The first is that the well-being of individuals in a given situation is influenced by many facets of both the physical and social environments. Thereby, the overall health status of an individual is affected by these contextual factors as well as personal attributes, such as genetics, disposition and behavior patterns (Stokols, 2000). Extending from this premise, a second theoretical assumption is that any attempts to promote health must take into account the multidimensional nature of human environments (Stokols, 2000). As pertaining to the present study, both personal teacher factors, constituting primary level factors, as well as multi-leveled
environmental and contextual factors must be examined to better understand and predict teacher burnout. Further, the social ecological paradigm follows the notion that human behavior is embedded into systems (Stokols, 2000). Thus, interactions between individuals and their environments are seen as cycles of mutual influence. Bidirectional factors come into play, whereby physical and social environmental variables directly influence a person, but concurrently the individual modifies his setting through individual and collective action. A final theoretical premise is that the social ecological model views human environments of local settings and organizations as located within a network of more complex and remote regions. Therefore, an individual’s health is affected both by his/her immediate and more distant environments (Stokols, 2000).

Social-ecological theory can also be utilized to evaluate job settings. In their theoretical essays on examining factors which affect occupational performance, Wicker and August (2000) further elaborate on the many layers of variables affecting the worker. They begin with a focus on the person, enveloping a wide range of characteristics including the employee’s background, personality, decision-making tendencies, social self and long-term goals. Extending their research to environmental effects, the researchers then examine factors outside the individual, such as the specific work domain, work behavior settings, and employing organization. Additionally, more indirect factors stem from the family, kinship systems, informal social groups, locality/culture and the larger society (Wicker & August, 2000). From this viewpoint, all factors affecting a worker should ideally be taken into account, for every aspect of the employee’s life ultimately plays a part in affecting the individual’s performance and well-being. Incorporating this conceptual framework into the present study centered on teacher burnout, predicting factors stem from not just personal variables of the teacher, but also from environmental contextual variables such as the school and the culture at large (Refer to Appendix A).
From the existing literature base, a generally accepted presumption is that burnout is caused by chronic overstress which may stem from job features, personal characteristics and/or life events (Blasé, 1982). Following a mediator model, burnout occurs after job-related antecedents and results in both emotional and health-related consequences (Burke et al., 1996). Sources of stress involved in this cumulative process include students, administrators, and personal fatigue (Blasé, 1982; Schwab, 2001). A review and summary of factors to be examined follows, moving from primary-level individual characteristics to the first-level school environment and further encompassing the upper-level cultural climate.

Individual Characteristics and Protective Factors

A number of individual characteristics have been studied as they relate to teacher burnout. Gender is one such factor which differentiates patterns of burnout characteristics, with men scoring higher on depersonalization across all grade levels (Byrne, 1991; Burke et al., 1996; Lau, Yuen, & Chan, 2005), as well as more negative attitudes toward students (Schwab & Iwanicki, 1982a, as cited in Schwab, 2001). In contrast, females reported higher emotional exhaustion and reduced personal accomplishment (Lau et al., 2005). As noted by Byrne (1991) in her study of 642 teachers across all grade levels, self-report data from mailed questionnaires revealed the female role may also be useful in conceptualizing the increased propensity for burnout. Seeing as many women are still responsible for both emotional and physical needs of family, female teachers may conceivably be required to express emotional investment through a “double dose” of caring both in the school and in the home (Byrne, 1991, pp. 205). Further, Friedman (1995) found that burnout among male teachers was mainly influenced by students’ inattentiveness, whereas female teacher burnout was affected most by student disrespect. Additional studies are warranted to further explore factors related to gender as possible influences on burnout ratings.
Alternatively, studies have exposed conflicting trends when investigating age and teaching experience as factors relating to burnout. A recent study specifically investigated teacher burnout and demographic correlates with a sample of 1,797 Hong Kong educators across all grade levels. Questionnaires were presented to teachers at 45 randomly selected schools, and they were then asked to complete the measures, seal the envelope, and drop it off in the main school office. Results showed teachers in the youngest age group were significantly more burned out than their older colleagues. More specifically, young age was a strong predictor for both the emotional exhaustion and depersonalization burnout factors (Lau et al., 2005). Additionally, teachers with junior rank status had significantly lower scores on the burnout dimension of personal accomplishment. Conclusions obtained from this data must be tentative, though; teachers in Hong Kong may have very different experiences and a unique cultural context from which they teach compared to educators in the United States. Indeed, studies of public school teachers in the United States have been inconclusive regarding the relation between burnout and teacher age (Byrne, 1991).

Further, personality variables may facilitate or inhibit the outcome of contextual factors related to burnout. Cano-Garcia and colleagues (2005) used the Personality Inventory NEO-FFI to evaluate the Big Five Factors of personality structure. Results revealed that high burnout scores correlate with high neuroticism and introversion. Neuroticism accounted for 41% of the variance in emotional exhaustion, as individuals with this personality trait express more emotions, experience more instability and exhibit an elevated stress reaction, thereby becoming more vulnerable to experiencing burnout (Cano-Garcia et al., 2005). In addition, agreeableness accounted for 34% of feelings of personal accomplishment. Also, both openness and neuroticism were associated with feelings of depersonalization, demonstrating strong relations to prominent burnout facets. As demonstrated, empirical evidence links certain patterns of personality traits as associated with aspects of teacher burnout. Still, personal factors alone do not accurately predict
levels of burnout. A more comprehensive model of burnout prediction including possible interactions with classroom stressors and contextual variables is likely more useful in conceptualizing factors leading to teacher stress.

Teacher perceptions are another important characteristic to consider in understanding teacher burnout. Unfortunately for teachers, many of their reported stressors cannot be eradicated completely from their jobs, so educators’ personal views and coping remain an important deterrent to burnout. These personal outlook characteristics also affect educators’ risk, such as teachers’ personal views on stress and role conflict (Hepburn & Brown, 2001). For example, Schonfeld (1990) found that teachers who demonstrated active coping techniques (e.g., advice seeking and direct action) had lower burnout levels and higher morale. In a related study, Vanheule and Verhaeghe (2004) examined interview narratives of both high- and low-scoring teachers on a burnout questionnaire. Results showed that teachers experiencing burnout have an overly idealized notion of what they want to accomplish and subsequently feel powerless when this is not realized. In contrast, healthier teachers deal with inabilities in their jobs by taking into account the structural context of events, and are able to detach from their stressors more easily.

Further exploring the impact of teacher perceptions on burnout, a study by Kokkinos, Panayiotou, and Davazoglou (2005), administered questionnaires to teachers anonymously in small-group sessions to assess whether burnout was linked to the perceived severity of 24 undesirable student behaviors among teachers. Results showed a significant association between burnout and the ratings of antisocial and oppositional student behaviors, suggesting that as teachers experience higher degrees of stress, they are less tolerant of aversive and challenging students. Further, teachers have been found to generally view success with students more from “soft data,” characterized as verbal and non-verbal enthusiasm and gratitude, versus “hard data” such as test results (Blasé, 1982, pp. 106). Therefore, many healthy teachers rely on positive
feedback from their environment, and burnout can result from incongruence in community and teacher views.

Though teachers’ personal viewpoints play an important role in predicting burnout, the teaching context such as grade level taught also affects teacher stress. For instance, research trends have shown that disruptive behavior is one of the most potent predictors of teacher stress (Aluja et al., 2005; Byrne, 1991). For example, Byrne (1991) reported that educators teaching high school exhibit higher levels of burnout than elementary and middle school teachers, largely due to poor pupil behavior. High school teachers’ roles may require them to interact with more unmotivated students, and deal with discipline issues, time pressures, and poorer working conditions as compared to elementary and middle school teachers (Howard & Johnson, 2004). Additionally, Friedmana (1995) conducted a study with 746 Israeli teachers, revealing that typical student misbehaviors including disrespect and inattentiveness accounted for 22% of teacher burnout variance for the whole sample, across all grade levels taught. Further breaking down these results, within religious schools in the sample, the burnout variance accounted for by misbehavior was 33% (Friedman, 1995), supplying evidence to support the idea that school context also affects teacher stress associated with student problems.

Adding to the stress of dealing with disruptive students, the teaching occupation as a whole has become increasingly stressful due to work overload, poor career structure, and low salaries (Schonfeld, 2001). Occupational strain occurs when teacher’s coping resources are not enough to overcome the effects of a stressor, resulting in chronic negative cumulating feelings (Blasé, 1982). The risk of burnout is greatly increased by teachers having perceptions of unmet or unrealistic goals and a lack of development of professional accomplishment (Evers et al., 2004). With these feelings come increased feelings of emotional exhaustion, negative attitudes toward students, negative affectivity, low self-actualization and a loss of professional efficacy (Schonfeld, 2001; Tatar & Horenczyk, 2003).
As Blasé noted in 1982, the meaning of being a teacher has also shifted over time, affecting educator motivation, satisfaction, and effectiveness. Experienced teachers’ definitions of student needs have expanded to include moral and counseling components, further increasing an educator’s vast repertoire of duties. In contemporary education, the advent of new legislative demands, such as the Ohio Revised School Logic Model designed to improve the context for learning, has led to expanding roles for teachers. Modern teachers face the strain of little prestige in the profession, gradually assigning diminished value to student personal relations (Cano-Garcia et al., 2005). As demonstrated, the modern educator encounters a number of strains and role ambiguity from the outside contextual environment that play into personal feelings of worthlessness and burnout.

In addition to the many studies performed linking specific personal characteristics to burnout in teachers, a number of resiliency traits have also been explored. According to past research, experienced teachers develop technical, psychological and social characteristics that are essential for effective work with students and protection against the negative effects of job-related pressures (Blasé, 1982). As an example, research shows experienced teachers emphasize the importance of close self-monitoring for early signs of stress and actively attempt to reduce the stressors in their environment via a more direct coping style (Evans et al., 2004). Another resiliency study in Australia conducted qualitative interviews on teachers who were regarded by their school principals as being highly resilient to burnout, despite their very stressful school environments (Howard & Johnson, 2004). Transcribed results from the interviews showed specific burnout protective factors to include having a strong sense of agency, fervent support group with competent leadership, and continuing to hold pride in achievements and feel competent in areas of personal importance.

A common finding among teachers resilient to burnout, as well as personal feelings of competency, is the presence of strong interpersonal relationships including friendships, colleague
feedback, and support groups (Burke et al., 1996). This type of social support both assists coping, helps teachers to ward off stress and burnout, and can benefit overall health outcomes. Positive support may be provided in many forms, including instrumental, tangible, informational, and emotional ones. A key problem is that teachers who feel burned out are much less likely to make and maintain interpersonal relations at the workplace.

Though great strides have been taken in the empirical study of teacher burnout, most research has focused on personal characteristics leading to teacher stress. General conclusions have been reached regarding differential rates based on age, gender, level of experience and others, but no studies have investigated the more indirect effects acting on teachers and likely causing further stress. The present study was intended to address individual-level features as well as incorporating school, cultural, and community components relating to teacher stress, specifically investigating characteristics of teachers in the rural Appalachian region.

School and Legislative Factors

Further insight into teacher burnout and its eliciting pressures may be drawn from within the more general professional burnout literature. For example, within organizational psychology studies, evidence shows strong predictors of burnout, labeled “red tape,” include conflict with rules and procedures within the organization (Burke et al., 1996). Occupational factors such as administration/management problems within the organization, lack of supervisor feedback and communication, and contact overload have shown to increase burnout rates. Furthermore, burnout is significantly affected by job training deficiencies and the stress of evaluation by others (Howard & Johnson, 1994). These examples illustrate the need to take a multidimensional approach to factors leading to professional burnout. Due to a lack of rural representation in this area of research, the present study examines this premise in the Appalachian region according to
the social-ecological theory, which asserts that multiple levels of contextual influences play a part in shaping a situation conducive to teacher burnout.

According to the social-ecological model, indirect influences move through direct personal influences to affect teacher burnout. The first concentric level involves school factors, ranging from such issues as classroom environment, student population, and school-wide management. For example, many school managerial structures lack a sense of communication and teacher support (Hepburn & Brown, 2001). Often teachers feel that poor administrator decision-making results in consequences such as time budgets, unreasonable paperwork deadlines, and inspection regimes in their classes. Further, the policies that affect the school also affect the teacher. The federal government has become more involved in policy formation, as education problems have been brought into the political realm with increasing government intervention, such as the Individuals with Disabilities Education Improvement Act of 2004 (IDEA; Hepburn & Brown, 2001). Because teachers are so closely linked to the school environment, it is likely that legislative pressures exert further strain on their occupation. As briefly introduced, burnout may stem from a hierarchy of organizational factors, ranging from power struggles within classrooms all the way to Federal laws impacting teacher stress. Often, education is subject to public visibility and reaction, further increasing the burden on teachers both intra- and interpersonally.

Larger-scale sociological outlooks on teacher burnout posit that organizational and structural changes may exacerbate levels of teacher stress. Dworkin (2001) used three waves of data collection to conduct a longitudinal investigation of levels of teacher burnout based on experience level and legislative time period. Since 1983, he noted that the first major wave of reforms occurred to guarantee that only competent teachers were in the classroom and that only educated students ultimately graduated. During this time, Dworkin’s first set of data revealed rates of burnout rose for all experience levels, though they were especially high for those teachers
with 5-15 years of experience. The imposed competency testing and well-marked career ladder became a serious demoralizing factor for those educators who may have previously considered themselves as masters of their trade. The second reform wave followed in the late 1980’s with a pull toward more decentralization and localized accountability. Teachers had to share responsibilities and decision making, and ensuing turf battles emerged. Finally, the third reform is marked by high-stakes testing and rating of schools. During this time, survey results reveal that a notable burnout trend occurred especially within the poorer schools. It was posited that children in poverty brought few resources from home (i.e. supplies or parental support) to help them achieve on the exams, and increased responsibility was placed on the teacher to be the focal educator for these children, entailing a high degree of teaching skill. In this phase, the most experienced teachers became severely burned out. Of note, though the study had an adequate sample at each administration (minimum n = 246), it used a Teacher Burnout Scale that the researcher himself devised. As such, longitudinal designs comparing burnout rates across time may help to delineate the importance of structural or legislative changes in predicting burnout.

Finally, because occupational roles are more impersonally organized, they result in a work environment that is not as responsive to individual coping efforts. Therefore, school administrators may also help to overcome the problem of burnout within teacher ranks, dually noting the symptoms extend beyond just the individual teacher (Schwab, 2001). Though individual factors may vary, organizational factors contribute heavily to teacher stress at all levels of the education system (Byrne, 1991). Ultimately emotionally and physically healthy teachers exist in environments where the school system and middle management work diligently to enhance self-actualization and esteem in their teachers.

Clearly there are a host of individual and school factors that affect teachers. The present study assessed both teacher satisfaction and teacher perception of school climate in as part of measuring school variables. However, beyond assessing personal demographic characteristics
and contextual school factors, the present study addressed the Appalachian cultural factor as it plays into teacher burnout levels. Following the social-ecological model, teacher burnout is affected by variables on multiple tiers, ranging from direct and personal influences to school factors to broader cultural and community-based effects. Specific aspects of the Appalachian culture, history, and value system will be explored next, as the present study advocates rural representation as its focal rationale.

Community and Cultural Components: Historical and Current Issues in Appalachia

In supplement to the multitude of individual and school-level factors previously discussed, there exist a range of contextual characteristics pertaining to the cultural and community environments that may relate to the onset and maintenance of burnout. Specifically, a brief historical review of Appalachian culture will acquaint the reader with basic regional values and customs. Additionally, an overview of the education system’s history in the Appalachian region is necessary in order to understand the origin of widely held community and cultural viewpoints regarding schools. In effect, these contextual variables exert a great impact on teacher stressors. Of note, most of the research conducted within the Appalachian region is both outdated and often entails poorly designed or qualitative studies. Though there is a general lack of research in this area, the present study sought to investigate burnout trends in Appalachian teachers.

*Early History*

An appropriate definition for the Appalachian region is a difficult and much-debated task. Geographically, the area is defined by the oldest mountain range in North America, the Appalachian Mountains. This landmark stretches for over 2000 miles in the southwest direction, beginning in Newfoundland and finally halting in central Alabama. The Appalachian Mountains
have been divided into the northern, central, and southern regions, with southeastern Ohio usually characterized as falling in the northern region.

The formal history of Appalachia is another important component to fully understand the context of the region. Central themes have depicted the vast mountains as a barrier to westward expansion (Owens, 2000). The early settlers in this region were mostly of a Scotch-Irish background that led their lives as family-centered subsistence farmers and held egalitarian ethics. These pioneers experienced many hardships due to the diverse topography of the region. In fact, even within the last half century, rough terrain has delayed road construction and maintenance in the rural areas of Appalachia.

**Economic Trends**

Beginning in the late 1800’s, the economy of Appalachia began to shift from small-scale farming to independent commodity production with the rise of large corporations (Precourt, 1976). Loaded with natural mineral resources, the Appalachian region contains the world’s largest deposits of asbestos, anthracite and bituminous coal (Owens, 2000). As history reveals, coal mining was the primary target in the region and soon “company towns” sprang up near the mines, symbols of the transformation from pre-industrial to industrial Appalachia. The extent of their role in the town was vast. Indeed, the coal companies built houses, acted as landlords, ran the general stores, built schools and churches and hired the teachers and clergy to run them. In addition, they opened hospitals, employed sheriffs, and even built meeting halls, baseball fields, playgrounds and graveyards. Company towns were persistent until the 1950’s, when finally many of the injustices faced by the miners and native Appalachians began to surface (Shifflett, 1976). For many natives, there has been a longstanding family tradition of mining, and countless family members have died in both accidents and disease. “Black lung,” an attendant condition wrought upon miners who spent up to 18 hours per day in a coal mine, resulted in over 1 million
Exploitation by the coal companies of both the environment and the citizens in the Appalachian region gradually took effect, both through personal disparities and government ploys.

Economic trends have also affected socioeconomic status disparities in the region. For instance, in the schools SES emerged as the largest factor in student extracurricular participation including sports and clubs, and the overall composition of a rural school classroom has changed dramatically (Reck et al., 1993). Even 30 years ago, Keefe and colleagues (1976) noticed that high school students were divided into distinct groups. The “upper” students were those in the popular crowd, seen as high society and coming from families in the middle class or above. The “lower” pupils, considered the Appalachian “natives”, came from working class families on welfare, often living in rural areas. Similar distinctions were found within the past decade in Appalachian schools (Morton, 1997), only serving to strengthen evidence for the growing dichotomy in rural schools. Teacher responses to this changing class structure have not been measured in the United States; the present study examined levels of stress and burnout in the context of a dynamic multicultural Appalachian classroom.

**Economic Patterns: Social Class and Culture**

Though the Appalachian region has rich environmental resources, poverty remains a painful reality. Currently, 13.6% of Appalachian Ohio residents live below the poverty level, compared to the national average of 12.4% poverty (Appalachian Regional Commission, 2005). Further, the 2000 census revealed that 27.4% of Athens county residents and 19.8% of Meigs county households (constituting a majority of the present study) are living under the poverty level. In addition, the gradual decline in industry no longer offsets the tax burden from citizens, resulting in deficient roads, schools, and community centers. Unfortunately, media stereotypes have long reminded the mainstream public of the region’s disparities. Alas, many reports reveal
that major regional economic disparity is directly traceable to industrial exploitation beginning around 1900 and continuing ever since (Ergood & Kuhre, 1976). As such, outside corporations have consumed many of Appalachia’s natural resources and wealth, leaving scarce social institutions (Glenn, 1970).

The focal government intervention to quell the growing poverty in this area has been the formation of the Appalachian Regional Commission (ARC) in 1965, created to resolve problems in Appalachia that are a result of economic conditions (Ergood & Kuhre, 1976). Its funds were directed toward highway construction, building schools and hospitals, dealing with water and sewage issues and contracting social service programs. Ultimately, the programs’ goals were to attract new industry and stimulate commerce within the region, diversifying the economy from mining and manufacturing sections (Owens, 2000). The ARC deals with the roughly 200,000 square mile region where there have been immense economic hardships.

Against a backdrop of economic hardships, negative value judgments imposed by outsiders have also affected the region. In fact, the Appalachian people have been labeled as poverty-stricken in scattered accounts dating back to the 1850’s. Later, in the 1900’s, missionaries branded Appalachians as ignorant and destitute. John F. Kennedy was the first to declare a “war on poverty” in the Appalachian region (Glenn, 1970), and Lyndon B. Johnson followed subsequently in his focus on the mountain area (Kentucky Humanities Council, 1987). Since then, the “poverty stigma” has been applied to both the monetarily poor as well as those whose behavior is incongruent with the prevailing market’s consumption patterns (Precourt, 1976). Though the Appalachian region is lacking many economic resources, the stereotypes of the region tend to overemphasize its monetary deficits. In reality, the Appalachian region entails a variety of social conditions and can be better viewed as a heterogeneous entity. Historically, physical and geographical isolation in early settlements led to distinct styles of living, some of which prevail into modern times (Ergood & Kuhre, 1976). Still, though these were confirmed
cultural trends in the 1970’s and 1980’s, more modern conceptualizations of the Appalachian region and culture are needed through the use of elegantly designed research.

School Effects and Teachers’ Consequences of Poverty

An important Appalachian factor to consider in examining multi-leveled contextual predictors of teacher burnout lies in economic conditions characterizing the schools and community. In many cases, insufficient resources in Appalachian regions have resulted in difficulty funding school and other government operations. For students, practical economic results include less school participation in basic and vocational education and fewer students proceeding to higher education after high school (Gotts & Purnell, 1986). Consequentially, teachers may face increased stress due to the economic and financial instability of their school district. For instance, the National Commission on Teaching and America’s Future (2003) determined the rate of attrition is nearly 50% higher in poor schools than in wealthier ones. Because the Appalachian region currently suffers from an overwhelming lack of revenue to run its schools, teachers bear a significant brunt as manifested by job cuts, low salaries, poor work conditions, and few supplies. Ultimately, poverty in the Appalachian region appears as a relevant stressor for teachers in the area. Still, little quantitative empirical evidence has provided information on the effects of these Appalachian features on the role of the educator. Though existing literature has not empirically studied any possible ramifications of cultural contextual factors on teachers, the present study addressed this area by encompassing measures on Appalachian cultural alignment, acceptance, and understanding.

Social Trends: Out-migration

Another important social concern in the Appalachian region lies within population changes. As the Appalachian region has slowly begun to shift away from mineral mining,
increasing amounts of people have migrated out of the area. Given the lack of employment opportunities in their home region, within the past 40 years educated young people from rural areas have moved to urban areas in the north and west to obtain professional and stable employment. Due to a shift toward urbanization, these out-migrants must transition from primary group relationships central to the Appalachian culture to more impersonal, transitory, secondary contacts in their new environment (Mayo, 1970). In a regional response, communities seem to be disintegrating. In particular, the resultant effects of people’s views on education are mixed (Morton, 1997; Reck et al., 1993). For example, if students do excel in school, they often leave the region and never return. Along the same vein, because jobs in rural areas usually require less schooling and pay less, this further compels Appalachian natives with higher education to seek work elsewhere.

Teacher Consequences of Out-Migration

Specifically in the teaching profession, many individuals are drawn in due to the high demand for teachers in the Appalachian region. For instance, in North Carolina, Reck and colleagues (1993) used qualitative interview data from a representative sample of 25 teachers across all grade levels to assess their perceptions of Appalachian students as based on their own backgrounds. Fifty-eight percent of the teachers interviewed were born and raised in the Appalachian region, but the article points to suspect that this percentage has increasingly dropped since job supply and consolidation have become progressively more common in the region. As such, a growing number of teachers in Appalachia did not grow up in the region and may, in turn, be wholly unfamiliar with many of the trends, values, and norms in this unique educational system (Reck et al., 1993). Indeed, teachers who are not familiar with the Appalachian region face a number of transitional difficulties. Implications of moving to a new culture may provide another contextual factor to consider when examining the region’s educational system, and
teacher stress in particular (Roux, 2001). The present study addressed the ramifications of this migratory concern as it relates to teacher satisfaction and burnout, as no previous literature has exclusively studied this unique culture.

Changing Populations within the Schools

Social changes within Appalachian school districts are an important contextual factor to consider as well. Seemingly in contrast to widely held notions, rural schools face similar problems as urban schools, such as poverty, violence, isolation from larger society, and drug problems. When examining cultural issues, rural schools may seem ethnically and racially homogenous on the surface. As a consequence, there has been a general lack of discussion regarding diversity issues which are part of the pedagogical theory in the educational community at large (Hills & Ralston, 2001). Demographic information clearly indicates that rural school systems in Appalachia have actually been diversified since 1920’s. Immigration has affected the region, introducing new people with unique ideals, styles, expectations, and values. Also, consolidation efforts in the 1980’s reorganized district numbers from 128,000 to 16,000 (Gotts & Purnell, 1986). Resultant effects have resulted in a culturally heterogeneous Appalachian population, as well as a number of changes for teachers.

Mainstream culture versus Appalachia.

As history has revealed, the Appalachian region has been misunderstood by mainstream America for countless years. For example, Appalachians are often depicted as feuding families, hoarders of illegal whiskey, and hillbillies (Ergood & Kuhre, 1976). This grossly inadequate mass media description of Appalachia has been spread through a variety of songs, film, and news stories. As seen by the broad mainstream middle class, these qualities may be given negative value judgments, yet Appalachian natives realize the historic and generational roots of their culture (Ergood & Kuhre, 1976). A rich folk culture has emerged, based on what outsiders may
see as backwardness, passive recognition, traditionalism, poverty, and person-centered orientation (Ergood & Kuhre, 1976). Unfortunately, though much literary interest was taken in the region in the 1960’s to 1970’s, a lack of empirical literature has occurred since that time. As demonstrated, investigating the historical basis of cultural values provides a more comprehensive understanding of Appalachia, and past effects likely have a direct influence on the present educational system in the region. The outdated empirical research regarding the Appalachian region provides further rationale for quantitative modern study designs to be implemented.

Within the Appalachian school systems, delineation has begun to take place between student and administrative population sects, namely natives of Appalachia and non-Appalachians who were born outside the region (Reck et al., 1993). Each subgroup has a culturally defined distinctive system of behavior, beliefs and values, with the non-Appalachians tending to hold more liberal and mainstream American ideals. This delineation within the population of Appalachia often results in close-knit associations with members of one’s culture and fierce competition against out-group members. As America transforms more and more into a proverbial melting pot and the federal government tightens its grip on school curriculum instruction, native Appalachians face continued challenges. For example, the mainstream American worldview is quite different from the traditional Appalachian one, yet most teachers and professional class citizens in the Appalachian region believe strongly in it (Woodrum, 2005). The result is that often native Appalachian children and their families feel as if biased media and politicians, wholly unfamiliar with the true mountain region, are dictating educational standards (Best, 1995; Woodrum, 2005). As an example, an early study in the schools discovered that Appalachian youth have been heavily discriminated against by newcomers to the region (Keefe, Reck, & Reck, 1976). A more recent 1993 study detailed similar findings, namely that students who identify with mainstream American culture have been shown to take more courses, continue their education to the college level and perform well academically (Reck et al., 1993). In contrast,
students who identify with Appalachian culture take more vocational courses and frequently drop out of school.

Classroom implications of the changes in population makeup in Appalachia have led to educational prejudice, alienation, cultural misunderstanding and conflict. Both negative teacher perceptions and cultural prejudices are negative influences on students’ experiences (Reck et al., 1993). As of yet, teacher responses to this changing class structure have not been measured in the United States; the present study examined levels of stress and burnout in the context of a dynamic multicultural Appalachian classroom.

Further evidence of teacher cultural perceptions was gained through a study conducted by Reck and colleagues (1993), which revealed teachers distinguish vast differences between native and non-Appalachian students. In their sample of 21 teachers from a rural western North Carolina school, qualitative interviews were conducted regarding teacher views on their students as well as demographic information on the educator’s own Appalachian heritage (Reck et al., 1993). Specifically, 87% of in-migrant Appalachian teachers and 71% of teachers from native Appalachian backgrounds saw differences between Native and in-migrant students. A significant amount of the sample viewed their pupils as belonging to two homogenous and opposing groups in a rural/town dichotomy. Interestingly, in-migrant teachers saw more distinction between rural and town children that did their Appalachian-born colleagues. Practical implications of these views include differential treatment of each group by teachers, other students, and counselors. Excesses of 80% of teachers saw differences between town and rural groups in their club participation, sports, special attention, tracking, college prep versus vocational, honors, disciplinary action; the most distinct differences were reported by high school teachers. The overwhelming trend was that town kids had advantage; they were more likely to be complimented by their teachers and to be rewarded for their accomplishments. Population shifts within the Appalachian region have likely been a source of significant stress for teachers as they learn to
deal effectively with both native and non-native students. Facing the differing roles and access of opportunities among children likely affects teachers on a personal and professional level. The present study specifically investigated the relationship between this cultural heterogeneity within the region and the effects on teacher burnout.

Stereotypes and their influence on native Appalachian children.

In addition to population trends affecting the education system in Appalachia, social views on the region also affect treatment of individual students. By applying a social theoretical model in the school context, past literature dictates that stereotyping stems from illusory correlations between students’ group affiliations and their psychological attributes and traits (Roux, 2001). As a consequence, stereotypes create expectations about others, and those who hold stereotypes attend more to information and behavior to confirm these beliefs, thereby creating self-fulfilling prophesies. In the case of Appalachian youth, children have historically been exposed to media messages that mountain people are incapable of being worthwhile, significant contributors to society (Keefe et al., 1976). Additionally, rural students are often ashamed of their roots due to society’s labeling of them as uncultured and undefined (Morton, 1997). This cultural shame leads children to lower success in school (Best, 1995).

Unfortunately, certain steadfast cultural norms which negatively influence native Appalachian children are incredibly difficult to overcome. Some Appalachian students seemed to have lost the war long before their time; teacher and community recognition of family surnames have contributed to differential expectations of success in the classroom (Keefe et al., 1976). This issue also affects the teachers in Appalachian classrooms, with past studies showing the tendency for teachers to negatively view students who they see as culturally and socially unique. These pessimistic beliefs about pupils affect teacher expectations and often result in poorer student academic performance in response (Hills & Ralston, 2001).
Past approaches to increasing multicultural classroom awareness have asserted that negative views pertaining to certain groups can be decreased with a more thorough understanding of the culture at hand. Thus, articulating multicultural education gives educators a chance to voice concerns and questions and gain a comprehensive understanding of the student population background. Contrasting this notion, Cross (2002) conducted qualitative interviews to investigate what a group of teacher education graduates learned about race during their university preparation for teaching in multicultural classrooms. Results revealed that the graduates did not feel they had obtained a comprehensive training in this area, citing that theoretical viewpoints and multicultural acceptance strategies learned in college were often not as easily adaptable to real classrooms (Cross, 2002). No past research has examined if teachers new to the Appalachian region feel they are properly and fully knowledgeable on the ways these communities have been marginalized in the past. For that reason, the present study measured the training received in multicultural education as well as personal feelings of alignment and understanding of the culture. Ultimately, if unclear assumptions and stereotypes remain, teachers may less fully understand their students and school community, increasing the possibility of experiencing undue distress and burnout.

**Multicultural issues.**

As population shifts occur in Appalachian schools, it has become necessary to more closely examine the issue of teaching students from multiple cultural backgrounds in the educational system. In rural communities, a common finding is that people in power within the schools may fail to see the potential contributions of the out-groups in their neighborhoods. Though this area has not been extensively studied in Appalachia, general literature on multiculturalism in schools show most school curriculum is mono-cultural; it implicitly ignores some cultural minorities’ achievements, conveying a message of cultural inferiority, however subtle it may be, to children outside the mainstream (Roux, 2001). Though most past studies address cultural issues such as race, ethnicity, gender, language, sexual orientation, and language,
regional affiliation has been underrepresented (Hills & Ralston, 2001). More recently, increasing numbers of researchers and educational professionals have agreed that it is necessary to work rural concerns into the educational debates at large (APRAC, 2005).

In addition to personal teacher ramifications of multicultural class composition, educators also face concerns in properly interacting with students. Generally, teachers prefer to teach in a similar setting as where they grew up, but the reality of teaching placements often results in “cultural mismatch” and “cultural dissynchronization” (Tatar & Horenczyk, 2003, pp. 398). Some teachers even respond with resistance to face new demands which they encounter. Therefore, in-migrant teacher perspectives may consider any deviation from the “normal” mainstream American culture as abnormal and improper (Roux, 2001), resulting in potentially harmful consequences for the student in this context. Alternatively, studies have shown that teachers who are effectively managing multiculturalism place emphasis on quelling stereotyping in the classroom, remaining sensitive to one’s own preconceptions, and ensuring a clearly unbiased stance to guarantee equal treatment for all children (Roux, 2001). Although a more culturally-competent approach, this added psychological task on the part of teachers was hypothesized to add to their overall stress levels.

*Classroom ramifications of multiculturalism and legislation.*

In addition to personal stressors, working with students from unfamiliar cultures often requires teachers to develop widely divergent styles of teaching and delivery systems (Baker, 1983). Due to the profound negative implications on the achievement of marginalized students, multicultural classroom teachers are required to understand the dynamics of diverse cultures and implications in developing successful teaching strategies (Baker, 1983). In addition to changing teaching style to match different learning styles, healthy multicultural classrooms also entail the teacher serve as the “initiator, manager, and demonstrator of inter-group acceptance and positive regard of others different from oneself” (Roux, 2001, pp. 279). Educators who are multiculturally
aware, therefore, encourage all students to accept the pupils who are socially marginalized, ensure positive socialization opportunities exist in the classroom, and emphasize that each student has positive qualities to increase feelings of self-worth.

Finally, in addition to the classroom consequences due to the changing student population, government interventions also exert pressure on teachers for equal treatment. After reviewing evidence of school-based achievement levels in 2004, the Appalachian Regional Advisory Committee for Educational Needs Assessment (APRAC) designed a plan to implement evidence-based curriculum and programs into parts of the region (APRAC, 2005). Their goals included eliminating the gap in achievement between different student groups, namely the rural versus town children. In doing so, the commission recommended tailoring strategies and programs to meet the needs of different student groups based on socioeconomic status and family background. The APRAC (2005) also wishes to support culture change among teachers and school personnel with programs to ensure educational professionals can recognize and understand all student groups within the school. Though these changes seem positive for the school, they may exert increased pressures on educators within the region. After all, teachers who are not trained in the special curriculum and are forced to adapt may experience notable stress in response to the adjustments. This and other important educational factors which influence teachers are important to study as they relate to educator burnout. The present study investigated teachers’ personal perceptions of stress experienced in rural Appalachian school systems in relation to attitudes on multiculturalism within Appalachian classrooms.

**Personal implications for teachers.**

Overall, the empirical literature base linking teacher stress and burnout to broad contextual factors such as regional social change and cultural affiliation is sufficiently lacking. One exception is the work conducted by Tatar and Horenczyk (2003), who included student ethnic subtype as a contextual factor affecting educator burnout among Israeli teachers (Tatar &
Horenczyk, 2003). The investigators assessed for difficulties in teaching students with diverse backgrounds, such as facing community and parental expectations, unfamiliar difficulties with students, and teaching challenges such as new styles and subject matter in the classrooms. Based on a sample of 280 teachers from 30 schools, this research investigated a new construct of “diversity-related burnout” (DRB) as an addition of negative impact of coping with students who are culturally diverse. Results showed that both traditional burnout and DRB were related ($r = .38$) but empirically distinguishable. One notable finding was that, compared to other self-reported measures of school-level attitudes, levels of DRB actually increased as teachers and schools held assimilative views on multicultural classrooms (Tatar & Horenczyk, 2003). That is, the Israeli teachers felt more burned out when their schools were highly assimilative and openly welcoming of students from diverse backgrounds. In a similar fashion to this study, the present study addressed the construct of diversity-related burnout with a rural Appalachian cohort of teachers. It was expected that burnout levels formed distinct patterns according to teacher background, school cultural composition and multicultural orientation.

The difference in SES between teachers and their native Appalachian students may also affect perceptions of multiculturalism (Massey & Crosby, 1983). For example, teachers may feel the need to assertively negotiate themselves out of a forced negative and stereotypical identity many Appalachians are labeled by (Reck et al., 1993). As Branscome (1976) stated, “middle class teachers cannot comprehend that the world of Appalachian children or ghetto youth is often more vital than their own” (pp. 328). Unfortunately, even in regional colleges and universities, aspiring teachers are rarely taught the special problems of teaching in poverty-stricken areas and how to deal with them.

Specific personal implications for the educator also come into play in understanding the multicultural classroom. First and foremost, teachers must recognize and familiarize themselves with the social, political, and economic differences between regional cultures in the community
(Baker, 1983). Teachers now deal with heterogeneous classrooms, and personal, educational, social, and psychological demands accompany these classrooms (Tatar & Horenczyk, 2003). In addressing issues of education and diversity, the teacher is expected to understand the learner in terms of values and practices of families and the culture at large, as well as the context of the school in local economy, politics, and general social structure (Morton, 1997). In preparation, teachers are forced to develop basic competencies in evaluating, perceiving, and behaving in many culturally divergent settings (Baker, 1983) as well as gaining knowledge of, and experience with, the diversity of cultures in their classrooms, thereby making a strong commitment to multicultural education (Tatar & Horenczyk, 2003). In the case of Appalachian schools, teachers who gain a comprehensive cultural understanding for both native and non-native students, as well as firmly inquire into their own cultural beliefs, will likely have underlying skills to assist them in coping with daily stressors and therefore are predicted to endure the lowest rates of burnout. Past writers have noted that the most effective regional teachers are able to both understand their own humanity as well as build on Appalachian strengths, allowing students to reevaluate their heritage (Best, 1995). Cultural understanding is not a simple or easily-acquired skill, often entailing a great deal of time and effort on the educator’s part; therefore, the larger the incongruence between students and teachers, the more is expected from the teacher in this respect.

Unfortunately, many educators do not have the information, skills, and motivation to successfully cope with such divergent student populations (Tatar & Horenczyk, 2003). Teachers already feel as if time constraints limit their abilities to effectively manage their classes, and a focus on multiculturalism may not be possible due to other demanding aspects. Still, little literature exists on the stress experienced by educators due to multicultural and diverse classroom makeup. Because the literature on Appalachian schools is so scarce, this further warranted the further investigation of the effects of teaching diverse student classroom populations on burnout.
Educational Trends

In the present study, Appalachian education systems are the primary sample. Therefore, a thorough review of educational trends in the region is necessary to provide the background needed to generate culturally-appropriate research questions and hypotheses. However, it is important to note that, empirical research on Appalachian school systems is generally lacking. Though there were a number of studies conducted in the 1960’s and 1970’s, primarily due to the ARC deployment, modern trends are difficult to procure from the existing literature.

Rurality and Appalachian Schools

In many Appalachian communities, schools are a source of pride and identity, serving as a major employer in the area and a center of community life (Gotts & Purnell, 1986). Rural schools develop their own distinct reputations in the Appalachian region, and public support of education is extensively aligned with close parent-teacher relations. For example, the AEL Parent Survey found that rural teachers and parents are much more likely to communicate through informal personal contacts, such as school-sponsored activities. In addition, the survey revealed rural parents were found to be more appreciative of contacts from the school, and ready to collaborate with schools to resolve a child’s problem versus their urban counterparts (Gotts & Purnell, 1986). Rural students also enjoy the benefits of small, local schools, such as acquiring the opportunity to be personally challenged and develop individual competencies (Sher & Thompkins, 1977). In addition, results from AEL surveys revealed students in rural schools report greater personal academic pressures and instructional effectiveness, and are satisfied with many of their educational leaders. Rural teenagers also participate and plan events in a greater number of extracurricular activities, including athletics, band, drama, social and subject-related clubs (Gotts & Purnell, 1986).
Because the schools are a strong force in rural communities, they reflect local values and needs. These “values of smallness” include a pride in local control, close ties between parents and educators, and firm community bonds. Dedicated rural taxpayers often give a larger percentage of their incomes to the school due to disparities in local tax systems (Morton, 1997). Though isolated Appalachian families may have thinner support networks physically and socially, it is clear that intense community and family ties with schools are an ever-present priority.

Consolidation

Important to understanding the basis of community attitudes toward schools in Appalachia, district restructuring has been a central transformation in the region. Rural school districts are found in every state, and usually are defined as having a total student body of 2,500 students or less (Morton, 1997). In Appalachia as in other rural areas, the focal change in schools since 1918 has been a shift to consolidation, a more economically efficient merging of small schools into more centralized, large, buildings (Gotts & Purnell, 1986). Educational facilities have transformed from small one-room, multi-graded classrooms to much larger, age-graded, centrally-located schools. In turn, small districts have merged with neighbors and larger schools have been built. Although secondary school enrollment rates tripled in the 1950’s, the number of Appalachian high schools was halved due to consolidation. For example, one district in western North Carolina now has a single consolidated high school for eight K-8th elementary schools.

Appalachian community responses to consolidation have been mixed. To working class Appalachians, the schools appear to have been taken by the same elite professional class that similarly controlled the mineral industry from afar in the past (Woodrum, 2004). In many cases, citizens have felt that legislative trends that heavily favor consolidation illustrate the government does not understand or comply with the local point of view (Gotts & Purnell, 1986). Many parents felt angry that their children have, in effect, been taken out of their home communities.
and into centralized areas, often resulting in extended time per day on a school bus (Kentucky Humanities Council, 1987). Although the physical rewards of this move may be apparent, many school officials may not realize the high cost to local pride, sense of community, and personal identity in choosing to consolidate.

In terms of consolidation and its heavily debated inception, teachers have likely experienced direct pressure between community members (e.g. students’ parents, administrators) and the changes experienced in the school as a result. The consolidation trend has been, therefore, a unique aspect of Appalachian history that may lead to increased levels of teacher stress and burnout in the region. Historical variables such as this are important to understanding the larger cultural factors impacting teachers in Appalachia.

Current Educational Status

Besides cultural factors of population makeup, another important contextual variable in the Appalachian region is the state and quality of the educational system. Academic performance statistics in Appalachia have long trailed national averages. Recent statistics, based on a report of Kentucky, Tennessee, Virginia, West Virginia (APRAC, 2005), concurrently reveal that educational attainment in the Appalachian region remains below national average. Additionally, in central Appalachia, the average high school completion rate is only 68.0%, compared with 80.4% for the nationwide average. Further data reveal that, in Appalachian Ohio, the percent of adults with college degrees in the year 2000 was 12.3%, again trailing nationwide standards of 24.4% (Appalachian Regional Commission, 2005). Implications of these staggering statistics include negative feedback from parents and community members, lower school morale, diminished student expectations and pressure on school officials and teachers (Kentucky Humanities Council, 1987).
The 2001 institution of “No Child Left Behind” (NCLB) legislature has also shed new light on the disparities of some Appalachian schools. According to a 2004 qualitative study in rural Appalachia, non-Appalachian parents saw the state report cards mandated by NCLB as an important and beneficial way to address concern about local schools’ performances whereas working-class Appalachian parents saw little or no value in state-mandated testing of their children (Woodrum, 2005). Further, using the NCLB standards, one-third of Appalachian schools failed to make yearly progress from 2002-2003.

*Teacher consequences of poor educational status.*

In addressing the major educational needs of the Appalachian region, APRAC (2005) has emphasized their goal to improve educator quality by recruiting and retaining teachers who understand the unique needs of their culturally diverse student populations in Appalachia. This goal is especially pertinent given the startling fact that 25% of rural teachers leave after one year and 50% leave within five years (APRAC, 2005). Modern laws such as NCLB exert even more pressure on teachers, leaving them responsible for their students’ widely public performances in a context where educational difficulties are rampant and the very metrics for assessing student success are questioned by the community (Simpson et al., 2004). Together, it is likely that these recent laws as well as the overall status of educational attainment in the Appalachian region add a significant stressor for teachers, and they have in turn directly bore the brunt of the distressing educational statistics in the region. Teachers are in essence experiencing a dual pressure: both to recognize and celebrate diversity among students as well as for assimilation to strict federal and state curriculum regulations.

*Community and Culture Clashes*
As already discussed, there is a distinct interaction between the school and community attitudes toward education. Because the citizens have such a sense of ownership in their local schools, the school becomes a “visible consumer of local tax dollars” and many individuals may demand a say in its operation (Massey & Crosby, 1983, pp. 268). A recent qualitative interview study was conducted in Southeastern Ohio to assess community attitudes toward the schools, taking into account native Appalachians as well as in-migrant Appalachian families and teachers (Woodrum, 2005). From the families’ perspectives, interview data reveal Appalachians believe the connection is lacking between values taught in school and those endorsed at home, such as the school’s reliance upon standardized tests. Overall, the non-Appalachian families focused more on their individual children’s success when reflecting on the role of schools in society, whereas Appalachian families place more emphasis on the value of community, interrelationships, and attachment to “our home” (Woodrum, 2005, pp. 8). Comparing this data to teacher reports, results revealed that a majority of teachers believed that poor parents of Appalachian children did not participate in their child’s life within the school and, therefore, did not value education for their children. Most teachers also noted that education’s major role was to help students to develop the skills that would allow them to be employable outside the area where they could ultimately create economically stable lives (Woodrum, 2005).

These historical educational perspectives still conflict in modern Appalachian schools. In order to be more effective at acknowledging these and other cultural issues rural children face, a 2005 Appalachian Regional Advisory commission denoted a primary regional goal to involve family and community more in the educational system (APRAC, 2005). Based on the commission’s plan, if parents, organizations, and business were able to provide more sustained and serious support for teachers and the education system, schooling in the region could be greatly enhanced. Still, teachers often feel as if they are forced to be the mediator between the district officials and parents of children. Additionally, community consensus may be difficult for
teachers to assess when teaching values to students, causing significant stress to both the students and educators (Blasé, 1982). This provides further evidence for the need to study specific teacher stresses within the domain of school climate in the Appalachian region.

Implications of Appalachian Contextual Factors for Teachers

As demonstrated in the former sections, a number of historical trends have affected the Appalachian region in the past. These have ranged from economy shifts within the region, population changes, to more specific historical factors within the educational system. The present study dealt with teacher burnout as it relates to these regional and cultural trends. Because previous literature has yet to examine this relationship, past accounts and more general burnout trends were used to generate model hypotheses on the ways in which factors unique to Appalachia affect teacher burnout levels.

IV. PRESENT STUDY

In the present study, the main characteristics of interest included cultural factors as they contribute to educator burnout in Appalachian rural school districts. A number of pressures unique to the Appalachian region were predicted to associate with increased levels of burnout among educators. Additionally, upon reviewing past literature on the cultural implications involved in teaching in a rural school, it became apparent that burnout levels may fluctuate in association with a teacher’s own personal affiliation with students. Because many young professionals have migrated out of the Appalachian region, teaching positions have been filled by educators who may not have grown up in Appalachian region and who are unfamiliar with the values and norms of this subculture (Reck et al., 1993). This stress of adapting teaching styles and personal expectations may also correlate with increased levels of burnout. By further
studying this particular cohort of Appalachian teachers, research may help to identify trends involved in developing intervention strategies specifically targeted for this group.

As framed by the social-ecological theory, a number of environmental antecedents as expressed on multiple tiers of direct and indirect effects can trigger burnout in teachers. The present study began by analyzing personal and school factors, encompassing primary level and first level environmental factors. Unique to the existing empirical base, measures also assessed a cultural affiliation factor, as compared to teacher burnout levels in an Appalachian rural school sample. Measures evaluated demographics, burnout levels, school climate, multicultural attitudes, and personal affiliation with the Appalachian culture. Based on past literature, the following hypotheses were offered.

Hypotheses

**Hypothesis 1: Individual Factors**

The first set of predicted associations centered on individual factors related to burnout. All individual demographic characteristics were examined and compared with global burnout scores. Also, more predictions pertained to specific demographics for hypothesis 1a:

1.a.i  A negative correlation was expected between teacher age and global burnout scores.
1.a.ii  Females were expected to report greater burnout on indices of a) personal accomplishment and b) emotional exhaustion as compared to males. Males were expected to score higher on the depersonalization dimension of burnout than females.
1.a.iii  The fewer the years in the teaching profession, the higher the associated burnout scores. This included an exploration of the total years of teaching experience as well as the total years teaching in an Appalachian school. It was predicted that teachers with less exposure to the Appalachian culture would experience higher burnout as opposed to teachers with many years of experience.
1.a.iv Consistent with past research, the degree achieved was expected to correlate with burnout scores in that the more advanced the degree, the less burned out teachers will be.

For hypothesis 1b, the makeup of one’s classroom was investigated, as moderated by teacher attitudes. Specifically, as the percent of students culturally different from the teacher increases, accompanied by negative teacher attitudes about multiculturalism, burnout scores were also predicted to increase. However, classroom diversity was not expected to affect teacher burnout among teachers who adopt positive attitudes on multiculturalism.

For hypothesis 1c, the amount of training in multiculturalism was also predicted to act as a moderator of the relation between classroom diversity and burnout scores. As the classroom diversity increases, accompanied by higher amounts of past multicultural training for the teacher, burnout scores were also predicted to decrease. Similarly, diverse classrooms taught by teachers with little to no multicultural training were not predicted to affect levels of teacher burnout.

Hypothesis 2: School-Level Factors

The second set of hypotheses investigated school factors related to burnout. First, the relation between school climate and burnout was examined, with coping style as a possible mediator.

2.a.i There was an expected relationship between global cumulative scores of school climate and teacher burnout; the more negative the climate, the higher rate of global burnout associated with it, as mediated by active coping style.

2.a.ii Poor teacher support, as measured by the climate factors of administrative support and parent/community school relations, was predicted to lead to higher global burnout, as mediated by active coping style.

2.a.iii Low scores on teacher-student relations were predicted to lead to higher burnout scores, as mediated by active coping style.
2.a.iv Poor student contribution to the school climate factors, assessed by academic orientation, behavioral values, student-peer relations, and student activities, were predicted to result in higher burnout scores, as mediated by active coping style.

For hypothesis 2b, the school level variable of interest was teacher satisfaction. A number of global and specific predictions follow.

2.b.i As global teacher satisfaction ratings increase, it was predicted that burnout scores will decrease, as mediated by active coping style.

2.b.ii Higher contentment levels (as measured by the professional school relations factor) were predicted to lead to decreases in teacher stress, as mediated by active coping style.

2.b.iii The factor of teacher satisfaction specifying parents and community satisfaction was also predicted to negatively affect burnout, as mediated by active coping style.

2.b.iv A final construct of interest is student responsibility and discipline, which encompasses teacher satisfaction with student conduct and disciplinary practices in the school.

Hypothesis 3: Community and Cultural Factors

The third set of hypotheses centered on community and cultural contextual factors related to burnout. For 3a, a mediated relation was anticipated, such that the inverse relation between cultural alliance and burnout was expected to be mediated by the school climate. For hypothesis 3b, a mediation relation was expected such that the negative association between cultural alliance and burnout was mediated by teacher satisfaction (refer to Appendix B).

V. METHOD

Participants
A total of 530 surveys were dispersed to teachers; 320 (60.38%) of these surveys were completed and returned. The final sample of participants consisted of 73.8% female educators, with 83 male responses. The mean age of teachers was 42.34 (SD = 11.59). Further, 98.7% of the respondents identified themselves as Caucasian, whereas only one individual fell in each of the other demographic racial categories including American Indian/Alaskan Native, Bi/Multi Racial, Hispanic, or Other. Of participants who reported their marital status, 70.9% reported that they were married, 10.7% were divorced or remarried, and 14.1% were single. Additionally, the mean annual household income was $64,000 (SD = $60,000) but ranged from $7,000 to $200,000. Teachers from all grades were included in the sample. Specifically, the sample consisted of 13.0% kindergarten educators, 24.1% ninth grade teachers, and between 5% and 10% of the sample falling in each of the other grades. The lowest responses came from tenth, eleventh, and twelfth grade high school instructors with 4.3%, 2.7%, and 0.7% respectively.

District information was collected on schools within 30 miles of Athens, Ohio. The sample was defined as the five closest districts that were not confounded by other research studies occurring in the school. These districts included Alexander Local School District, Federal Hocking, Southern Local (Perry County), Southern Local (Meigs County), and Meigs Local. A chi square analysis revealed significant differences in teacher reported generational Appalachian identity by school building ($\chi^2 = 45.33, 12.06, P = .00, .00$). However, there was no identifiable pattern of responding. For instance, Southern Elementary school had a higher number of teachers with 4 or more generations of Appalachian background on both their mother and father’s side of the family (observed N=29, expected N=18.4). Comparably, Southern Middle School had a much lower number of Appalachian teachers (observed N=5). Because most residual scores between observed and expected backgrounds of the teachers per school were low and non-significant, no serious limitations arise from this finding.
Measures

*Demographic Questionnaire.* The Demographic Questionnaire was designed by the author to assess participants’ current demographic information, as well as personal history and family background as it relates to Appalachian heritage (refer to Survey Part 1 in Appendix D). It also was used to assess participants’ occupational information, such as prior training, occupational experience, and current role in school.

*Multigroup Ethnic Identity Measure.* Originally designed by Phinney (1992), an adapted version of the Multicultural Ethnic Identity Measure (MEIM) was used to assess for two factors associated with self-identity (refer to Survey Part 2 in Appendix D). Based off an amalgamation of identity components identified in existing research, Phinney (1990) noted a number of central components that have been widely used in studies across a variety of ethnic groups (as cited in Roberts, Phinney, Masse, Chen, Roberts & Romero, 1999). The first, derived from Erikson’s (1968) theory of identity development, posits that identity formation develops via a process of exploration and commitment in a variety of identity domains. In the MEIM, this component is “ethnic identity search”, accounting for the developmental and cognitive component [items 2,3,8,10]. It includes items centered on identity achievement, such as activities to learn about one’s group, as well as the degree to which a person clearly understands their personal identity. A second factor is based on Tajfel’s (1982) social identity theory, which approaches ethnic identity with a focus on a sense of belonging to a group and the associated attitudes and feelings with membership. This factor in the MEIM, known as “ethnic group affirmation and belonging”, encompasses ethnic group verification and commitment, covering an affective component [items 4,5,6,7,9,11,12]. This scale was adapted for use with “Appalachian” as the target ethnic/cultural group. Responses are based on a Likert scale of 1 (strongly disagree) to 4 (strongly agree) with each associated statement. In addition, a “Not Applicable” response was added for questions which may not pertain to subjects that do not affiliate themselves with the Appalachian culture at
all. Scoring is based on the mean of the item scores, but can also be divided into a mean score per factor represented. Higher scores represent closer relationships with one’s ethnicity or culture. Validity estimates have been scarce, but in past studies with total cumulative samples of 5,423 adolescents, MEIM alpha reliability coefficients typically fell above .80 across a wide range of ethnic groups (Roberts et al., 1999; Phinney, 1992). In the current study, the Cronbach alpha coefficient was .93. Overall, the present study’s MEIM scores fall in line with past research using the MEIM, including with over 200 juniors and seniors in high school (M = 2.90, SD = .58; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003) as well as with academically gifted adolescents (M = 2.71 to 3.77; Worrell, 2000). Past results using the instrument have displayed higher mean scores for more physically distinctive ethnicities, such as Indian American (mean=3.27, SD = .58) or African American (M = 3.07, SD = .56; Roberts et al., 1999). Though results from the current study closely parallel past studies, a distinct potential limitation of the use of the MEIM lies in its lack of validation in studies with adults or in research using “Appalachian” as a cultural group. A qualitative question was added to the end of the survey, asking respondents to comment on the reasoning behind their response to question #1, “I consider myself an Appalachian.”

CASE – Teacher Satisfaction Scale. The Teacher Satisfaction Survey (TSS) is a self-report measure developed by the National Association of Secondary School Principals and University of Nebraska-Lincoln in 1982 (refer to Survey Part 3 in Appendix D). This instrument defines ‘satisfaction’ as the personal, affective response of an individual to a specific situation or condition. The TSS collects data on nine subscales: Administration, compensation, opportunities for advancement, student responsibility and discipline, curriculum and job tasks, co-workers, parents and community, school buildings/supplies and maintenance, and communication. For the purposes of the present study, a grouping of communication, administration, and co-worker satisfaction were combined to measure a professional-school relations factor. The TSS consists of
56 items and follows a 5-point Likert scoring format (1=strongly disagree to 5=strongly agree, and 6=don’t know) to the statements presented. Scores are obtained by first computing the average score of each subscale and then multiplying this by the number of items in each subscale. Following, subscale scores are then converted to scaled T scores, with a mean of 50 and a standard deviation of 10. Though overall averages have not been used by the NASSP, the present study computed the average T scores of combined subscale scores for those participants who completed all parts of the measure. The technical manual provides scaled descriptive statistics on normative samples of teacher-reported satisfaction (Halderson, Kelley, Keefe, & Berge, 2001). Though studies investigating the validity of this instrument are lacking, extensive factor analysis reveals a distinct set of nine subscales. Reliability coefficients ranged from 0.80 to 0.93, with an average of 0.88. Both internal consistency estimates of reliability as well as test-retest coefficients were all above 0.72 (Halderson et al., 2001). In the present study, Cronbach alphas for the subfactors ranged from .88 to .92; for the total score, an alpha of .95 demonstrated superb internal consistency across all items in the scale. For the purposes of the research question and in the interest of administration time both the ‘opportunities for advancement’ and the ‘curriculum and job tasks’ subscales were removed from the satisfaction survey, resulting in a total of 44 items.

*Coping Orientations to Problems Experienced Scale.* The “Active Coping” subscale of the Coping Orientations to Problems Experienced (COPE) Scale was used to measure a distinct aspect of coping that implies a direct focus on the dilemmas in one’s environment (Carver et al., 1989; refer to Survey Part 4 in Appendix D). Active coping techniques include initiating positive action, increasing one’s efforts, and executing attempts to overcome stressors in a stepwise fashion. This process entails taking active steps to remove, work around, or ameliorate the effects of numerous stressors. Theoretically, the active coping subscale implies a more adaptive approach to facing problems than other subscales measuring constructs such as behavioral and
mental disengagement. The 4-item subscale is based on a 4-point Likert format with responses ranging from “I usually don’t do this at all” to “I usually do this a lot.” Scores range from 4 to 16, with higher scores indicating a more active coping style. When asked what they generally do and feel when experiencing stressful events, questions include, “I concentrate my efforts on doing something about it.” Specifically for the active coping subscale, Cronbach’s alpha reliability averaged .62 with a sample of 978 undergraduate college students. Subsequent test-retest reliabilities across two separate samples revealed values of .56 (N=89) and .69 (N=116). In the present study the Cronbach alpha coefficient was .67. The COPE scale has exhibited both convergent and discriminate validity against other personality and coping inventories as well. Specifically within personality dimensions, for instance, active coping and planning subscales were positively associated with optimism, self-esteem, hardiness, and Type A; further, a negative correlation existed between active coping and trait anxiety (Carver et al., 1989).

**Teacher Multicultural Attitude Survey.** A modified version of the Teacher Multicultural Attitude Survey (TMAS) was used to measure global multicultural awareness in teachers, defined as teachers’ awareness of, comfort with, and sensitivity to issues of cultural pluralism in the classroom (refer to Survey Part 5 in Appendix D). Originally published by Ponterotto in 1998, this 20 item self-report is appropriate for teachers in K-12 settings, and items measure general multicultural awareness, appreciation, and tolerance. For the present study two items pertaining to differences in language were omitted to construct the measure as more appropriate for the sample at hand. Answers are scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Six items required reverse scoring for proper analysis (3,6,11,14,17,18). By averaging each respondent’s items and obtaining a product from the total number of items on the scale, a range for the shortened scale utilized was 18 to 90; higher scores indicate more favorable views and acceptance of multiculturalism in the classroom. Following an initial pilot study of that used factor analysis to further validate the items, reliability and other psychometric
properties were gained in a study of 227 graduate students in teacher education programs in three campuses in the New York City area (Ponterotto, 1998). The sample included a wide range of ages, ethnic identities, and backgrounds both with and without multicultural experiences thus far (including workshops, courses, or hands on teaching experience in diversified classrooms).

Results revealed the normed grand means on pilot studies using the survey demonstrated negatively skewed distributions. Internal consistency measurements include a coefficient alpha of .86 and theta coefficient of .89, maintaining adequate internal consistency. In the current study the Cronbach alpha value was .80. Correlations with comparative instruments such as the Quick Discrimination Index and Multigroup Ethnic Identity Measure revealed positive correlations ($r = .45$ and $r = .35$ respectively); nonexistent correlations were found with the Social Desirability Scale ($r = .00$) indicating that social desirability was not a limitation to the validity of the TMAS.

The measure also distinguished significant differences between teachers who had completed professional workshops on multiculturalism and those who had not ($t (198) = 4.68, p < .001$; Ponterotto, 1998). Added to the TMAS in the present study was a short set of questions pertaining to the number of classes or workshops on diversity offered throughout training for the teaching position, as well as a ranking of their effectiveness.

**CASE School Climate Survey – Teacher Climate Measure.** The National Association of Secondary School Principals (NASSP) collaborated with the University of Nebraska-Lincoln in developing the School Climate Survey (1982), a self-report measure that assesses perceptions of the relatively enduring characteristics of a particular school environment (refer to Survey Part 6 in Appendix D). The School Climate Survey can be administered to students in grades 6-12, teachers, and parent/citizen groups. It collects data on ten subscales: Teacher-student relations, security and maintenance, administration, student academic orientation, student behavioral values, guidance, student-peer relationships, parent and community-school relationships, instructional management, and student activities. For the purposes of the present research
questions, a construct of teacher support was calculated as the mean of administrative support and parent/community school relations. Also student contribution was assessed by academic orientation, behavioral values, student-peer relations, and student activities. The Teacher Climate Measure consists of 55 items and follows a 5-point Likert scoring format (1=strongly disagree to 5=strongly agree, and 6=don’t know) to the statements presented. Scores are obtained by first computing the average score of each subscale and then multiplying this by the number of items in each subscale. Following, subscale scores are then converted to scaled T scores, with a mean of 50 and a standard deviation of 10. Though overall averages have not been used by the NASSP, the present study computed the average T scores of combined subscale scores for those participants who completed all parts of the measure. The technical manual provides scaled descriptive statistics on normative samples of teacher-reported school climate (Halderson et al., 2001). Validity evidence is lacking (Roach & Kratochwill, 2004), though the initial development taskforce extensively reviewed other instruments to ensure content validity in the School Climate Survey. Construct validity was developed and based on the Interactive Model of the School Environment, resulting in the multifaceted nature of the instrument (Halderson et al., 2001). Adequate reliability for the Teacher Climate Measure was found, including both test-retest and internal consistency coefficients (Cronbach’s alpha) ranging from .79 to .87 across all 10 subscales (Halderson et al., 2001; Roach & Kratochwill, 2004). In the present study Cronbach’s alphas for the subfactors generally ranged from .73 to .91; one factor, the student-peer relations displaying weak internal consistency with a coefficient of .41. The Cronbach alpha value which included all items in the TCM was .88, demonstrating strong consistency across subscales. For the purposes of the culturally focused research question and in the interest of administration time, both the security/maintenance and the guidance subscales were removed from the climate survey, resulting in a total of 44 items.
**Maslach Burnout Inventory.** The Maslach Burnout Inventory (MBI; e.g. Maslach & Jackson, 1986; Maslach, Jackson & Leiter, 1996) is the most widely used tool both in research and clinical settings to assess professional burnout (Burke et al., 1996; refer to Survey Part 7 in Appendix D). Items assess frequency of feelings and attitudes related to burnout on a 7-point Likert scale (see Appendix D for item descriptions), and combine to form three different subfactors (i.e., emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA)). Emotional exhaustion is characterized by feeling overextended and drained. Depersonalization is described as a callous response to people receiving services. Lastly, reduced personal accomplishment is defined as a decline in feelings of competence and achievement in one’s occupation. All subscale scores are calculated by summing items for EE, DP, or PA. Subscale scores range from 0 to 54, depending on the number of items included in each. Higher scores indicating more severe levels of burnout in EE and DP; for PA, high subscale scores indicate high feelings of personal accomplishment. A total MBI score may also be obtained using a sum of EE, DP, and reverse-scored PA items. The MBI total score ranges from 0 to 132, with higher scores indicating more severe levels of burnout. The MBI has also been adapted for use with teachers specifically (i.e., MBI-ED; Maslach et al., 1996). In this few modifications were made, including a change in the word “recipient” in the original MBI to “student” and item content improvements to better represent a school context. This 22-item self report consists of the same subscales with 9 questions comprising the EE subscale, 5 items measuring the DP subscale, and 8 items forming the PA subscale. Scoring is the same as in the original MBI.

Adequate convergent and discriminate validity levels were determined when MBI scores are compared with spousal or co-worker evaluations and measures of other psychological constructs such as self-esteem, job satisfaction and depression (Maslach & Jackson, 1986). Psychometric qualities have been continually substantiated, such as in a Spanish adaptation for teachers, where results revealed the MBI-ED shows appropriate concurrent validity with the
Teacher Stress Inventory and predictive validity with regards to general health questionnaires, such as the GHQ-28 (Ferrando & Perez, 1996, as cited in Cano-Garcia et al., 2005). In a sample of 631 elementary teachers in Catalonia, factor analysis revealed the three-factor structure accounts for 43.4% of the variance (Aluja et al., 2005). Using results from the same study, internal consistency alphas for the subtests ranged from .61 to .88. Reliability assessment using Cronbach alpha coefficients revealed .90, .79, and .71 for the subfactors of EE, DP and PA, respectively. Test-retest scores were between .80 and .85 for all three subtests. In the present study, Cronbach alpha coefficients were .88, .80, and .64 for EE, PA, and DP subscales, respectively.

On the whole, distributions straying from the normal curve have been documented in past literature, appearing quite common within the MBI-ED. For instance, in the Catalonia sample of over 600 teachers, distributions for all three MBI-ED dimensions were positively skewed, yielding z-coefficients from the Kolmogorov-Smirnov test ranging from 2.23 to 4.20 (Aluja et al., 2005). Also, Byrne (1991) sampled 543 participants from six intermediate schools, four secondary schools, and one university setting. Subsequently, normality analysis revealed skewness within the MBI differing based on grade level taught. Mean coefficients of skewness for intermediate teachers were .33, with .24 for secondary educators, and .63 averages for university professors (Byrne, 1991). These results suggest that all educators reported less burnout than would be expected from a statistically normal distribution, with university professors experiencing the least symptoms and high school teachers noting the most within this teacher sample.

Procedure

Letters were sent to superintendents and principals of school districts (see Appendix C). After first receiving verbal commitments from superintendents and principals, the precise means
of survey administration was decided by each school principal. Some opted for a brief summary of the study to be presented to teachers at either staff meetings or in-service days, followed by administration of surveys to be returned at the teacher’s convenience. Alternatively, teachers in other schools received anonymous survey packets in their mailboxes with explanation from their school principal (see Table 1 for a detailed description of recruitment procedures). The battery of questionnaires took about 20 minutes to complete. In order to further entice teachers to participate and thereby increase the rate of return of surveys, a monetary gift of $2 was also incorporated in their packet of measures. This procedure was based on the work of Szelenyi, Bryant, and Lindholm (2005), who found that prepaid monetary incentives of $2 enhanced response rates, substantially more so than $5 incentives obtained post-response. Individual teachers were asked to anonymously fill out their surveys and return them in a pre-stamped envelope.
Table 1

Rate of Return of Measures as Compared to Dissemination Method

<table>
<thead>
<tr>
<th>Rate of Return</th>
<th>Method</th>
<th>School Level</th>
<th>Ratio of Return per School</th>
</tr>
</thead>
<tbody>
<tr>
<td>71% average</td>
<td>Principal disseminated at teacher in-service/meeting</td>
<td>High</td>
<td>17/20</td>
</tr>
<tr>
<td>(range 55.88-</td>
<td>Elementary/Middle High</td>
<td></td>
<td>34/43</td>
</tr>
<tr>
<td>85.00)</td>
<td>Elementary (K-2) High</td>
<td></td>
<td>29/42</td>
</tr>
<tr>
<td>69%</td>
<td>Distributed to head “teacher leaders” per grade and then handed down to</td>
<td>Elementary (3-5)</td>
<td>20/29</td>
</tr>
<tr>
<td>58%</td>
<td>Placed in teacher mailboxes with memo of importance from vice-principal</td>
<td>High</td>
<td>15/26</td>
</tr>
<tr>
<td>54%</td>
<td>Presented at teacher in-service by PI and later completed and returned</td>
<td>Middle</td>
<td>19/35</td>
</tr>
<tr>
<td>52%</td>
<td>Collected by school secretary and sent in a large batch of envelopes</td>
<td>Middle</td>
<td>13/25</td>
</tr>
<tr>
<td>51.2% average</td>
<td>Anonymously placed in teacher mailboxes</td>
<td>Elementary</td>
<td>16/33</td>
</tr>
<tr>
<td>(range 28.57-</td>
<td>Elementary/Middle High</td>
<td></td>
<td>18/30</td>
</tr>
<tr>
<td>60.00)</td>
<td>Elementary/Middle High</td>
<td></td>
<td>30/66</td>
</tr>
<tr>
<td></td>
<td>Elementary High</td>
<td></td>
<td>10/35</td>
</tr>
</tbody>
</table>

VI. RESULTS

Descriptive Statistics for the Sample

Descriptive analyses of each independent and dependent variable used in the study were conducted (see Table 2). Following, an evaluation of the normality of the distributions based on the Kolmogorov-Smirnov test revealed that overall scores on the MBI-ED, AGB, and MEIM AGB were significantly skewed in the expected direction given the population sampled for this investigation. For instance, the MBI-ED total score showed a slightly positive skew in this sample, indicating lower rates of reported burnout symptoms than expected from a normal
distribution. This finding aligns with past empirical investigations using the MBI-ED (Aluja et al., 2005; Byrne, 1991). Similarly, the total number of past generations in the region is skewed such that most respondents indicated a high number on both mother and father sides of the family (see Figure 1). Also, the MEIM measure was negatively skewed in the current study; responses were more likely to be higher on this measure than in a comparable statistically normal distribution. Besides validating the subjects’ value placed on their Appalachian ethnicity, this result provides further evidence for the salience of “Appalachian” as a subcultural group. Results from the current study fall closely in line with past literature, though a distinct potential limitation of the use of the MEIM lies in its lack of validation in studies with adults or in research using “Appalachian” as a cultural group. The present study represents important varied populations for which the use of the MEIM may be further explored with the development of additional norms.

![Figure 1. Percent of Mother and Father Generational History in Appalachia](image)

In addition to examining scale normality, t-tests and correlational analyses were conducted to assess the relationship between demographic characteristics and the study variables. First, a significant association was found between gender and MEIM scores (t(314) = 2.20, p = .03), with males scoring significantly higher (M = 2.81, SD = 0.92) than female participants (M = 2.55, SD = 0.94).

Table 2
### Descriptive Statistics for Independent and Dependent Study Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Sample Range</th>
<th>Skew</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPE</td>
<td>319</td>
<td>11.54</td>
<td>2.59</td>
<td>4-16</td>
<td>-.135</td>
<td>.137</td>
</tr>
<tr>
<td>TMAS</td>
<td>316</td>
<td>63.95</td>
<td>12.50</td>
<td>34-95</td>
<td>-.189</td>
<td>.137</td>
</tr>
<tr>
<td>MBI-ED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depersonalization</td>
<td>304</td>
<td>32.84</td>
<td>15.33</td>
<td>4-79</td>
<td>.574</td>
<td>.190*</td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>304</td>
<td>22.94</td>
<td>10.54</td>
<td>0-52</td>
<td>.219</td>
<td>.140</td>
</tr>
<tr>
<td>Personal Accomplishment</td>
<td>291</td>
<td>37.84</td>
<td>7.03</td>
<td>13-48</td>
<td>1.936</td>
<td>.185*</td>
</tr>
<tr>
<td>MEIM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic Identity Search</td>
<td>319</td>
<td>2.62</td>
<td>.94</td>
<td>1-4</td>
<td>-.744</td>
<td>.137*</td>
</tr>
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<td>Ethnic Group Affirmation</td>
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<td>.82</td>
<td>1-4</td>
<td>-.550</td>
<td>.137*</td>
</tr>
<tr>
<td>TSS (average with no missing values)</td>
<td>205</td>
<td>45.65</td>
<td>7.02</td>
<td>30.29-67.71</td>
<td>.046</td>
<td>.170</td>
</tr>
<tr>
<td>Administration</td>
<td>308</td>
<td>48.50</td>
<td>11.08</td>
<td>20-65</td>
<td>-.553</td>
<td>.139*</td>
</tr>
<tr>
<td>Compensation</td>
<td>313</td>
<td>51.45</td>
<td>10.50</td>
<td>24-72</td>
<td>-.259</td>
<td>.138</td>
</tr>
<tr>
<td>Student Responsibility</td>
<td>317</td>
<td>43.97</td>
<td>10.76</td>
<td>24-72</td>
<td>.071</td>
<td>.137*</td>
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<tr>
<td>Coworkers</td>
<td>263</td>
<td>49.43</td>
<td>9.48</td>
<td>20-64</td>
<td>-.390</td>
<td>.150*</td>
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<tr>
<td>Parents and Community</td>
<td>274</td>
<td>35.93</td>
<td>7.87</td>
<td>23-63</td>
<td>.564</td>
<td>.147*</td>
</tr>
<tr>
<td>Building and Maintenance</td>
<td>260</td>
<td>43.99</td>
<td>12.07</td>
<td>15-68</td>
<td>-.217</td>
<td>.151</td>
</tr>
<tr>
<td>Communication</td>
<td>263</td>
<td>47.47</td>
<td>11.47</td>
<td>16-70</td>
<td>-.338</td>
<td>.150*</td>
</tr>
<tr>
<td>TCM (average with no missing values)</td>
<td>195</td>
<td>46.04</td>
<td>6.27</td>
<td>31.13-65</td>
<td>.164</td>
<td>.174</td>
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<td>Teacher student relations</td>
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<td>55.99</td>
<td>7.96</td>
<td>26-70</td>
<td>-.462</td>
<td>.142*</td>
</tr>
<tr>
<td>Administration</td>
<td>293</td>
<td>48.37</td>
<td>13.03</td>
<td>15-112</td>
<td>.857</td>
<td>.142*</td>
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<tr>
<td>Student academic orientation</td>
<td>281</td>
<td>39.65</td>
<td>12.33</td>
<td>4-75</td>
<td>-.245</td>
<td>.145</td>
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<tr>
<td>Student behavioral values</td>
<td>294</td>
<td>47.03</td>
<td>10.10</td>
<td>24-67</td>
<td>-.080</td>
<td>.142</td>
</tr>
<tr>
<td>Student peer relationships</td>
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<td>47.26</td>
<td>9.23</td>
<td>13-68</td>
<td>-.732</td>
<td>.143*</td>
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<td>Parents/Community relations</td>
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<td>40.77</td>
<td>11.33</td>
<td>16-69</td>
<td>-.011</td>
<td>.145</td>
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<tr>
<td>Instructional management</td>
<td>266</td>
<td>43.93</td>
<td>10.33</td>
<td>16-69</td>
<td>.169</td>
<td>.149</td>
</tr>
<tr>
<td>Student activities</td>
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<td>49.35</td>
<td>9.35</td>
<td>23-66</td>
<td>-.343</td>
<td>.144*</td>
</tr>
<tr>
<td>Appalachian Generational Background</td>
<td>260</td>
<td>4.96</td>
<td>3.20</td>
<td>0-8</td>
<td>-1.272</td>
<td>.301*</td>
</tr>
</tbody>
</table>

*Note: * = significantly skewed distribution, Appalachian Generational Background = number of generations (classified as 0 through 4+) on both mother and father sides of one’s family. Though no participants were eliminated completely from the analyses, the sample sizes differ according to the different statistical tests used based on the number of teachers that completed each measure or section.

Bivariate correlational analyses also revealed that age was positively related to MEIM scores, indicating that as one grows older, there are stronger ties to the Appalachian cultural identity. MEIM was also positively associated with the total years of lifetime teaching.
Furthermore, both generational background and MEIM scores were positively correlated with length of time living in the county, the Appalachian region, and time teaching at one’s current school. Interestingly, the number of years a respondent lived outside of the Appalachian region as well as the length of time since one returned to the region were also highly correlated with MEIM and one’s Appalachian generational background. Additionally, respondents indicated significant more active coping styles in dealing with stress as their education levels, years living in their county, years living in Appalachia, and years teaching at their current school also increased. Multicultural attitudes, as assessed by the TMAS, were negatively correlated with years living in the county, years in Appalachia, years living outside Appalachia, length of time since returning to the region. Further, total lifetime years of teaching as well as years teaching at current school were negatively related to TMAS; therefore, as teaching experience increased, reported positive attitudes toward multiculturalism decreased. Table 3 presents results of correlational analyses.
Table 3

Two-tailed Correlations between Demographic/Regional Variables and Subjective Measures

<table>
<thead>
<tr>
<th></th>
<th>COPE</th>
<th>MBI-ED</th>
<th>MEIM</th>
<th>TSS</th>
<th>TCM</th>
<th>TMAS</th>
<th>AGB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.081</td>
<td>-.080</td>
<td>.113*</td>
<td>.009</td>
<td>.081</td>
<td>-.208</td>
<td>.022</td>
</tr>
<tr>
<td>Degree Level</td>
<td>.144*</td>
<td>-.009</td>
<td>.048</td>
<td>-.007</td>
<td>-.027</td>
<td>-.014</td>
<td>-.041</td>
</tr>
<tr>
<td>Years living in county</td>
<td>.133*</td>
<td>.058</td>
<td>.316**</td>
<td>-.062</td>
<td>-.020</td>
<td>-.214**</td>
<td>.375**</td>
</tr>
<tr>
<td>Years living in Appalachia</td>
<td>.150**</td>
<td>-.008</td>
<td>.516**</td>
<td>-.006</td>
<td>-.020</td>
<td>-.286**</td>
<td>.575**</td>
</tr>
<tr>
<td>Years ever living outside Appalachia</td>
<td>.046</td>
<td>.061</td>
<td>.395**</td>
<td>-.051</td>
<td>121†</td>
<td>-.177**</td>
<td>.531**</td>
</tr>
<tr>
<td>Years ago returned to Appalachia</td>
<td>-.016</td>
<td>.087</td>
<td>.269**</td>
<td>.142</td>
<td>.189</td>
<td>-.200*</td>
<td>.338**</td>
</tr>
<tr>
<td>Total years of life teaching</td>
<td>.082</td>
<td>.004</td>
<td>.140*</td>
<td>-.038</td>
<td>.013</td>
<td>-.213**</td>
<td>.084</td>
</tr>
<tr>
<td>Years teaching at current school</td>
<td>.122*</td>
<td>.015</td>
<td>.123*</td>
<td>.269</td>
<td>.203</td>
<td>-.124*</td>
<td>.142*</td>
</tr>
</tbody>
</table>

Note. † Denotes a trend with p<0.10 (2 tailed). * Correlation is significant at p<0.05 (2 tailed). ** Correlation is significant at p<0.01 (2 tailed). AGB (Appalachian Generational Background) = number of generations (classified as 0 through 4+) on both mother and father sides of one’s family living in the Appalachian Region.

Two tailed correlations were also computed within the dependent and independent variables for the study (see Table 4). MEIM total score was positively related to the COPE, indicating that a closer tie to one’s Appalachian identity was associated with more active coping styles. Further, the TSS and TCM were both positively correlated with the COPE and negatively correlated with the MBI-ED; this pattern reveals that, as teacher satisfaction is enhanced and perception of school climate is more positive, it is accompanied by more active coping and less burnout. Also, the TCM and TSS are closely positively related, revealing that teacher perceptions of the overall school climate and personal satisfaction with that environment are highly interrelated. Finally, there is a strong negative relationship between Appalachian generational
background and multicultural attitudes; that is, as the number of familial generations in Appalachia increases, multicultural attitudes are less positive.

Table 4

Two-tailed Correlations between Independent and Dependent Factors

<table>
<thead>
<tr>
<th></th>
<th>COPE</th>
<th>MBI-ED</th>
<th>MEIM</th>
<th>TSS</th>
<th>TCM</th>
<th>TMAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBI-ED</td>
<td>.063</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MEIM</td>
<td>.116*</td>
<td>.035</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TSS</td>
<td>.205**</td>
<td>-.438**</td>
<td>.019</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TCM</td>
<td>.165*</td>
<td>-.371**</td>
<td>.014</td>
<td>.672**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TMAS</td>
<td>.011</td>
<td>-.038</td>
<td>-.071</td>
<td>.106†</td>
<td>.095†</td>
<td>-</td>
</tr>
<tr>
<td>AGB</td>
<td>.032</td>
<td>.001</td>
<td>.681**</td>
<td>-.077</td>
<td>-.017</td>
<td>-.223**</td>
</tr>
</tbody>
</table>

Note. † Denotes a trend with p<0.10 (2 tailed). * Correlation is significant at p<0.05 (2 tailed). ** Correlation is significant at p<0.01 (2 tailed). AGB = number of generations (classified as 0 through 4+) on both mother and father sides of one’s family.

Results for Hypothesis 1: Individual Level Factors

Hypothesis 1A consisted of specific predictions pertaining to a number of demographic variables. Using correlations, t-tests, and ANOVA statistical analytic methods, the relationship between age, gender, degree, and experience levels and teacher burnout were analyzed. Results showed that there was no correlation between age of teachers and global MBI burnout scores (r = .03, ns). Next, a t-test revealed significant differences between males and females on the Emotional Exhaustion subfactor of the MBI-ED. Supporting the original hypothesis, females reported higher emotional exhaustion than did males (t (299) = -2.91, p = .00, mean difference = -3.97). No differences existed between sexes for either total MBI scores or in the facets of Depersonalization or Personal Accomplishment. Of note, gender was unrelated to one’s age,
amount of teaching experience, or degree level, \( t(310) = .483, t(311) = .671, t(301) = .833 \), all \( p < .05 \), respectively.

The relation between professional characteristics and burnout was also evaluated. First, regression analyses were conducted to determine the relation of total years of teaching experience and years teaching in an Appalachian school on subsequent burnout scores. Neither variable made a unique contribution in accounting for variance in burnout scores, either with the total MBI or any of the three subfactors. Additionally, a one-way ANOVA was conducted to determine the relationship between degree achieved and burnout. Neither the total burnout score nor specific subfactors were significantly related to professional degree. Of note, results were likely tainted by the limited n-size in each respective group, with only 3 participants falling into the category of “less than a Bachelor degree” of education and 6 achieving higher than a master’s degree.

Hypotheses 1B and 1C were tested using regression analyses to ascertain the relationships of multicultural attitude and the amount of training in multiculturalism as possible moderators of a relationship between classroom cultural diversity and burnout scores. In both cases, a hierarchical linear regression was conducted. For hypothesis 1B, the first step entered was classroom diversity, the second added TMAS scores, and the third step included a diversity * TMAS interaction variable. In examining regression coefficients, diversity was not a significant predictor of burnout, either independently or in either condition of the interaction term. Similarly, Hypothesis 1C tested the amount of multicultural training as a moderator of the relation between classroom diversity and burnout. Multicultural training was operationalized as the response to item 19 on the TMAS scores (the number of training sessions or classes previously attended on multiculturalism in the classroom). Using the same methodology as described above, similar results were found. Again, classroom diversity was not a significant predictor of burnout, either independently or in either condition of the interaction term.
The second set of hypothesis tested for mediation relationships between school-level factors and burnout. For hypothesis 2A, both global TCM and specific TCM subfactors were predicted to significantly predict burnout scores, with active coping style evaluated as a possible mediator. First, bivariate correlational analyses were used to evaluate the relation of all variables of interest for inclusion in the test of mediation. As all were found to be significantly correlated, hierarchical regression analyses were deemed appropriate as a test of mediation. In this, the regression analysis involved entering the TCM variable into the regression equation in the first step, and adding the COPE total score to the regression equation as the second step. Results of the regression analyses are presented in Table 5.

Post-hoc probing was then used to determine whether the drop in the total effect was significant when the mediator entered the model. Sobel’s test of significance was utilized to explore the mediator effects, ultimately testing whether a mediator carries the influence of an independent variable to a dependent variable (Preacher & Hayes, 2004). After entering the necessary values for the Sobel test, reported p-values are presented based on the assumption for the normal distribution two-tailed z-test that the mediated effect equals zero in the population. The absolute value for the test ratio must fall within 1.96 standard deviations to contain the central 95% of the normal distribution. The final equation for the Sobel test is:

\[ z\text{-value} = \frac{a \times b}{\sqrt{b^2 \times s_a^2 + a^2 \times s_b^2}} \]

To ascertain the values needed for Sobel’s test, first a regression analysis was run with the independent variable, TCM or a subfactor of TCM, predicting the mediator, COPE. The value of the unstandardized beta and standard error were then entered into the first part of the Sobel equation as \( a \) and \( S_a \) (Preacher & Hayes, 2004). The second part of the analysis involved entering both the independent variable (TCM or subfactor) and the mediator (COPE) in a regression computation. From the results, the unstandardized beta and standard error representing
the mediator to dependent variable relationship was then entered into the second part of the Sobel equation as $b$ and $S_b$. From this, a Sobel statistic and significance value allow for analysis of mediation from the input results. In all cases, the independent variable significantly predicted teacher burnout; however; no significant mediation relationships were detected (see Table 5).

Table 5

**Summary of Hierarchical Regression Analysis Predicting Educator Burnout – TCM**

<table>
<thead>
<tr>
<th>DV: MBI-ED total score</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>Sig.</th>
<th>$R^2$</th>
<th>$Δ R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. <strong>Total School Climate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_total</td>
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<td>.234</td>
<td>-.371</td>
<td>.000</td>
<td>.138</td>
<td>.138</td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>TCM_total</td>
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<td>.236</td>
<td>-.392</td>
<td>.000</td>
<td>.153</td>
<td>.016</td>
</tr>
<tr>
<td>COPE_total</td>
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<td>.572</td>
<td>.128</td>
<td>.190</td>
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<tr>
<td>ii. <strong>School Climate Subfactor: Teacher Support</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_teachersupport</td>
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<td>.118</td>
<td>-.175</td>
<td>.032</td>
<td>.028</td>
<td>.028</td>
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<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_teachersupport</td>
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<td>.119</td>
<td>-.178</td>
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<td>.035</td>
<td>.007</td>
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<tr>
<td>COPE_total</td>
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<td>.289</td>
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<tr>
<td>iii. <strong>School Climate Subfactor: Teacher Student Relations</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_teacherstudent</td>
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<td>.158</td>
<td>-.167</td>
<td>.043</td>
<td>.028</td>
<td>.028</td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TCM_teacherstudent</td>
<td>-.354</td>
<td>.160</td>
<td>-.184</td>
<td>.028</td>
<td>.037</td>
<td>.009</td>
</tr>
<tr>
<td>COPE_total</td>
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<td>.491</td>
<td>.095</td>
<td>.255</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. <strong>School Climate Subfactor: Student Factor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_students</td>
<td>-.652</td>
<td>.140</td>
<td>-.347</td>
<td>.000</td>
<td>.121</td>
<td>.121</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCM_students</td>
<td>-.683</td>
<td>.141</td>
<td>-.363</td>
<td>.000</td>
<td>.133</td>
<td>.013</td>
</tr>
<tr>
<td>COPE_total</td>
<td>.677</td>
<td>.444</td>
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<td>.129</td>
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<td></td>
</tr>
</tbody>
</table>

Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory, Educator Edition total score.

For Hypothesis 2B, the relation between teacher satisfaction and burnout was evaluated. In this, global TSS and specific TSS subfactors were considered as independent variables. Again,
active coping was tested as a mediator, and MBI-ED total score served as the dependent measure. This regression analysis involved entering the TSS variable into the regression equation in the first step, and adding COPE to the regression equation as the second step. Bivariate correlational analyses were again used to evaluate the relation of all variables of interest for inclusion in the test of mediation. As all were found to be significantly correlated, hierarchical regression analyses were deemed appropriate as a test of mediation. In all cases, the independent variable significantly predicted teacher burnout; however; no significant mediation relationships were detected. Results of the regression analyses are presented in Table 6.

Table 6

Summary of Hierarchical Regression Analysis Predicting Educator Burnout - TSS

<table>
<thead>
<tr>
<th>DV: MBI-ED</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>Sig.</th>
<th>R²</th>
<th>Δ R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Total Teacher Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSS_total</td>
<td>-.954</td>
<td>.189</td>
<td>-.438</td>
<td>.000</td>
<td>.192</td>
<td>.192</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
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<td>ii. Teacher Satisfaction Subfactor: Professional Relations</td>
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<td>iii. Teacher Satisfaction Subfactor: Parents and Community Factor</td>
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<tr>
<td>TSS_parentscomm</td>
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<td>iv. Teacher Satisfaction Subfactor: Student Responsibility and Discipline</td>
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Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory, Educator Edition total score.
Results for Hypothesis 3: Community and Cultural Factors

Results for the third hypothesis were based on a series of regression analysis to test for the possible mediating role of school climate on the relationship between cultural-level factors and burnout. For this hypothesis, global generational Appalachian background and MEIM scores were each separately considered as independent variables. In hypothesis 3A, school climate scores as well as the subfactors of the TCM were separately tested as possible mediators in a series of regression analyses, all with the MBI-ED total score serving as the dependent measure. For hypothesis 3B, satisfaction scores and subfactors of satisfaction each served as mediating variables. Because both generational background and MEIM factors (independent variables) were not significantly correlated with MBI-ED scores or subfactors of burnout (dependent variables), no further hierarchical regression analyses were applied to test for mediation. Thus, neither the subjective nor objective cultural identity measures contributed to the prediction of teacher burnout.

Secondary Analyses

Secondary analyses were also conducted to further explore the relationship between school-level factors and burnout. First, it was hypothesized that teacher satisfaction would serve as a mediator of the relationship between school climate and burnout. In this analysis, TCM was the independent variable, TSS was used as a mediating factor, and MBI-ED was the dependent variable. Bivariate correlational analyses were used to evaluate the relation of all variables of interest for inclusion in the test of mediation. As all were found to be significantly correlated, hierarchical regression analyses were deemed appropriate as a test of mediation. In all cases, the independent variable significantly predicted global teacher burnout scores. Although the beta dropped upon further processing, subsequent post hoc analysis using the Sobel statistic revealed the difference was not significant. Results of the regression analyses are presented in Table 7.
Table 7

Summary of Hierarchical Regression Analysis Predicting Educator Burnout – mediator model

<table>
<thead>
<tr>
<th>DV: MBI-ED</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>Sig.</th>
<th>R²</th>
<th>Δ R²</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>-.344</td>
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Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory total score.

Given the multidimensional nature of burnout, additional analyses were considered to compare the underlying three features. The same analyses for mediation were executed using each of the MBI-ED subdomains of burnout, including emotional exhaustion, depersonalization, and feelings of low personal accomplishment. Bivariate correlational analyses were initially used to evaluate the relation of all variables of interest for inclusion in the test of mediation. As all were found to be significantly correlated, hierarchical regression analyses were deemed appropriate as a test of mediation. In all cases, the independent variable (TCM) significantly predicted all three subfactors of teacher burnout scores. Post hoc probing was conducted with the use of the Sobel statistic to determine if the drop in beta weight was significant with the addition of the mediator to the model. Using emotional exhaustion as the dependent variable, teacher satisfaction served as a significant mediator between the relationship of school climate and burnout (Sobel = -3.156, p = .002). As ratings in climate are more positive, teacher satisfaction increases, resulting in a decrease in emotional exhaustion. Results of the regression analysis are presented in Table 8. No significant mediation relationships were detected for the depersonalization or personal accomplishment domains. Results of their regression analyses are presented in Tables 9-10.
Table 8

*Summary of Hierarchical Regression Analysis Predicting Educator Burnout – mediator model*

<table>
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<tr>
<th>DV: MBI-ED EE</th>
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<th>R²</th>
<th>Δ R²</th>
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Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory Emotional Exhaustion subscale score.

Table 9

*Summary of Hierarchical Regression Analysis Predicting Educator Burnout – mediator model*

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<th>Δ R²</th>
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<td>-.095</td>
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Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory Depersonalization subscale score.

Table 10

*Summary of Hierarchical Regression Analysis Predicting Educator Burnout – mediator model*

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<td>.000</td>
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<td>-.009</td>
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Note. Each predictor was entered as a separate step. DV = Maslach Burnout Inventory Personal Accomplishment subscale score.
VI. DISCUSSION

The present study investigated the phenomenon of teacher burnout as it relates to a number of individual, school, and cultural factors. In doing so, the primary goal was not focused on comparing one level of variables against the others. Instead, this study aimed to explore the complex relationship between personal characteristics, situational variables, and other factors that interact in affecting an educator’s perceived burnout symptoms. In this sense, the analyses focused on better understanding the interplay of both contextual and individual factors associated with teacher stress. A particular goal of interest in the present study was to ascertain the potential affects of Appalachian cultural factors in the prediction of teacher burnout. Although the results did not support many of the proposed hypotheses regarding these cultural factors, important information was still gained on Appalachian identity and its relation to many facets of the teaching profession.

Individual-Level Trends

First, individual level factors associated with teacher burnout were investigated in the present study. Beginning with gender, females reported more feelings of emotional exhaustion than did males, a finding that aligns similarly with past literature (e.g., Lau et al., 2005). This finding similarly follows from prior theoretical underpinnings of the female role in society. Possible interpretations note that many women are still responsible for both emotional and physical needs of their family, and female teachers may feel required to express emotional investment through a “double dose” of caring both in the school and in the home, leading to extensive emotional exhaustion (Byrne, 1991, pp. 205).

There was no association between either age or years teaching experience and burnout in the present study. In previous investigations, those teachers in the youngest age group and junior
rank status were significantly more burned out than their older colleagues (Lau et al., 2005). These past findings followed from the premise that burnout risk is greater when teachers have perceptions of unmet or unrealistic goals and a lack of professional accomplishment. In the present study, no relationships were determined for these variables.

Similarly, no relationship was found between level of education and reported burnout. Potentially, this finding may be due to the similar amounts of classroom training in educational content often found for teachers with either a Bachelor’s or a Master’s degree (particularly among middle and high school teachers). For instance, many teachers choose to major in their specialty area (i.e. History or English) as undergraduates and to pursue their Master’s degree in education thereafter to receive their teaching certifications. Others may obtain a Bachelor’s degree in their preferred grade level and subject area of interest. Ultimately, both levels of education have similar amounts of actual training as an educator. For these reasons, similar levels of burnout may simply follow as a natural occurrence. An important focus for future studies lies in differentiating the type of degrees one possesses and more concretely capturing the effect of education level on experiences of burnout.

Another noteworthy individual factor in determining the precipitants of teacher burnout was one’s approach to coping with daily stressors. Early portrayals have stated that burnout occurs when coping resources are not enough to overcome the effects of a stressor, resulting in chronic negative cumulative feelings (Blasé, 1982). As noted by Schonfeld (2001), direct action as an occupational coping strategy is an especially effective method of addressing symptoms related to burnout. Still, in past studies of this construct, coping strategies have not differentially mediated the relationship between workplace stressors and emotional consequences (Schonfeld, 2001). Similarly, as evidenced by the present study, the use of an active coping style was not significantly related to teacher burnout levels. Of note, often coping measures are more accurate when asking the respondent about their particular coping strategies in dealing with
specific stressors. Because the COPE addressed one’s general style of coping, respondents may be tapping into some stressors that are not central to their occupation. Unfortunately, the coping construct as presented may have been more useful as a process-oriented and contextual variable. Still, nonsignificant results may be interpreted in light of more recent educational literature that takes school context into account. As Schwab (2001) notes, teaching roles have become increasingly less personally organized and may result in a work environment that may not be as responsive to individual coping efforts.

School Level Variables

Transitioning to other important predictors of teacher burnout, the most salient factors associated with teacher stress in the current study stemmed from the organizational level. Both the occupational context as well as the participant’s experience within that context were significantly related to teacher burnout. That is, as teachers rated both their school climates as well as their satisfaction levels more positive, there was an associated decrease in burnout levels. Overall, trends in the burnout literature focus on the importance of environmental conditions as well as one’s own interpretation of those conditions. In terms of school climate, teachers view themselves as important informants of the general school atmosphere (Halderson et al., 2001). Importantly, the organizational climate is closely related to a number of other workplace issues. For instance, a study of 400 professionals conducted by the Institute for Organizational Performance revealed that key climate factors, specifically dealing with relationships, predict over 50% of the difference between high and low performers, as measured by customer service, job performance, productivity, and retention (2005). Following suit, the results of the present investigation align closely with existing literature regarding the workplace atmosphere.

As a supplement to school climate, satisfaction in the present study is operationalized as the personal, affective response of an individual to a specific situation or condition. In the past,
job satisfaction has also been associated with burnout among healthcare professionals. For example, Bettina (2006) used a sample of over 200 participants to determine that burnout, particularly emotional exhaustion, was strongly related to job dissatisfaction. The present study similarly established strong trends between these variables with teachers.

Extending from these past studies, mediator analyses in the present study revealed interplay between contextual and individual school variables. Though ratings of school climate were strongly negatively associated with the emotional exhaustion component of burnout, teacher satisfaction accounted for a significant portion of this relationship. Of interest, no mediator relationships existed using depersonalization, or personal accomplishment as the dependent variable. As noted by Brouwers and Tomic (2000), emotional exhaustion may be the core component, and first evidence, of experienced burnout. Indeed, in the present study emotional exhaustion was most sensitive in detecting the mediator effects of teacher satisfaction on the relation between school climate and emotional duress.

Workplace factors associated with burnout have long been a topic of interest. For instance, Lindblom, Lington, Fedeli, and Bryngelsson (2006) investigated the overall levels of burnout in the general population and then deduced the psychosocial work factors associated with it, irrespective of one’s occupation. Results based on a random sample of 3,000 participants revealed the group with the highest burnout scores most frequently endorsed a poor psychosocial workplace climate, including high demands, low control, general lack of social support and disagreement with the values in their workplaces (Lindblom et al., 2006). Further, a study of group home caregivers for individuals with learning disabilities revealed strong correlations between burnout and occupational climate measures (Lundstrom, Graneheim, Eisemann, Richter & Astrom, 2005). In particular, the authors noted that the personal experiences of demands in the work situation played an important role in the prediction of burnout (Lundstrom et al., 2005). Thus, the relationship between occupational and workplace factors and burnout (for individuals in
helping professions in particular) lead to important interpretations and possible targets for intervention.

Returning to the educational literature, the relationship between school factors and burnout may be especially important because of its propensity for positive change. Organizational factors such as school climate are more amenable to change than characteristics such as culture or individual traits. For instance, a focus on school climate may prompt the implementing of behavior management strategies to support teachers, contracting staff leadership teams, and developing teacher education programs (Howard & Johnson, 2004). Importantly, there is likely a great deal of interplay between school climate, teacher satisfaction, and community and cultural influences. Though the occupational level variables are most strongly statistically associated with educator burnout, these constructs still accounted for only a small percent of variance in burnout scores. Furthermore, it is imperative to consider the wraparound influence of culture and community as ever-present and prominent.

Cultural and Diversity Factors

No relationships were found between Appalachian identity and reported burnout. Still, important information was gained on the relationship between generational and subjective identity measurements. Also, Appalachian background was associated with certain educational characteristics.

*Appalachian Identity: Construct Development and Demographic Characteristics*

Although there was no relationship found between classroom diversity, Appalachian identity, and teacher burnout, a number of notable associations existed between Appalachian generational background and scores on the Multigroup Ethnic Identity Measure. For instance, both objective and subjective ratings of cultural identity are highly correlated. That is, as the number of past familial generations in the region increases, it is associated with similar increases
in reported feelings of closeness to Appalachia. This finding lends credit to the prior accepted method of ascertaining Appalachian identity via generational heritage. Thus, if a person has a vast family history in the region, he or she is likely to also feel subjectively close to, and accepting of, the Appalachian culture.

In reviewing the associations between Appalachian identity and a number of situational characteristics, many similarities are noted between objective and subjective measurements. Both ways of operationalizing identity correlated positively with years living in the county and total years living anywhere in the Appalachian region. Other positive associations were also determined with the number of years ever living outside Appalachia as well. That is, the longer one spent away from the Appalachian region, the more closely aligned he is with this subculture upon returning. Further, the longer the amount of time since living outside of the region, the higher the number of past generations in the region or more subjective positive feelings one holds regarding Appalachian culture. These findings may appear contrary such that both time away from Appalachian and time in the region both are positively associated with identity, measured both subjectively and objectively. Though the present study does not possess the mechanisms to determine why this anomaly occurred, it warrants further consideration in future studies.

In the past, Appalachian cultural identity has been solely measured generationally (e.g. Reck et al., 1993), defining a person as “native Appalachian” based on their family heritage in the region or whether they specifically were born and raised in Appalachia. A number of potential limitations are associated with past operationalizing of this variable, in that it does not account for the diversity of experiences while growing up in the region, the place in which one was born and raised, and the time spent away during adulthood before returning. Further, generational identification allows for no information about one’s personal attitudes and feelings toward the culture. Therefore, in addition to collecting information on generational identity, the present study also compared objective generational background with a subjective measure of this
construct, the Multigroup Ethnic Identity Measure (MEIM). In this, participants responded to queries regarding their commitment to the Appalachian culture, feelings of closeness with Appalachian customs, and desire for increased knowledge and comfort with the history and traditions in the region. Initial results revealed a negative skew, indicating that most responses on this measure gravitated toward the high end with most participants reporting strong positive feelings toward their Appalachian identities. This finding parallels the sample’s Appalachian generational characteristics as well; the majority of teachers had extensive generational backgrounds in the region, and similarly reported high amounts of Appalachian group affirmation within the subjective measure of identity. Of note, while prior literature regarding the region predicted notable trends of outmigration (e.g., Mayo, 1970; Reck et al., 1993), the sample in the present study contrasted with this notion.

In assessing the need for including a subjective measure of identity as compared to simple familial heritage measures, the MEIM differentially correlated with two other demographic variables which were unrelated to one’s familial background. That is, significant correlations for MEIM and demographic characteristics did not hold for generational background. For instance, the MEIM was also related with one’s age. That is, one’s personal alignment with the Appalachian subculture increased with age, yet age and generational background were not significantly correlated. Similarly, males reported closer subjective alignment with the Appalachian culture than females, but this trend was not found with Appalachian generational background. In effect, these findings may indicate a more comprehensive glimpse at cultural identity is gained through subjective measures than by simply using generational measures. Overall, the findings from the present study lend credit to the need for gathering of updated information on the Appalachian subculture to further delineate its cultural characteristics. More recent data is needed to understand the population flux in the Appalachian region as well as the specific and unique aspects of this culture that may affect social issues. By acknowledging the
existing limitations of only capturing generational background in much research on Appalachian identity, important associated characteristics may remain hidden.

In surveying the literature on cultural factors, the generational identity in Appalachians differs from that of other ethnicities. For instance, a study of 110 Hispanic college students from four universities used self-report measures to assess the level of acculturation to mainstream U.S. society (Valentine, 2001). Results revealed that Hispanic acculturation increases across generational levels, and the level of identification with the parent culture negatively influences acculturation. Contrasting this, the present Appalachian study revealed a reversal of this trend; that is, the longer one’s family history in the region, the closer one feels to his Appalachian identity. Importantly, because of the notable differences between these cultures, only critical comparisons should be offered. Because Appalachians may not be physically differentiated from mainstream Americans and speak English, circumstances for cultural identity growth are therefore divergent from that of some Hispanic Americans. Additionally, the Appalachian culture is geographically based within the community of the United States, whereas Hispanic Americans may have ties outside of this country.

In another comparison, Weaver (2001) notes that Native Americans’ cultural identities also fluctuate within their community climate. Among cultures where discrimination based on one’s Native identity is present, a person is more likely to reject a Native identity, whereas a climate in which it is fashionable or perhaps financially profitable a person may assert their Native identity. Further, Native American literature also points to the hypocritical findings regarding identity and behavior (Weaver, 2001). Overall, one’s cultural identity is shaped by many contextual and environmental factors that are unique to every ethnicity, race and individual. In the case of Appalachian identity, one major limitation appears to be the lack of a foundation to objectively quantify a person’s individuality. Because of the lack of visible differences, there remains difficulty in defining Appalachian identity.
An increased understanding of the nature of the Appalachian culture may provide information on the mechanisms through which identity in this subculture affects educators’ occupational roles, both positively and negatively. For instance, investigations of cultural characteristics and demographic or school factors may help to interpret the particular stressors that teachers in this region face. Further studies are necessary to reliably determine how one’s Appalachian identity affects his/her perceptions of occupational surroundings and job tasks.

*Appalachian Cultural Background and Professional Characteristics*

Cultural background also plays a part in understanding teaching characteristics. For instance, Appalachian generational background and subjective identity are both positively related to the years teaching at one’s current school, as located within the Appalachian region. Also, the MEIM shows separate affects from Appalachian generational background by also correlating with the total years teaching in one’s lifetime. Thus, the longer one has been teaching at any school in the country, the more positive feelings of closeness she will have for her Appalachian home. Contrastingly, this association does not exist between generational heritage and lifetime years teaching. Therefore, the MEIM differentially distinguishes this teaching characteristic from more objective Appalachian identity measurements, further emphasizing the need to assess more than just family background in capturing facets of one’s identity that may relate to their educational career. Of note, the associations between teaching and Appalachian identity may possibly be merely byproducts of age predicting both.

Another important relationship between one’s cultural identity and teaching aspects used a measure of an educator’s acceptance of and openness to cultural diversity within the classroom. Although not directly connected to burnout among this group, negative multicultural values may be a risk factor for teacher stress. Interestingly, more positive multicultural attitudes were associated with fewer years living in the Appalachian region. As related to teaching, negative
attitudes about the importance of embracing diversity within the classroom were also aligned with more experienced teachers, similar in both measured lifetime teaching experience as well as time spent teaching at the current school. This trend is disconcerting in that it draws attention to the significant relationship between teachers’ cultural identity as an Appalachian and less favorable views of diversity within the classroom. Hills and Ralston (2001) similarly noted this trend as being exhibited by Appalachian students. Though many Appalachian students have been found as concerned, industrious, and religious, they also tend to hold attitudes of exclusion and inflexibility, viewing the population influx in their communities and newfound diversity with displeasure (Hills & Ralston, 2001). Comparably, the results from the present study indicate adult professionals from the Appalachian region may similarly hold unwelcoming attitudes toward diversity in their professional environment. Educational implications may include stereotyped or discriminatory attitudes toward children or parents from outside the Appalachian region, or who may be of a different race or ethnic background. Still, it is not clear whether these trends hold true outside the professional setting.

Certainly, diversity is not simply based on race, but also includes other characteristics such as socioeconomic status, religion, sex, or cultural differences. As historically noted by Massey and Crosby (1983) and Branscome (1976), teachers in the Appalachian region may be distinctly different from the cohort of students they teach in terms of socioeconomic status. For instance, within the present study, the mean and median household income rates hovered around $60,000 annually. From the broader perspective encompassing the high poverty in the Appalachian region, incomes such as these educators’ likely place them in the upper echelon of Appalachian citizens. Likely, the effects of this unbalanced distribution of wealth between students and teachers may negatively affect teachers’ perceptions of their students or of increasing the diversity of their classroom makeup. For instance, Reck and colleagues (1993) suggested that middle class teachers in the Appalachian region may feel the urge to avoid the
negative and stereotypical identity many Appalachians are labeled by. Because they are one of the highest paid professionals in the area, they are content to continue to serve mostly Appalachian children who do not challenge this notion. By accepting outsiders and encouraging more open validation of diversity within their classrooms, the teachers may feel they are putting themselves at risk. To combat cultural mismatch problems, teachers’ own identities must be explored to adopt a truly tolerant and pluralistic orientation toward their students, including socioeconomic differences (Roux, 2001; Tatar & Horenczyk, 2003). In an accepting atmosphere, teachers must learn to respect all learners as well as their cultures and various conditions, not comparing them to their own cultural or situational backgrounds (Morton, 1997). Much further attention and focus on multiculturalism is necessary to allow for optimal performance per student, and to allow for specific target interventions by teachers to ensure the most unbiased classroom climate. All of the aforementioned diversity issues are points of interest for future studies in teacher stress and burnout, especially given their likely association between tension in the classroom and teacher duress.

Another important research focus lies in recognizing the unique experience of teaching in a rural Appalachian district. As previously noted, teachers in rural settings have reported leaving their profession due to a misunderstood and unexpected array of broad professional responsibilities placed on their shoulders and the necessary close relationship with the community (Massey & Crosby, 1983). Rural teachers’ roles also include additional duties and expectations that may not have been taught during training. For those teachers who may not have originated from the Appalachian region, these extra duties may be overwhelming and unexpected tasks (Reck et al., 1993). Further, as noted by many of the school administrators from the present study, teachers in the Appalachian region are faced with a lack of revenue to run schools, manifested by job cuts, low salaries, poor work conditions, and few supplies. Likely, these conditions are intermixed in reports of school climate and satisfaction, and may not be direct
byproducts of cultural and geographic features within the present study. Still, though burnout cannot be directly predicted via cultural characteristics, the interplay of context, school, and individual factors produces a complex linkage system leading to teacher stress.

Limitations

The present study entailed a number of limitations. First, tests of normality of the measures resulted in negatively skewed data distributions for both the MEIM and Appalachian generational background. Of note, negatively skewed data may increase the risk of failing to reject the null hypothesis when it should indeed be rejected, or a Type II error. Hence, there is an increased potential that significant trends may not have been revealed due to psychometric maladies. To partially compensate, trends in the data with p<0.10 were presented in all tables and results.

Another potential limitation of the present study lies within the use of the Multigroup Ethnic Identity Measure to operationalize subjective feelings of cultural identity with the Appalachian region. Because this measure has not previously been used with Appalachian samples, this leads to questioning of the validity of the measure in capturing the nuances of this unique subculture. For instance, many Appalachians may not label themselves as such, and a more qualitative and values-focused measure may be more appropriate to capture affiliation with this subculture. Further, in many past validation studies, the MEIM has only been used with children and adolescents (e.g. Ponterotto et al., 2003; Roberts et al., 1999). Therefore, the measure may not be generalizable to the Appalachian culture given the purposes for which it was originally designed. Further research should investigate the sensitivity of this measure to fully capture the nuances of a culture that is not well understood or highly studied.

Also, both the TSS and the TCM were adapted for use in the present study. In the past, sub-factors of both climate and satisfaction have been compared across teacher, parent, and
student raters in utilizing these measures. The present study only examined the teacher as the primary respondent. Also, subscales were dropped from the measure to ensure timely administration and focus only on the research focus at hand. Past analyses using the measures have not derived average climate or satisfaction scores, either. Therefore, the average scores used in the present study were computed as the mean of all subscales administered, and only counted if the respondent fully completed the measures. As such, results should be viewed as averages of the subscales, rather than overall total scores. Therefore, conclusions based on these average scores must be viewed with the tentative understanding of their nature.

Although a strength of the present study lies in its large sample size, the breakdown of respondents for various degree levels was unequal. For instance, the number of paraprofessionals was 3, and there were only 6 educators with degrees higher than a Master’s. Because paraprofessionals often deal with the most challenging children, yet possess less training, there is an increased need to focus on their needs better with a larger representation in future studies.

Other potential limitations of the present study lie within its dissemination methods. Because so much variance occurred within each individual school principal’s choice of how to distribute the surveys to teachers, this may have affected the rate of return and teachers’ attitudes and motivation toward the measures. For instance, those teachers whose administrators verbally supported the surveys and presented them in a manner of encouragement and usefulness of potential results may have been more likely to complete the measure than those who received anonymous packets in their school mailboxes. Further, because there was not a 100% rate of return, it is also important to consider the reasons behind the teachers who chose not to participate. There is a possibility that the roughly 40% of teachers who did not complete the surveys may have been the most burned out and stressed for time. Or, perhaps another confounding variable, such as time of the school year, affected this rate of return. It is imperative
to consider what the results that were not collected may reveal, and what changes may have occurred from the noted trends.

Also, the anonymous nature of the surveys increased the uncontrolled environment in which the survey was completed. Therefore, situational variables, such as time of day, place, life events or mood may have significantly contributed to more positive or negative results. Further, there was a potential that the teachers may not have understood all of the questions. Though contact information was provided, only a handful of teachers responded with questions or comments via phone or email.

Future Research Suggestions

Although the present study addressed a number of holes in the literature, especially with its focus on the Appalachian contextual factors involved in teaching, further research should continue to focus on unanswered or unclear trends. One clear suggestion for future studies includes an increased focus on training of educators. This question may be addressed from a number of angles, viewing the amount or perceptions of training as it relates to burnout. For instance, suggestions from management literature have long encouraged the use of training specifically to reduce employee stress. As noted by Losyk (2006), studies have shown strong relationships between job stress and low performance, less teamwork, low morale, lateness and absenteeism, increased health costs and workers’ compensation claims, theft, lawsuits, and sabotage within the workplace. Specific training to target employee stress include stress-management training, focusing on changing beliefs, habits, attitudes and behaviors. Also, Losyk (2006) suggests time-management and financial training to further reduce the underlying causes of employee burnout. Relating specifically to on-the-job training, Wayne Gassaway, manager of DCT Communications, also explains that his company spends a great amount of time on training in an attempt to involve all employees and encourage appreciation of the value of working
together. Gassaway notes, “when employees understand that there is indeed a method to the madness, they are much more cooperative with their coworkers” (as cited in O’Donnell, 2003). Overall, research across fields has revealed the association of effective training and worker performance, a more positive job climate, and stress reduction. As such, an emphasis on more qualitative data collection may prove useful in the future to ascertain the nature of the relationship between training and teacher stress. Further, it may be important to investigate the training differences between stress-related training versus specific content training in targeting burnout.

Moving on, another topic of interest stemming from the present study is the issue of rurality. Can the Appalachian culture be subsumed under the broad umbrella of “rural education” or are there unique aspects about the region that differentiate it? This distinction may be further clarified by comparing Appalachians in rural areas to cities within the region. Ultimately, the underlying question is whether the issues faced in Southeastern Ohio schools are more a product of cultural factors or demographic features. Further research into theory of rural education as well as detecting the unique factors in Appalachian schools may help to delineate this question.

Further, though Appalachian identity was not directly associated with burnout, it was positively correlated with holding more negative multicultural attitudes. In this sense, identity may serve as a risk factor for teacher stress, though not necessarily lead directly to burnout. Using instruments with a wider range of stress reactions may prove helpful in the future in continuing to examine cultural factors related to occupational stress. Because burnout is an extreme form of psychological stress, possible relationships may have been masked by the insensitivity to lesser forms of teacher duress.

More specific to improving empirical designs, another future research suggestion is to implement procedural techniques more systematically. As noted earlier, the teachers who chose not to participate in the present study may have actually withheld valuable information or have shared similar characteristics. In order to gain a sense of how all teachers in a school or district,
future studies may also employ accountability in pressuring their teachers to complete all measures. Further, statistical procedures such as Hierarchical Linear Modelling may account for the nesting of variables within schools or districts.

Finally, once more clear-cut relationships have been defined between burnout and the interaction of precipitating factors, future interventions may be designed and tested based off the specific variables of interest. For instance, in the present study, teacher burnout prevention initiatives would likely be centered on the school climate and perceptions of the workplace environment as they relate to teacher stress.
VII CONCLUSION

Educator burnout has presented itself as a serious and detrimental issue in the mental health field over the past 50 years (Aluja et al., 2005; Abel & Sewell, 1999; Blasé, 1982), often resulting in negative consequences, both to teachers’ personal lives and professional functioning (Burke et al., 1996; Byrne, 1991). Though many past studies have investigated individual-level characteristics and school factors associated with teacher burnout, the present study focused also on the influences of community and culture as factors. Especially because no studies have been centered on teacher burnout in the Appalachian region, the study presented a unique picture of rural teachers in southeastern Ohio, encompassing their personal traits, perceptions of their school and professional environment, as well as the larger sphere of cultural influences. Overall, results show that teachers in this region are most poignantly affected by their organizational level variables, including school climate and satisfaction with one’s workplace. Still, future studies would gain from continued emphasis on the uniqueness of Appalachian teachers’ struggles and the general nature of their role as educators, as well as specific interventions of most use to the teachers and school administrators in the region.
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Appendix A: The Social Ecological Paradigm of Teacher Stressors

(As adapted from Stokols, 2000)
Appendix B: Predicted Mediator Relationships

Cultural Alliance
  i. generational
  ii. qualitative

School Climate
  (and sub-factors)

Teacher Burnout
  (and sub-factors)

Teacher Satisfaction
  (and sub-factors)
Appendix C: Letters/Communication

* Superintendent Research Request Mailings

* Principal Research Request Mailings

* Principal and Superintendent Results Mailings
Dear Principal,

Greetings from Ohio University! I am a clinical psychology graduate student at Ohio University conducting my master’s thesis project on teacher stress and burnout. More specifically, I would like to collect anonymous survey data from K-12 teachers on characteristics of the school and community to help understand particular teacher stressors. Specifically, I would like to learn about what challenges cause some teachers to experience job-related stress and how others successfully avoid it. The intention is to use what is learned from this study to help school professionals to meet the needs of both teachers and students. I would greatly value your participation by including ______ school as part of my research base. I have already sent a letter of requested participation to the Superintendent of the district as well.

This data will be collected for research purposes through Ohio University, and completion of these questionnaires is completely anonymous. If this study is approved for your school, we will place survey packets in your teachers’ mailboxes, and they will come with pre-stamped return envelopes. In the packet, the teacher will find a more detailed description of the study as well as 4 short surveys (*see attached pages). Altogether, the survey should only take 20-25 minutes to complete. If possible, I hope to collect all surveys by May 30, 2006. Completion and return of the survey implies consent to use the data for research purposes.

For all participating schools, I will provide a written summary of findings with recommendations about programs and services for educators. In addition, a teacher in-service workshop will be offered to each interested school.

I would like to thank you in advance for your consideration of this request. I will follow up this letter in 1-2 weeks to discuss this request further. In the meantime, please feel free to contact me to discuss any questions or concerns regarding your decision to participate. I can be reached at (740)597-2565 or email jg238305@ohio.edu. In addition, my advisor, Dr. Heather Alvarez can be reached via email alvarez@ohio.edu.

Thank you,

Jessica L. Grayson

Heather Alvarez, Ph.D.
Dear Superintendent,

I am a clinical psychology graduate student at Ohio University conducting my master’s thesis project on teacher stress and burnout. More specifically, I would like to collect anonymous survey data from K-12 teachers on characteristics of the school and community to help understand particular teacher stressors. Specifically, I would like to learn about what challenges cause some teachers to experience job-related stress and how others successfully avoid it. The intention is to use what is learned from this study to help school professionals to meet the needs of both teachers and students. For instance, I hope that this information may assist your school district in improving teacher work conditions and the overall school environment. I would greatly value your participation by including the _____ School District as part of my research base. I am also sending letters of requested participation to the principals of elementary, middle, and high schools in the district.

This data will be collected for research purposes through Ohio University, and completion of these questionnaires is completely anonymous. If this study is approved for your school, we will place survey packets in teacher mailboxes, and they will come with pre-stamped return envelopes. In the packet, the teacher will find a more detailed description of the study as well as 4 short surveys and an information sheet (*see attached pages). Altogether, the survey should only take 20-25 minutes to complete. If possible, I hope to collect all surveys by May 30, 2006. Completion and return of the survey implies consent to use the data for research purposes.

For all participating schools, I will provide a written summary of findings with recommendations about programs and services for educators. In addition, a teacher in-service workshop will be offered to each interested school.

I would like to thank you in advance for your consideration of this request. I will follow up this letter in 1-2 weeks to discuss this request further. In the meantime, please feel free to contact me to discuss any questions or concerns regarding your decision to participate. I can be reached at (740)597-2565 or email jg238305@ohio.edu. In addition, my advisor, Dr. Heather Alvarez can be reached via email alvarez@ohio.edu.

Thank you,

Jessica L. Grayson

Heather Alvarez, Ph.D.
Dear _____ (superintendent or principal)_____,

Greetings once again from Ohio University. Since collecting data from the ______ school/district late in the Spring of 2006, I have been fervently analyzing the results of the surveys your teachers completed. Again, as part of my Master’s thesis project, I was interested in investigating teacher stress and burnout. The original intention for this project was to use what is learned from this study to help school professionals to better understand occupational stress among teachers. Now that the “numbers have been crunched” I hope that this information may assist your school and district in improving teacher work conditions and the overall school environment. Results follow with detailed explanations of the components that are most highly predictive of teacher stress and burnout, as well as general prevalence rates for the teachers in Southeastern Ohio.

I would like to thank you again for your participation in this study. My colleagues and peers in the child/adolescent clinical psychology program at Ohio University are eager and excited to continue to build bridges between university programs and the local school systems. If you have any further inquiries or would like to see more detailed statistical reports on the data, please feel free to contact me. I can be reached at (740)597-2565 or my email address is jg238305@ohio.edu. In addition, my advisor, Dr. Heather Alvarez can be reached via email at alvarez@ohio.edu.

Sincerely,

Jessica L. Grayson     Heather K. Alvarez, Ph.D.
Report of Results: Teacher Stress in Southeastern Ohio

Rate of Survey Return

The percentage of surveys returned per school and district are shown in the graph below. In order to compare your school or district with others in the sample, the total number of surveys returned was 320, an overall rate of return of 60%. Depending on how close or distant your school/district fared in comparison to the overall results may also help to understand whether your school/district is well represented in the following results.
What the Survey Measured

The survey that your teachers completed had many parts. Most of the responses to the measures revealed normal distributions that would be expected in a general population sample. That is, most answers and rankings fell within the middle range, and only a few were at the very high or very low ends. Following is a review of each measure in the survey with comparisons to other teacher populations, and explanations of any relationships to other factors.

Part 1: Demographic Measure

- The first page was assessing demographic information, such as the length of time they had been teaching and their family history. These characteristics were then compared to the measures that follow.

Part 2: Multigroup Ethnic Identity Measure

- The second part was the Multigroup Ethnic Identity Measure (MEIM), which measured the degree to which each teacher felt comfortable with, close to, or proud of living, working, and growing up in the Appalachian region.
- There were 2 sub-factors in the MEIM. Ethnic Identity Search used questions to measure the motivation and commitment to exploring one’s Appalachian identity. The second factor, Ethnic Group Affirmation, measured a person’s sense of belonging to the Appalachian cultural group and the associated attitudes and feelings with membership.
- The results from the MEIM were skewed, both on total scores and both sub-factors, meaning that most responses were more likely to be higher on this measure than in comparable samples. This means that the teachers in this study generally placed high value on their ties to Appalachia.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEIM</td>
<td>319</td>
<td>2.62</td>
<td>.94</td>
<td>1-4</td>
</tr>
<tr>
<td>Ethnic Identity Search</td>
<td>319</td>
<td>2.55</td>
<td>.82</td>
<td>1-4</td>
</tr>
<tr>
<td>Ethnic Group Affirmation</td>
<td>319</td>
<td>2.61</td>
<td>1.11</td>
<td>1-4</td>
</tr>
</tbody>
</table>

N = number of teachers who responded. Mean = the average score on this measure. SD = the standard deviation from the mean. Range = the lowest and highest reported scores on the MEIM.
Compared with other variables, the **number of years a teacher lived outside** of the Appalachian region as well as the **length of time since one returned** to the region were highly correlated with MEIM.

- In other words, the longer a teacher lived outside the Appalachian region, the closer they felt to their Appalachian home.
- Also, the longer it has been since they returned to the Appalachian region, the more comfortable and proud they were of their Appalachian heritage.

**Age** was significantly related to MEIM scores. As one grows older, there are higher ties to their Appalachian cultural identity.

MEIM scores were also positively associated with

- length of **time living in the county and the Appalachian region,**
- length of **time teaching at one’s current school**
- and number of **past generations of family** living in the region

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**Part 3: Teacher Satisfaction Scale**

The third measure was the **Teacher Satisfaction Scale (TSS),** which assessed each teacher’s individual level of satisfaction with his/her school’s administration, communication, parents/community, co-workers, student responsibility and discipline, compensation, and school buildings, supplies and maintenance.

For teacher satisfaction, **total scores were similar to other studies.** Overall, the teachers in this study had the same levels of satisfaction as national samples. The scale was designed with a **mean of 50 and a standard deviation of 10,** based on large-scale studies with teachers from across the U.S.

Some sub-factors of teacher satisfaction were significantly higher or lower than national norms (see figure on the following page).

- **Administration** – Scores from teachers reveal they are more satisfied with their administration than the national average.
- **Student Responsibility and Discipline** – Teachers in this region are less satisfied with their students’ sense of responsibility and discipline than those from the national study.
- **Co-workers** – Teachers in this study are more satisfied with their co-workers and co-worker support than the national average.
- **Parents and Community** – Teachers in this region are less satisfied with their students’ parents and feel less community support than those teachers from large national studies.
- **Communication** – Teachers in this study are more satisfied with communication within their school than the national average.
The fourth survey measured Teacher Multicultural Attitudes (TMAS), that is, how teachers perceive diversity within their classrooms. This includes diversity in students’ socioeconomic status, race, cultural backgrounds, and other differences. Overall, results on this scale indicate that the teachers in Southeastern Ohio hold similar attitudes than those expressed by teachers in comparable samples.

Multicultural attitudes were negatively related to years living in the county and years in Appalachia. Thus, the longer amount of time a teacher has lived in their county or anyplace in the Appalachian region, the more negative their views are of teaching a diverse classroom.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMAS</td>
<td>316</td>
<td>63.95</td>
<td>12.50</td>
<td>34-95</td>
</tr>
</tbody>
</table>

N = number of teachers who responded. Mean = the average score on this measure. SD = the standard deviation from the mean. Range = the lowest and highest scores reported on the TMAS.
Also, TMAS scores were inversely related to the years living outside Appalachia and length of time since returning to the region.
- Therefore, the longer teachers have lived outside the Appalachian region before returning here to teach, the more negative attitudes they hold regarding teaching in diverse classrooms.
- Also, the longer the length of time since they returned to the region the more negative attitudes toward teaching a diverse student group.

Further, total lifetime years of teaching as well as years teaching at current school were negatively related to TMAS.
- Therefore, as teaching experience increased, positive attitudes toward multiculturalism decreased.

### Part 5: Coping Orientations to Problems Scale

Fifth, the Coping Orientations to Problems Scale (COPE) measured the degree to which teachers faced difficulties or stressors with an active and direct style of coping or dealing with the dilemma. Active Coping is an especially effective method of addressing symptoms related to burnout.

Results from this measure indicate that teacher responses were similar to other samples, both including teachers and other populations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPE</td>
<td>319</td>
<td>11.54</td>
<td>2.59</td>
<td>4-16</td>
</tr>
</tbody>
</table>

N = number of teachers who responded. Mean = the average score on this measure. SD = the standard deviation from the mean. Range = the lowest and highest scores reported on the COPE.

Teachers in Southeastern Ohio indicated more active coping styles in dealing with stress as their:
- education levels increased. Thus, those teachers with Master’s degrees or higher generally reported more direct coping styles than those with a Bachelor’s degree or less.
- length of time living in their county or years living anywhere in Appalachia increased. Therefore, the longer a teacher has lived in the region, the more active coping style he/she is likely to hold.
- length of time teaching at their current school increased. The longer a teacher has been at the current school that he/she teaches in, the more active the coping style.
Part 6: Teacher Climate Measure

- The sixth measured School Climate (TCM), which asked for ratings of how most people would rank their school on factors of administration, student academic orientation, student behavioral values, student-peer relationships, parent and community school relationships, instructional management and student activities.
- For teacher perceptions of school climate, total climate scores were similar to other studies. Overall, the teachers in this study ranked similar levels of school climate as national samples. The scale was designed with a mean of 50 and a standard deviation of 10, based on large-scale studies with teachers from across the U.S.
- Some sub-factors of teacher climate were significantly higher or lower than national norms (see figure below).
  - Administration – Teachers in the local sample held more negative viewpoints regarding the school climate factor of administration compared to national averages.
  - Teacher-Student Relations – Compared to large-scale national surveys using the TCM, the teachers in the present study held more positive viewpoints on teacher-student relations.
  - Student Peer Relationships – Teachers in Southeastern Ohio viewed student peer relationships more positively than the national averages.
  - Student Activities – Teachers in the present study perceive the student activities sub-factor of school climate to be more positive than those teachers from national normative studies.
Finally, the last measure was the Maslach Burnout Inventory, Educator Edition (MBI-ED), which measured the frequency of burnout symptoms along three key dimensions:

- **Depersonalization** → teachers develop negative and cynical attitudes toward their work situation, including interactions with students, parents, and colleagues.
- **Emotional Exhaustion** → characterized by feeling overextended and drained, teachers are unable to physically and emotionally provide for students due to overwhelming feelings of fatigue and stress.
- **Low Personal Accomplishment** → decline in feelings of competence and achievement in one’s occupation, this facet is especially pertinent to the teaching profession in that teachers do not enter the field of education for financial gain, but instead they often truly want to make a difference in children’s lives.

Also, the **MBI-ED total score** indicated **lower rates** of reported burnout symptoms from Southeastern Ohio teachers than expected from similar populations.

- Teachers here are faring better in feelings of personal accomplishment than many past samples. On this subfactor, high scores indicate more positive feelings of accomplishment. The mean score for Southeastern Ohio teachers was 37.84, compared to other studies with means of 30.29 and 32.15.
  - (Ferrando & Perez, 1996, N=1474; Gold et al., 1989, N=147 respectively).

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### Feelings of Personal Accomplishment:

**Southeastern Ohio Teachers feel more positive than Teachers in Other Studies**

- Next, the teachers in this region reported a mean score of **22.94** on Emotional Exhaustion, similar to other studies with means of 22.30, 21.25, and 22.54.
  - (Iwanicki & Schwab, 1981, N=469; Maslach & Jackson, 1986, N=4163; Byrne, 1993, N=1195 respectively).
- On Depersonalization, teachers in Southeastern Ohio are also similar compared to other samples, with a mean of 5.72. Past studies have exhibited means ranging from 3.08 to 6.2.
  - (Gold et al., 1989, N=147; Maslach & Jackson, 1986, N=4163 respectively).

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### Depersonalization and Emotional Exhaustion:

**Southeastern Ohio Teachers report similar scores as Teachers in Other Studies**
Key Trends

The social-ecological paradigm of teacher stress was used in development of this study. Using this model, all factors affecting a teacher should be taken into account, for every aspect of the employee’s life ultimately plays a part in affecting the individual’s performance and well-being. Incorporating this conceptual framework into the present study centered on teacher burnout, predicting factors stem from not just personal variables of the teacher, but also from environmental contextual variables such as the school, community, and culture at large. A visual depiction of these factors follows on the target graph.

A number of important relationships were found upon further investigation. Beginning with individual-level factors that may lead to teacher burnout, there were significant differences between the sexes in reported burnout. Females reported more pervasive feelings of emotional exhaustion than did males. No differences existed between sexes for either total MBI scores or in the facets of Depersonalization or Personal Accomplishment.

Females $\Rightarrow$ higher Emotional Exhaustion scores

The most predictive variables of interest are at the school-level. Strong statistical relationships were observed with perceptions of school climate and teacher personal satisfaction and subsequent burnout. First, a strong connection exists between total climate scores and burnout; that is, as the school climate is perceived to be more negative, higher rates of burnout occur. Further, specific facets of climate including student factors, teacher student relations and teacher support also share strong ties to burnout. As perceptions of these sub-facets are more positive, less burnout is reported.
Similar trends are seen in with teacher satisfaction. **As satisfaction increases, rates of burnout decrease.** The strongest predictive relationship is in total satisfaction scores. Similar results were also analyzed for parent/community satisfaction and student responsibility and discipline. As satisfaction decreases in regard to these specific sub-factors, burnout increases among the teachers in this sample.

Also, subsequent analysis revealed that **school climate and teacher satisfaction are related.** As depicted below in the graph of a mediator type relationship, teacher satisfaction exacerbates the existing inverse association between school climate and the emotional exhaustion facet of teacher burnout. As perceptions of school climate are more positive, there are significant increases in personal satisfaction, resulting in a decrease in experienced exhaustion.

**Future Suggestions**

Based on the results of this study involving the teachers in Southeastern Ohio, the **most predictive route of teacher burnout is through school-level factors.** In ensuring that teachers remain healthy, schools should especially focus on changing the school climate in a positive way as a way to ensure a decrease in burnout. Potential ways of manifesting change in the school climate include ensuring staff feel supported, including them in decision-making within the school, empathizing with their struggles, and positively reinforcing their accomplishments.
Also, it is important to focus on those aspects of teachers’ workplaces that they are least satisfied with. From the TSS measure, these include parent and community support and a school-wide valuing of student responsibility and discipline. As a principal or superintendent, possible action steps may focus on increasing communication and parent participation in school programs in an attempt to further support teachers in the schools.

As seen in the figure below, there is significant interplay between these factors. School climate affects teacher satisfaction, which subsequently affects burnout. Feelings such as emotional exhaustion then continue to cycle by further influencing the school climate.

*For a more detailed report of data analysis from the present study, or for an electronic copy of the entire thesis defense, please contact Jess Grayson at (740) 597-2565 or email, jg238305@ohio.edu.
Appendix D: Participant Packets

*Teacher Cover Letter and Informed Consent

*Demographic Questionnaire (Part 1)

*Multigroup Ethnic Identity Measure (Part 2)

*CASE Teacher Satisfaction Scale (Part 3)

*COPE Scale (Part 4)

*Teacher Multicultural Attitude Survey (Part 5)

*CASE School Climate Survey – Teacher Climate Measure (Part 6)

*Maslach Burnout Inventory – Educator Version (Part 7)
Dear Teacher,

Greetings from Ohio University! I am a clinical psychology graduate student focusing on children and school systems. As part of my master’s thesis project, I am interested in studying more about local schools and communities and their influences on teacher stress. Specifically, I would like to learn about what challenges cause some teachers to experience job-related stress and how others successfully avoid it. I wholeheartedly appreciate your help as I collect data from schools in the Alexander Local School District.

In the survey packet, there will be one form describing the study which is yours to keep. You will also find a packet of surveys printed on yellow paper. Please complete these and mail them back in the pre-stamped return envelope provided. They will likely take between 20-25 minutes to complete. If possible, I hope to collect all surveys by May 30, 2006. If you are unable to complete your packet by then, or notice that you missed the deadline, please email me and I will be happy to arrange for an extension. If you do not have time to complete the survey or are not interested in participating in this study, we will leave a drop box in the main office for the recycling of blank surveys.

For all participating schools, I will provide a summary of survey findings and recommendations to each teacher upon completion of the project. We hope the school district may be able to use this information to improve your work conditions and the overall school environment. Also, please accept this $2 gift as an expression of thanks for taking the time to provide us with your views. If you have any questions regarding this study, please contact me at (740)597-2565 or email jg238305@ohio.edu. In addition, my advisor, Dr. Heather Alvarez can be reached via email alvarez@ohio.edu.

Thank you,

Jessica L. Grayson

Heather Alvarez, Ph.D.
INFORMED CONSENT TO PARTICIPATE

Investigators: Jessica L. Grayson, B.A., Principal Investigator,
Clinical Psychology Graduate Student, Ohio University
Heather K. Alvarez, Ph.D., Faculty Sponsor, Assistant Professor of
Psychology, Ohio University
Study Title: “Teacher Stress and School Characteristics”
Study Site: Department of Psychology, Ohio University

What is the purpose of this project? The purpose of this study is to better understand teacher stress and its association with characteristics of the school and community. Participation should take approximately 20-25 minutes.

What are the potential risks or discomforts? There are virtually no risks involved with participation in this study. A potential discomfort for teachers may involve drawing attention to occupational stressors when filling out surveys.

What are the benefits? There are no anticipated benefits to individual participants in this study. The intention is to use what is learned from this study to help school professionals to better meet the needs of both teachers and students. These results will help us understand matching interventions to teachers’ preferences in order to reduce teacher stress.

How will information be kept private? You will not be asked to provide your name or any identifying information as part of this study. Data will be gathered in an anonymous manner and, therefore, no one can link your responses back to you. Surveys across all schools will be combined for the purpose of presenting trends in findings.

Who can I contact if I have questions? Participants who have questions regarding this study may contact Jessica L. Grayson (jg238305@ohio.edu) or Heather Alvarez, Ph.D. (alvarez@ohio.edu) at (740) 597-2565. Participants with questions regarding rights as a research participant may contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740) 597-1267.

Your participation in this study is voluntary. Please note, you must be 18 years of age or older in order to participate. Your completion of this survey implies that you have given your consent to participate. Thank you for your time!!
Survey Part 1: Demographic Information Collected

Age: ____
Gender: ___Male ___Female
Race:              American Indian/Alaskan Native ___ Asian or Pacific Islander ___ Black (Not of Hispanic Origin) ___ Hispanic ___ Bi/Multi Racial ___ Caucasian/White ___ Other: _______________________
Marital Status: __ Single   __ Separated    __ Married    __ Widowed   __ Divorced/Remarried
Spouse/Partner Occupation: _______________________
Estimated Household Income: _______________________
Major(s) in College: __________________
Degree(s) Achieved: __________________
What town do you currently reside in? _______________
What county? _______________
Length of time living in this county? ___________ years
Length of time living in any county in Appalachia (*please refer to map)? ___________ years
During childhood, did you grow up in the Appalachian region? _____yes _____no
Have you ever lived outside the Appalachian region? ____yes ____no
If yes, for how long? ___________ years
What year did you return to the region? ___________
Family Information – [Information collected on both Father and Mother]
Highest Educational level attained?
Occupation?
Number of generations that have lived in the Appalachian Region (not including yourself)?
Occupational Information -
School Name: _________________________
Total Years Teaching (Lifetime): __
Total Years Teaching at Current School: __
Have you ever taught outside the Appalachian region? ____yes ____no
If yes, for how long? ___________ years
Grade(s) Currently Teaching: ___________
Role in School: ___ Regular Classroom Teacher ___ Special Education Teacher ___ One-on-one Assistant ___ Other: _______________
Employment Status: ___Full-time ___Part-time
Estimate of percentage of classroom cultural makeup (native & non-native to Appalachian region)?
_____ % Native Appalachian Children (i.e. born in the region)
_____ % Non-Native Appalachian children (i.e. born outside the region)

*Note: Also included a map of the Appalachian Region according to the Appalachian Regional Commission (as seen on following page).
Survey Part 2: Multigroup Ethnic Identity Measure (adapted version)

Directions: Please circle the number below to indicate how much you agree or disagree with each statement.

1  2  3  4  0
Strongly Disagree  Disagree  Agree  Strongly Agree  Not Applicable

1. I consider myself of Appalachian heritage
2. I have spent time trying to find out more about the Appalachian region, such as the area’s history, traditions and customs.
3. I am active in organizations and social groups that include mostly other people of Appalachian heritage.
4. I have a clear sense of my Appalachian background and what it means to me.
5. I am happy that I am of Appalachian heritage.
6. I have a strong sense of belonging to the Appalachian culture.
7. I understand pretty well what my Appalachian membership means to me.
8. In order to learn more about my Appalachia heritage, I have often talked to other people about it.
9. I have a lot of pride in my Appalachian cultural heritage.
10. I participate in Appalachian cultural practices, such as special food, music, or customs.
11. I feel a strong attachment towards the Appalachian region.
12. I feel good about my cultural background in Appalachia.

*In response to question #1, “I consider myself of Appalachian heritage”, why or why not?
Survey Part 3: Teacher Satisfaction Scale
(chosen subscales represented in the present study)

Please circle the one answer below that best describes your satisfaction about this aspect of the school.

1 Very Dissatisfied  2 Dissatisfied  3 Neutral  4 Satisfied  5 Very Satisfied  6 Don’t Know

ADMINISTRATION
1. The degree to which the school administration deals tactfully with your problems.
2. The amount of input you have into administrative decisions that affect you and your classrooms.
3. The quality of feedback you receive from administrators about your performance.
4. The amount of support provided to you by your administrators.
5. The level of interest shown by administrators about your concerns and problems.
6. The amount of recognition provided by administrators for your work.
7. The degree to which administrators supervise or control your work assignment.
8. Your overall level of satisfaction with your school administrators.

COMPENSATION
9. The degree of financial security provided by your present teaching job.
10. The number of fringe benefits available to teachers in your school.
11. The degree to which your present salary is meeting your financial needs.
12. The quality of health benefits provided to you.
13. Your overall satisfaction with your pay, fringe benefits, and other compensation.

STUDENT RESPONSIBILITY AND DISCIPLINE
14. Your satisfaction with the behavior of students in your school.
15. The extent to which students are motivated to learn.
16. The degree of responsibility students show toward their school assignments.
17. The extent to which students act in a self-disciplined manner.
18. Your overall level of satisfaction with student responsibility and discipline.

CO-WORKERS
19. The range of interests of the teachers and staff members your work with on a daily basis.
20. The competence of teachers in your school and the school district.
21. The extent to which teachers and staff members support school improvement.
22. The degree to which teachers and staff members show concern for student learning and the general welfare of students.
23. The quality of your relationships with co-workers.
24. The extent to which you co-workers stimulate and support you in your work.
25. Your overall level of satisfaction with your co-workers.

PARENTS AND COMMUNITY
26. The degree of interest shown by parents in the education of their children.
27. The financial support the community provides for the school.
28. The degree and quality of parent and community input into school and curriculum development.
29. The extent in which parents feel responsible for the school performance of their children.
30. The extent to which parents and community are supportive of the school and its programs.

SCHOOL BUILDINGS, SUPPLIES, AND MAINTENANCE
31. The availability of supplies for classroom and instructional use.
32. The quality of the school’s library and media materials.
33. The number of quality of available school facilities.
34. The quality of maintenance of the school grounds.
35. The quality of maintenance of the school buildings.
36. The speed with which needed repairs are made.
37. Your overall level of satisfaction with the facilities, supplies, and maintenance.

COMMUNICATION

38. The speed with which you are informed about potential student problems.
39. The quality of information you receive about policies and activities in the school or district.
40. The speed with which administrators communicate important information to you.
41. The extent to which you are given advance notice of topics to be discussed at meetings of the school board or administrative council.
42. The ease with which you can communicate with school administrators.
43. The clarity of school forms and procedures.
44. Your overall satisfaction with the extent and quality of communication within the school and district.
Survey Part 4: Teacher Multicultural Attitude Survey (adapted version)

This survey is evaluating attitudes on diversity within the classroom. Diversity includes sex, ethnicity, socioeconomic status, regional or cultural differences. Please circle the number below to indicate how much you agree or disagree with each statement.

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

1. I find teaching a culturally diverse student group rewarding.
2. Teaching methods need to be adapted to meet the needs of a culturally diverse group.
3. Sometimes I think there is too much emphasis placed on multicultural awareness and training for teachers.
4. Teachers have the responsibility to be aware of their students’ cultural backgrounds.
5. I frequently invite extended family members (e.g. cousins, grandparents, godparents) to attend parent-teacher conferences.
6. It is not the teacher’s responsibility to encourage pride in one’s culture.
7. As classrooms become more culturally diverse, the teacher’s job becomes increasingly challenging.
8. I believe that the teacher’s role needs to be redefined to address the needs of students from culturally diverse backgrounds.
9. As classrooms become more culturally diverse, the teacher’s job becomes increasingly rewarding.
10. I can learn a great deal with students with culturally diverse backgrounds.
11. Multicultural training for teachers is not necessary.
12. To be an effective teacher, one needs to be aware of cultural differences present in the classroom.
13. Multicultural awareness training can help me to work more effectively with a diverse student population.
14. Today’s curriculum gives undue importance to multiculturalism and diversity.
15. I am aware of the diversity of cultural backgrounds in my classroom.
16. Regardless of the makeup of my class, it is important for students to be aware of multicultural diversity.
17. Being multiculturally aware is not relevant for the subject I teach.
18. Teaching students about cultural diversity will only create conflict in the classroom.

How many classes or workshops have you attended on diversity within the classroom?____

On a scale of 1 to 5, how effective were these learning experiences?

Not at all Effective  2 Somewhat Effective  3 Very Effective  4  5
Survey Part 5: Coping Orientations to Problems Scale (Active Coping Subscale)

There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel when you experience stressful events. Though different events bring out somewhat different responses, think about what you usually do when you are under a lot of stress.

1= I usually don’t do this at all
2= I usually do this a little bit
3= I usually do this a medium amount
4= I usually do this a lot

1. I take additional action to try to get rid of my problem.
2. I concentrate my efforts on doing something about it.
3. I do what has to be done, one step at a time.
4. I take direct action to get around the problem.
Survey Part 6: Teacher Climate Measure

Circle the one answer below that you think most people in your school or community would pick.

1. Teachers in this school like their students.
2. Teachers in this school are on the side of their students.
3. Teachers give students the grades they deserve.
4. Teachers help students to be friendly and kind to each other.
5. Teachers treat each student as an individual.
6. Teachers are willing to help students.
7. Teachers are patient when a student has trouble learning.
8. Teachers make extra efforts to help students.
9. Teachers understand and meet the needs of each student.
10. Teachers praise students more often than they scold them.
11. Teachers are fair to students.
12. Teachers explain carefully so that students can get their work done.

ADMINISTRATION (Principal, Assistant Principal and others)
13. The administrators in this school listen to student ideas.
14. The administrators in this school talk often with teachers and parents.
15. The administrators in this school set high standards and let teachers, students, and parents know what these standards are.
16. Administrators set a good example by working hard themselves.
17. The administrators in this school are willing to hear student complaints and opinions.
18. Teachers and students help to decide what happens in this school.

STUDENT ACADEMIC ORIENTATION
19. Students here understand why they are in school.
20. In this school, students are interested in learning new things.
21. Students in this school have fun, but also work hard on their studies.
22. Students work hard to complete their school assignments.

STUDENT BEHAVIORAL VALUES
23. If one student makes fun of someone, other students do not join in.
24. Students in this school are well-behaved even when the teachers are not watching them.
25. Most students would do their work even if the teacher stepped out of the classroom.

STUDENT-PEER RELATIONSHIPS
26. Students care about each other.
27. Students respect each other.
28. Students want to be friends with one another.
29. Students have a sense of belonging at this school.

PARENT AND COMMUNITY-SCHOOL RELATIONSHIPS
30. Parents and members of the community attend school meets and other activities.
31. Most people in the community help the school in one way or another.
32. Community attendance at school meetings and programs is good.
33. Community groups honor student achievement in learning, music, drama, and sports.
INSTRUCTIONAL MANAGEMENT
34. There is a clear set of rules for students to follow in this school.
35. Taking attendance and other tasks do not interfere with classroom teaching.
36. Teachers spend almost all classroom time in learning activities.
37. Students in this school usually have assigned schoolwork to do.
38. Most classroom time is spent talking about classwork or assignments.
39. Teachers use class time to help students learn assigned work.
40. Outside interruptions of the classroom are few.

STUDENT ACTIVITIES
41. Students are able to take part in school activities in which they are interested.
42. Students can be in sports, music and plays even if they are not very talented.
43. Students are comfortable staying after school for activities such as sports and music.
44. Students can take part in sports and other school activities even if their families cannot afford it.
Survey Part 7: Maslach Burnout Inventory, Educator Edition

The purpose of this survey is to discover how educators view their job and the people with whom they work closely. There are 22 statements of job-related feelings listed below. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write a “0” (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

<table>
<thead>
<tr>
<th>HOW OFTEN:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
<td>A few times a year or less</td>
<td>Once a month or less</td>
<td>A few times a month</td>
<td>Once a week</td>
<td>A few times a week</td>
<td>Every day</td>
</tr>
</tbody>
</table>

1. I feel emotionally drained from my work.
2. I feel used up at the end of the workday.
3. I feel fatigued when I get up in the morning and have to face another day on the job.
4. I can easily understand how my students feel about things.
5. I feel I treat some students as if they were impersonal objects.
6. Working with people all day is really a strain for me.
7. I deal very effectively with the problems of my students.
8. I feel burned out from my work.
9. I feel I’m positively influencing other people’s lives through my work.
10. I’ve become more callous toward people since I took this job.
11. I worry that this job is hardening me emotionally.
12. I feel very energetic.
13. I feel frustrated by my job.
14. I feel I’m working too hard on my job.
15. I don’t really care what happens to some students.
16. Working with people directly puts too much stress on me.
17. I can easily create a relaxed atmosphere with my students.
18. I feel exhilarated after working closely with my students.
19. I have accomplished many worthwhile things in this job.
20. I feel like I’m at the end of my rope.
21. In my work, I deal with emotional problems very calmly.
22. I feel students blame me for some of their problems.