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Volume 1 • 1997- 2003

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**ASSESSMENT OF AGE-RELATED DIFFERENCES IN BODY CONDITION  
OF MIGRATORY BIRDS IN SOUTHERN WEST VIRGINIA**

**Billie Jean Crigger<sup>1</sup> and Ronald A. Canterbury**  
Department of Biology  
Concord College  
Athens, WV 24712

**MCNAIR SCHOLARS PROGRAM**

**December 31, 2002**

**<sup>1</sup>McNair Scholar**

## **Introduction**

Temporal and spatial variation in avian migration ecology has been the subject of numerous studies, but avian migration is still poorly understood. Despite an increase in the number of recent field studies devoted to the subject, avian migration in some regions such as the Appalachians has not been fully quantified. Therefore, exceptional gaps in our understanding of avian migration ecology remain and important empirical data are needed before key Appalachian stopover sites can be identified and evaluated as Important Bird Areas (IBAs). The number of migratory landbirds passing through an area has long been noted to vary with landscape and habitat features and season, but the among- and within-year variation in avian migration patterns have yet to be completely quantified in the Appalachians.

Temporal and spatial variation in avian migration is notably linked to population demography of migratory birds and to community ecology and ecosystem structure. For example, seasonal variation in migration of warblers has been linked to risk of predation, weather patterns, and differential food availability (Morris et al. 1994). Additional studies have also documented the impacts of temporal variation on migratory bird populations (Rappole and Warner 1976, Francis and Cooke 1986, Ellegren 1991, Canterbury et al. 2001).

Species-specific patterns in post breeding and pre-wintering movements depend upon vegetation, temperature, prey abundance, and additional factors that determine the success of migrants (Rotenberry and Chandler 1999). These parameters are notably linked to energy demands, where the energetic cost of migration can be substantial for individual migrants. In fact, varying habitats along with how efficiently migrants satisfy energy demands before and during flight

affect migration success (Woodrey and Moore 1997). The efficiency of older and younger birds to obtain adequate fat supplies is believed to influence migratory success. Acquisition of sufficient fat loads may be dependent on age such that younger birds take longer to obtain the same fat stores than older, more experienced individuals (Woodrey and Moore 1997). However, younger birds also seem to use less energy and time for migration preparation (Woodrey and Moore 1997), which may be related to younger migrants being less efficient than older migrants in meeting demands during the migrations route. Yet, it is believed that younger migrants deposit more fat than older migrants in order to increase their margin of safety due to inexperience and social status (Woodrey and Moore 1997).

Stopover sites are important for allowing migrants to restore depleted fat stores during migratory routes, but age-related differences in stopover ecology have been only partially studied (Woodrey and Moore 1997). Woodrey and Moore (1997) found that migrants on the Gulf of Mexico had high fat loads regardless of age and species. Migration is likely to be substantially different in interior stopover sites such as the Appalachians than coastal sites. Migrants are likely to be leaner and spend less time at stopover sites than on the Gulf Coast.

In the Appalachians, many migrant birds pass through each year (Hall 1983, Canterbury et al. 2001). Yet, little is known concerning spatial and temporal variation in avian migration through the Appalachian Mountains (Canterbury and Stover 1998). In an earlier analysis, we found that the number of migratory birds differed substantially across localized regions and habitats in southern West Virginia (Crigger and Canterbury 2000). Age and body condition (fat) varied substantially across species and among localized study sites (Crigger and Canterbury 2000). We

report on a three-year analysis (1999-2001) of species captured at three habitats in southern West Virginia during the fall months. Since species-specific relative abundances have been documented in southern West Virginia (Canterbury and Stover 1998, Canterbury et al. 1999, Canterbury 2000, Canterbury et al. 2001, Canterbury et al. 2002), we do not report on the number of individuals per site but rather the purpose of this paper is to test for age-related differences in body condition (fat) of birds at different elevations.

## **Methods**

### **Study Sites**

The study sites are within Raleigh and Mercer counties and the Allegheny Plateau of southern West Virginia, and are described in previous studies (Canterbury 1990, Canterbury and Stover 1998, Crigger and Canterbury 2000). Sites were selected for differences in habitats and elevation, and included (1) an upland, ridgetop deciduous forest at Lilly Mountain in Raleigh County (818m); (2) rolling hills, farmland and the town of Athens in Mercer County (727m); and (3) an old field, lowland-lake reservoir in Mercer County (606m).

### **Data Collection**

Methods followed standard techniques employed at bird banding stations across North America and were adapted from Pyle et al. (1997). Six to ten black, 12-m, 30-mm nylon mist nets were used to capture birds at each site. The nets were opened from 0600-1200 or from 1500-1700 h at each site. Nets were checked every 30 minutes during the operation times. Captured birds were banded with uniquely numbered bands from the USFWS. Various mensural measurements (e.g., body mass and wing chord) were recorded on each bird captured (Pyle et al. 1997). Each bird was aged according to degree of skull pneumatization and sexed according to plumage, presence

or absence of a cloacal protuberance or brood patch (Pyle et al. 1997). Amount of body fat was assessed according to standard scoring techniques (Pyle et al. 1997). The date, time, and net number were recorded for each individual captured.

### **Data Analysis**

Data were entered into SPSS 10.0 and analyzed with Pearson correlation analysis and analysis of covariance (ANCOVA). Analyses were adapted from Crigger and Canterbury (2000), but we specifically tested in this study for age and amount of body fat differences of migrants across study sites. Statistical results are presented in table format and significance is reported as  $p < 0.05$ .

### **Results and Discussion**

Species of migratory birds captured in the southern West Virginia study sites indicated that older (after-hatch year, AHY) were larger and had more body fat (Table 1, correlation analysis). The older individuals tended to come through the areas later than hatch-year (HY) or younger individuals. These trends were disclosed by the direction (positive or negative) of the correlation coefficients (Table 1), and by aging birds at time of capture.

ANCOVA results showed that body mass and wing chord were significant covariates, but the number of species across localities did not covary with capture date. Species varied with the amount of body fat (Table 1). There was no significant interaction among capture locality (banding station), age, and body condition (fat) in determining the number of migrants captured (Table 3). Because most of the variables measured were correlated (Table 1) and the ANCOVA results (Table 2 and 3) were dissimilar, further analyses and studies, including species-specific

analyses, are needed to adequately address age-related differences in body conditions (accumulated fat for migration). In conclusion, we found some evidence of age-related differences in timing of migration and accumulation of body fat. However, differences among species merit further study. These results are in contrast to the condition of migrants on the Gulf Coast (Woodrey and Moore 1997), and implicate the further need for comparing inland migration to coastal migration.

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**Table 1. Pearson-product moment correlations among species, age, sex, fat, wing, mass and capture date.**

		CODE	AGE	SEX	FAT	WING	MASS	DATE
<b>CODE</b>	Pearson Correlation	1.000	.097**	-.269**	.171**	-.027**	-.044**	.153**
<b>CODE</b>	Pearson Correlation	1.000	.097**	-.269**	.171**	-.027**	-.044**	.153**
	Sig. (2-tailed)		.000	.000	.000	.021	.000	.000
	Sig. (2-tailed)		.000	.000	.000	.021	.000	.000
	N	8466	7433	8012	7251	7455	6465	8466
	N	8466	7433	8012	7251	7455	6465	8466
<b>AGE</b>	Pearson Correlation	.097**	1.000	-.053**	.125**	-.017	.046**	.419**
<b>AGE</b>	Pearson Correlation	.097**	1.000	-.053**	.125**	-.017	.046**	.419**
	Sig. (2-tailed)	.000		.000	.000	.157	.000	.000
	Sig. (2-tailed)	.000		.000	.000	.157	.000	.000
	N	7433	7433	7430	7223	7192	6137	7433
	N	7433	7433	7430	7223	7192	6137	7433
<b>SEX</b>	Pearson Correlation	-.269**	-.053**	1.000	-.215**	.259**	.185**	-.265**
<b>SEX</b>	Pearson Correlation	-.269**	-.053**	1.000	-.215**	.259**	.185**	-.265**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	8012	7430	8012	7248	7452	6266	8012
	N	8012	7430	8012	7248	7452	6266	8012
<b>FAT</b>	Pearson Correlation	.171**	.125**	-.215**	1.000	-.129**	-.068**	.174**
<b>FAT</b>	Pearson Correlation	.171**	.125**	-.215**	1.000	-.129**	-.068**	.174**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	7251	7223	7248	7251	7087	6116	7251
	N	7251	7223	7248	7251	7087	6116	7251
<b>WING</b>	Pearson Correlation	-.027*	-.017	.259**	-.129**	1.000	.816**	-.026*
<b>WING</b>	Pearson Correlation	-.027*	-.017	.259**	-.129**	1.000	.816**	-.026*
	Sig. (2-tailed)	.021	.157	.000	.000		.000	.026
	Sig. (2-tailed)	.021	.157	.000	.000		.000	.026
	N	7455	7192	7452	7087	7455	6117	7455
	N	7455	7192	7452	7087	7455	6117	7455
<b>MASS</b>	Pearson Correlation	-.044**	.046**	.185**	-.068**	.816**	1.000	.051**
<b>MASS</b>	Pearson Correlation	-.044**	.046**	.185**	-.068**	.816**	1.000	.051**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	6465	6137	6266	6116	6117	6465	6465
	N	6465	6137	6266	6116	6117	6465	6465
<b>DATE</b>	Pearson Correlation	.153**	.419**	-.265**	.174**	-.026*	.051**	1.000
<b>DATE</b>	Pearson Correlation	.153**	.419**	-.265**	.174**	-.026*	.051**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.026	.000	
	Sig. (2-tailed)	.000	.000	.000	.000	.026	.000	
	N	8466	7433	8012	7251	7455	6465	8466
	N	8466	7433	8012	7251	7455	6465	8466

\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

CODE=species number

**Table 2. ANCOVA table using mass, wing chord, and capture date as covariates and locality (station), age, sex, and fat as independent variables.**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	1912.961	1	1912.961	3.729	.064
MASS	20429.103	1	20429.103	46.905	.000
WING	50033.146	1	50033.146	114.875	.000
DATE	428.775	1	428.775	.984	.321
STATION	15594.957	2	7797.478	3.303	.154
AGE	2160.354	4	540.088	.875	.531
SEX	239.632	2	119.816	.116	.892
SEX	239.632	2	119.816	.116	.892
FAT	40475.626	24	1686.484	6.229	.021
FAT	40475.626	24	1686.484	6.229	.021
STATION * AGE	4121.228	3	1373.743	1.643	.313
STATION * AGE	4121.228	3	1373.743	1.643	.313
STATION * SEX	10997.560	4	2749.390	3.479	.173
STATION * SEX	10997.560	4	2749.390	3.479	.173
AGE * SEX	4546.585	6	757.764	1.206	.372
AGE * SEX	4546.585	6	757.764	1.206	.372
STATION * AGE * SEX	4448.735	6	741.456	1.062	.437
STATION * AGE * SEX	4448.735	6	741.456	1.062	.437
STATION * FAT	3859.416	7	551.345	.629	.722
STATION * FAT	3859.416	7	551.345	.629	.722
AGE * FAT	5657.039	17	332.767	.437	.946
AGE * FAT	5657.039	17	332.767	.437	.946
STATION * AGE * FAT	5781.602	6	963.600	1.333	.326
STATION * AGE * FAT	5781.602	6	963.600	1.333	.326
SEX * FAT	10421.554	18	578.975	.743	.721
SEX * FAT	10421.554	18	578.975	.743	.721
STATION * SEX * FAT	7725.101	9	858.345	1.098	.451
STATION * SEX * FAT	7725.101	9	858.345	1.098	.451
AGE * SEX * FAT	8941.364	10	894.136	1.216	.384
AGE * SEX * FAT	8941.364	10	894.136	1.216	.384
STATION * AGE * SEX * FAT	5865.713	7	837.959	1.924	.062
STATION * AGE * SEX * FAT	5865.713	7	837.959	1.924	.062

**Table 3. ANCOVA table using mass as a covariate and testing for the effects of age and body condition (fat).**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
<b>Intercept</b>	<b>62495.175</b>	<b>1</b>	<b>62495.175</b>	<b>117.015</b>	<b>.000</b>
<b>Intercept</b>	<b>62495.175</b>	<b>1</b>	<b>62495.175</b>	<b>117.015</b>	<b>.000</b>
<b>MASS</b>	<b>187.569</b>	<b>1</b>	<b>187.569</b>	<b>.390</b>	<b>.533</b>
<b>MASS</b>	<b>187.569</b>	<b>1</b>	<b>187.569</b>	<b>.390</b>	<b>.533</b>
<b>STATION</b>	<b>64320.591</b>	<b>2</b>	<b>32160.296</b>	<b>18.506</b>	<b>.022</b>
<b>STATION</b>	<b>64320.591</b>	<b>2</b>	<b>32160.296</b>	<b>18.506</b>	<b>.022</b>
<b>AGE</b>	<b>1017.794</b>	<b>4</b>	<b>254.449</b>	<b>.448</b>	<b>.773</b>
<b>AGE</b>	<b>1017.794</b>	<b>4</b>	<b>254.449</b>	<b>.448</b>	<b>.773</b>
<b>FAT</b>	<b>52545.861</b>	<b>24</b>	<b>2189.411</b>	<b>4.814</b>	<b>.000</b>
<b>FAT</b>	<b>52545.861</b>	<b>24</b>	<b>2189.411</b>	<b>4.814</b>	<b>.000</b>
<b>STATION * AGE</b>	<b>4702.479</b>	<b>3</b>	<b>1567.493</b>	<b>2.389</b>	<b>.103</b>
<b>STATION * AGE</b>	<b>4702.479</b>	<b>3</b>	<b>1567.493</b>	<b>2.389</b>	<b>.103</b>
<b>STATION * FAT</b>	<b>5673.436</b>	<b>7</b>	<b>810.491</b>	<b>1.139</b>	<b>.401</b>
<b>STATION * FAT</b>	<b>5673.436</b>	<b>7</b>	<b>810.491</b>	<b>1.139</b>	<b>.401</b>
<b>AGE * FAT</b>	<b>6154.853</b>	<b>19</b>	<b>323.940</b>	<b>.561</b>	<b>.914</b>
<b>AGE * FAT</b>	<b>6154.853</b>	<b>19</b>	<b>323.940</b>	<b>.561</b>	<b>.914</b>
<b>STATION * AGE * FAT</b>	<b>6402.058</b>	<b>8</b>	<b>800.257</b>	<b>1.662</b>	<b>.102</b>
<b>STATION * AGE * FAT</b>	<b>6402.058</b>	<b>8</b>	<b>800.257</b>	<b>1.662</b>	<b>.102</b>

Factors That Affect the Dropout Rates of

Adult Literacy Programs:

A Study in Mercer County, West

Virginia

By

Crystal Dilley

McNair Scholar  
Concord College

## **Factors That Affect the Dropout Rates of Adult Literacy Programs:**

### **A study in Mercer County, WV**

#### **Introduction:**

The fight against illiteracy is an ongoing pursuit. The challenge is extreme; yet, the answer to preventing illiteracy is on the verge of emergence. There are three challenges when dealing with adult literacy (a) reaching adults who are illiterate, (b) getting adults to enroll in an adult education program, and (c) preventing them from dropping out. This study is based on the Mercer County Academy of Adult Learning, the only Adult Basic Education Program in Mercer County. Twenty percent of adults in West Virginia were at Literacy Level one in 1998 (NIFL, 1998). Additionally, twenty-three percent of adults in Mercer County were also at Literacy level one (NIFL, 1998). This study will specifically address how adults were referred to the program, and identify why so many adults consider dropping out of the program.

#### **Problem Statement:**

The problem is that Adult Literacy Programs are suffering because of dropout. In order for programs to maintain funding, success rates must increase. Programs should be working continuously to keep enrollment. Many adults who enter Adult Basic Education Programs do so on their own. For this reason, teachers and administrators tend to assume that these adults have self-motivation. This could be one factor that affects success rates of adult literacy programs. However, there are numerous

reasons. In order to pinpoint an alternative to the problem we must first research why adults dropout.

There are many explanations as to why people are illiterate. Literacy is directly related to language. For this reason, in social psychology it is commonly agreed that language [and literacy] development depends on three variables; (a) The socialization process of the child in his/her early years, (b) the development of language functions in the child, and (c) the availability of an adequate model of these language functions in the child's environment (Hamers and Blanc, 1982; Wagner, 1987 p. 27). Literacy learning begins early. Unfortunately, there are many children who "fall through the cracks." Adults blame their illiteracy on a variety of factors: "bad" teachers, discouragement by uneducated families, being unmotivated to learn, low self-esteem, and a lack of self-confidence. There are an unlimited number of excuses for illiteracy. Regrettably, many young students are still "slipping through the cracks" which poses a challenging goal to be attained: educating adults about basic literacy.

#### **Literature Review:**

According to government figures, over twenty-five million Americans are illiterate, and another forty-five million are only slightly capable of leading productive lives, these numbers amount to nearly forty-nine percent of all adult Americans (Key to Life, 2001). In order to identify the impact of these numbers one must first be able to define literacy/ illiteracy, and functional literacy. To define literacy, in absolute terms, one would say, the adult is reading on a particular level, usually comparable to a level of schooling, or sometimes comparable to the fact that he has completed a certain number of

years in school (French, 1987). Fingeret (103) suggests that “literacy is a shifting, abstract term, impossible to define in isolation from a specific time, place, and culture; literacy, therefore, is described as historically and culturally relative” (French, 1987, p. 7). Relative in that definition can vary according to settings or situations. Definitions can vary from school to school, or from country to country. Literacy is also defined as “the possession by an individual of the essential knowledge or skills which enable him or her to engage in all of those activities required for effective functioning in his or her group and community and whose attainments in reading, writing, and arithmetic make it possible for him or her to continue to use these skills toward his or her own goal and the communities development (UNESCO 1962 [cited in Hunter and Harmon, 14]; Costa, 1988). Other definitions for literacy persist as well; there is not one fixed definition that exists. Illiteracy is a vague term that is difficult to define. An illiterate person is someone who does not meet the requirements of those who were defined as literate.

Literacy as a means of communication! This statement says much about the way “the literate” live. Communicating is essential to American lifestyle. It is a “key element of living” (Key to Life, 2001). Therefore, it is important to address the issue of illiteracy in adults. It is important not only to adults but to children as well. If a child were to read thirty to forty minutes a day with a fluent, adult reader, their reading skills would increase dramatically (Energy Express, 2001). Unfortunately, only in an ideal situation will this occur. Illiteracy in adults may contribute to the fact that “forty percent (4-10) fourth graders cannot read at level” (Energy Express, 2001). In 1989, the National Education Goals Panel created goals to help measure the educational progress of the United States.



They stated, "by the year 2000, every American adult will be literate and will possess the knowledge and the skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship" (National Institute for Literacy, p. 1; Gomez, 1999). It is obvious this goal has not been met; nevertheless, this goal could prove beneficial not only to American adults but American children as well.

Important to the issue of adult literacy is; a history of literacy in the United States, a definition of literacy/ illiteracy, a definition of functional literacy, available programs, methods of teaching and learning, reasons for dropout, and finally collaboration efforts. All information that needs to be considered in order to understand why American adults are illiterate, and what "the literate" can do to help. Adult literacy programs in 1998 were affected by the implementation of Title II of the Workforce Investment Act, also known as the Adult Education and Family Literacy Act. The objectives were to (a) help adults to become literate and gain the skills needed for employment and self-sufficiency, (b) assist parents in obtaining skills to be active participants in their children's educational development, and (c) help adults complete a secondary education (Workforce Investment Act 1998; Gomez, 1999).

Adult literacy in the United States still faces an ever-growing challenge, the problems grow as does the range of reading ability, from beginning reading to highly competent and skilled reading (Wagner, 1987). Before World War II, Adult Literacy Programs placed their concerns on those adults who were completely illiterate. Since that time the views and definitions of literacy in America have changed. More and more programs are working with adults who are functionally literate rather than totally

illiterate. After WW II, with the beginnings of new technology, societal pressures began to change. It was now imperative for those adults with little or no reading abilities to learn to read so that they could function in society. The people of the United States began to demand more of themselves and others as well. It is “the changing nature of the adult student [that] perhaps [is] one of the main reasons for the confusion over the extent of adult illiteracy in the United States” (Wagner, 1987, p.66).

Functional Literacy has been defined as “the possession of skill perceived as necessary by particular persons and groups to fulfill their own self-determined objectives as family and community members, citizens, consumers, job-holders, and members of social, religious, or other associations of their choosing. This includes the ability to obtain information and to use that information to satisfy the requirements they identified as being important for life; the ability to deal positively with demands made on them by society; and the ability to solve the problems faced in daily life (Hunter and Harman 1979, p. 7-8; Costa, 1988). Functionally literate persons recognize sight words that enable them to function in society, but are unable to interpret or associate phoneme/grapheme correspondence. Literacy Programs use the definition of literacy as the criteria by which the success of the program is measured.

One specific program is Adult Basic Education (ABE). One type of activity ABE uses is the acquiring of (a) language skills (b) numeric skills, and (c) social skills (Hamminck, 1990, p. 51). ABE is intended for those who lack the “skills strictly necessary to cope in daily life” (Hamminck, 1990). Facilitators of these programs are now required to improve retention rates and to submit annual plans on how this

improvement will be made (Quigley & Uhland, 2000). Their primary goal is preventing dropout otherwise they may lose funding.

Ronald P. Carver from the University of Missouri, Kansas City, USA, has shared his views about what is important to Adult Education. He breaks literacy learning into three levels; literacy level 1, literacy level 2, and literacy level 3. He believes the first goal should be to help beginning readers to read at third grade level, thus pushing them to literacy level 2. At this level, the goal is to be certain that the students cannot only read the words, but also understand and be able to spell them as well. During this level comprehension is mastered. As the goals of literacy level 2 are achieved, students enter literacy level 3 as advanced readers (Snippets, 2000). Other programs are being offered at businesses, colleges, libraries, etc. Each program will set forth its own goals, and strive to meet them in order to keep their program in existence.

Important to these programs is the endeavor to prevent dropout, probably the most important and challenging goal to be attained. There are many personal, business, social, or academic reasons for dropout. Working together cooperatively may be a means of preventing dropout. Fingeret and Danin, 1991, p.82 found that the most common reason for students leaving the [traditional literacy] program... was dissatisfaction with the way their tutor approached teaching. There has been an eighteen percent drop out rate before the first twelve hours of instruction (Development Associates, 1993; Quigley & Uhland, 2000). In fact, the first three weeks are the most critical if programs want to successfully keep students involved (Quigley & Uhland, 2000). Ideally, because adults come to these programs on their own they should have the self-motivation required to complete the

program. However, dropout is one to the most enigmatic, most exasperating, and overall most depressing issues in the entire field of adult literacy (Quigley & Uhland, 2000, p.55). To qualify for annual funding, many states now expect programs to submit a plan for improving dropout rates (Chisman and Associates, 1990; Quigley, 1997; Quigley and Uhland, 2000).

The effective teacher is the teacher who cares enough to learn about his or her students' background, to better understand them as learners. Research into the teaching of adults has concentrated on four themes (a) the awareness by teachers of adults of the need for a style of teaching different from that used with children, (b) the pedagogic implications that can be derived from analyses of adult learning theory, (c) the factors contributing to instructional effectiveness most commonly identified, and (d) learners' perceptions of the qualities of successful teachers (Brookfield, 1986, p. 128-9).

Understanding that adults are going to be comfortable with their own familiar value systems, ideas, and beliefs, facilitators need to present adult learners with alternatives to their current ways of thinking, behaving, and living (Brookfield, 1986). It is however important for the facilitator not to inflict upon the learners their own personal views, but rather offer alternatives to what they already believe. Adult learners come to teachers with experience. The life experience is the answer to why an adult curriculum must differ from that of a child's. Adults already have predetermined ideas about themselves and about others as well. "Adults tend to underestimate their abilities, and by overemphasizing school experience and interests, often perform below their capacity" (Brookfield, 1986, p. 27).

There are many other factors that can influence the adult as a learner; stress of raising children, low self-esteem, lack of support from family, and fear of losing loved ones. "There is a need to make literacy an important personal tool one that allows adults to change their lives, increase their self-esteem, and enrich the quality of their lives in ways that are important to them" (Rhoder & French, 1995, p. 115). "Literacy development must encompass issues of personal development, such as self-esteem and respect (Washington 1991), teamwork and leadership (Berryman, 1989), and family life (New Jersey Hospital Association, 1992). Finally, Literacy must be viewed as meaningful and useful to the learner" (Fingeret, 1990; Rhoder & French, 1995, p. 111).

Adult Basic Education must devise methods of teaching specifically designed for adults rather than children. The issue of selecting literature should be addressed early in the program. "Theorists who approach literacy from a whole language perspective believe that there are sound educational reasons to connect adult learning with picture books and young adult novels" (Bloem & Padak, 1996, p. 52). This is a very touchy issue, a teacher does not want to insult the class by bringing in books they should be reading to their own children. Predictable books should not be used for adult learners. The goal of the teacher should be to find books that will interest the adult reader, and select literature they can relate to, and provide experiences that will encourage adult learners to learn. Another tip for teaching adults is to allow them to engage in some self-directed learning. Ideally, these adults will have the motivation needed for self-directed learning, or they would not be in the program. Encourage adult learners to take responsibility for their own learning. "Fingeret (1985) established in an early

comparative study that learners' views of programs, of their own needs, and 'best methods of teaching,' could be radically different from those of their teachers/tutors (Quigley & Uhland, 2000, p. 57). Teachers and learners need to work together cooperatively.

Collaboration is great revenue for fighting dropout. Programs are being offered at different locations including; community colleges, universities, businesses, libraries, etc. Collaboration between these programs could prove beneficial. Irvin, Gordon, and Lindroth (1994, p.2) offer several principles for successful collaboration: (a) the idea that all education providers understand that no one program can address all of the communities literacy needs, (b) all providers must be convinced that the benefits of cooperation are greater than the cost of participation, (c) each organization must understand the vested interest of all other members of the coalition are as valid as their own, and (d) there must be agreements on how funding sources will be pursued and used (Gomez, 1999). The goal of each individual adult literacy program is success. Again, instead of competing against each other, community colleges and other business organizations can reposition themselves by pooling strengths to combat illiteracy in adults.

Adult Literacy Programs are prospering and expanding; there is a great demand for adult education in the United States. It is very interesting to study what is happening in the field today. There is much information available. By utilizing the knowledge of effective programs, identifying teacher and student needs, and adopting methods of

improvement; programs can strive to increase their success rates and decrease the literacy dropout rate.

### **Research Objectives:**

The purpose of this study is to determine which factors affect the dropout rates of Adult Literacy Programs. This researcher believes that lack of family support is a leading factor in the dropout rates of adults in adult learning programs. Once the results have been tabulated experts will have this information available to assist in building better dropout prevention programs.

### **Definition of Terms:**

**FUNCTIONALLY LITERATE PERSON**- a person who has acquired the knowledge and skills in reading and writing which enable him/her to engage effectively in all those activities in which literacy is normally assumed in his/her culture or group (Gray, 1956 p.19; Wagner, 1987 p.5).

**ILLITERATE PERSON** – A person who does not meet all aspects of the definition of a literate person.

**LITERATE PERSON** - a person with the ability to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential (Costa, 1998; Kirsh and Jungeblut, 1986).

**DROPOUT RATE** – The percentage of adults who enter an Adult Basic Education program and do not complete the program.

**LITERACY LEVEL 1** – the lowest literacy level, at this level one has difficulty using certain reading, writing, and computational skills considered necessary for functioning in everyday life (NIFL, 1998).

**Hypothesis:**

The researcher believes there is a significant difference in the dropout rates between adults receiving family support, and adults who do not receive family support. There are many personal and emotional reasons for adult dropout in Adult Literacy Programs that will be identified. Lack of family support, for example, is crucial to the success of adult students. Many adult education students come from low-income families. Those students have not had the privilege of material possessions. Thus, the family's perception is very important. Other barriers may include, the expense of childcare, a jealous spouse, or time and work schedules.

The researcher believes there has been an increase in the success rates of adult literacy programs throughout the last three years. Because it has been mandated that programs must submit a plan to prevent dropout, more emphasis is placed on personal relationships between the adult learners and teachers. The effective teacher is the teacher who cares enough to learn about his/her students' background knowledge in order to understand them as learners.

**Methodology and Procedure:**

This study was pursued in Mercer County, WV. The coordinator and a teacher at the adult literacy program found in Mercer County was interviewed. Interview questions



in Appendix A. Also in this pursuit, a survey was administered. Those adults who are currently enrolled in the program completed the survey. The survey is in Appendix B.

After analyzing the data, this researcher rejected the hypothesis. For collection and analyzing of data a Chi-Squared Statistical Analysis was used. This analysis was observing significant differences not expected between variables. There were 43 subjects surveyed, 31 of which were female and 12 of which were male. Of the subjects 26 were single, 15 married, and two divorced. There were 24 subjects under the age of 20, eight between the ages of 20 and 30, and 11 above the age of 30.

**Limitations:**

In survey, results would be more accurate if they could be distributed to those who had already dropped out of programs rather than those who were still enrolled. However, those who are already enrolled in programs will be able to provide feelings of doubt that currently exists. This information will be beneficial in preventing their dropouts.

Another limitation that may occur is bias of those running the programs. It is possible that they may offer only positive information about their programs, leaving out the negatives.

The amount of time and money available to this research may also be a limitation. With more time and money it would possible to study a larger area, and to provide conclusive research.

**Anticipated Benefits:**

It is the purpose of this study to provide other experts with information that can be used to build programs that will prevent dropout, thus combating the goal of building a nation without illiteracy.

**Assumptions:**

Before this research was completed it was anticipated that the results would find lack of family support as the number one cause of dropout in Adult Literacy programs. It was also the assumption of the researcher to find most adults entered this program for business purposes, in order to provide income for their families.

**Subject Limitations:**

This study was limited to the Princeton area in Mercer County, West Virginia. It is small-scale research consisting of only 43 subjects. The director of the Mercer County Academy of Adult Learning distributed the surveys. She anticipated the completion of 60 surveys, but was only able to attain the forty-three. Subjects' ages ranged from late teens to late thirty's. Many of the subjects were sent to the program by the Department of Health and Human Services. These subjects cannot dropout of the program. They must graduate in order to continue receiving state funds.

**Benefits to the Organization:**

It is the hope of the researcher that future McNair Scholars at Concord College will use this research as a guide to begin their own research in the same field. Examining avenues not yet pursued. This research is a representation of student progress at Concord College. If future demands find it necessary this research can also be used as proof of student academic excellence.

**Results:**

When searching for significance between variables. It was determined that no significant correlation existed between family support and previous dropout. It was also determined that no correlation existed between family support and subjects who consider dropout. However, there were only nine of 43 subjects who did not receive family support. It was also established that no significant correlation existed between Marital Status and those subjects who had previously dropped out of a program.

The researcher had also expected to find business purposes as the most popular reason for entering the program. Yet, personal purposes proved to be the number one reason, rather than business purposes. There were 34 subjects of which entered the program for personal purposes and nine of which entered for business purposes.

After testing age in relation to previous dropout, it was determined that for individuals between the ages of 20 and 30 dropout showed high difference. Meaning there was more likelihood for dropout in individuals of that age group. Finally, there was a correlation between those subjects with children and those who have dropped out.

Proving that subjects with children were most likely to dropout. (See Appendix C for statistical analysis.)

### **Discussion:**

It was the purpose of this study to identify why so many adults consider dropping out of adult literacy programs. In pursuing this research many more avenues of study were uncovered. There is much opportunity for research in adult education. Rather than looking at what is pushing adults away from programs, it might be interesting to look in depth at factors that keep adults in programs. Which is why this survey asked, what do you like best about the program?

This research found that there is correlation between adults with children and adults who have previously dropped out of a program. Therefore, studying adults with children and why they feel a need to dropout is another avenue to be pursued.

It has already been determined by Fingeret and Danin, 1991, p82 that the most common reason for students leaving the [traditional literacy] program... was dissatisfaction with the way their tutor approached teaching. One may attempt to research methods used to approve tutor performance, or also best methods of teaching. There are many social, business, personal, or academic reasons for dropout, all of which could prove interesting for study. This researcher wanted to discover the best means for preventing dropout.

Looking at factors that effect dropout was a way finding out what can be done to prevent future dropout, or rather, methods of preventing dropout. Lack of family support

was anticipated to be the number one cause of dropout, but the study proved otherwise. However, because of the sample used it may not have been a valid conclusion. There may not have been enough subjects in this sample to have ever dropped out or considered dropping out to make that correlation. A larger sample may have proved more beneficial, or different survey questions. It may be useful to examine the survey used and make alterations. In any situation more research is better.

In finding that adults with children are most likely to dropout. The director of this program may consider possible alternatives to helping adults in this category. Providing childcare, working around the parents' schedule, even in-home tutoring could be taken into consideration when looking for prevention techniques.

Although anticipated results were not discovered, the research provided valuable information. It will provide other researchers with answers to questions this researcher was looking to attain. It also raises questions of additional avenues to be pursued. As long as the fight for adult literacy is in pursuit, the need for research and new findings will be vast. Much information is available for this area of study. By utilizing the knowledge of effective programs, identifying teacher and student needs, and adopting methods of improvement; programs can strive to decrease dropout rates, thus combating the goal of building a nation without illiteracy.

## Appendix A

### Interview Questions for the Director of the Mercer County Academy of Adult Learning

- (a) How long have you been working in adult education?
- (b) What type of prior training did you complete in order to receive your position?
- (c) What are the requirements of your position, what do you do?
- (d) My main focus in this project is dropout; would you say that dropout is a major problem for your program?
- (e) Are most of your participants referred, recruited, or walk-ins.
- (f) Is your program federally funded?
- (g) I have found research that says the first three weeks are the most critical, once participants have completed three weeks dropout is slim have you found this to be true?
- (h) Are you required to submit dropout prevention plans in your grant?
- (i) What prevention techniques are you currently using?
- (j) Finally, do you have any other information you could share which you feel would be beneficial to this research?

## Appendix B

## Survey of Adults enrolled in the Mercer County Academy of Adult Learning

1. What is your Gender?
  - a. Male
  - b. Female
2. What is your age?
  - a. Under 20
  - b. 20-30
  - c. Above 30
3. What is your Marital Status?
  - a. Married
  - b. Single
  - c. Divorced
4. Do you have children? Yes or No
5. If yes, how many? \_\_\_\_\_
6. Did you enroll in Adult Education for
  - a. Business purposes
  - b. Personal Purposes
7. How long have you been enrolled in the class? \_\_\_\_\_
8. Who referred you to this program?  
\_\_\_\_\_
9. Do you receive family support? Yes or No
10. Have you ever dropped out of an Adult Learning Program?  
Yes or No  
If yes, why did you dropout? \_\_\_\_\_  
\_\_\_\_\_  
Why did you come back? \_\_\_\_\_

11. Have you ever considered dropping out of the Adult Basic Education Program?

Yes or No

If yes, is it because you feel

- a. You're not smart enough
- b. You really don't have time
- c. You don't particularly like something about the teacher
- d. A lack of family support
- e. A lack of transportation
- f. A lack of Child Care
- g. Or for other reasons

If possible specify. \_\_\_\_\_

12. Is dropping out an option for you? Yes or No

13. What do you like best about the program?

- a. The teachers
- b. Learning at your own pace
- c. One-on-one instruction
- d. The flexible schedule
- e. The sense of self confidence it builds
- f. New friends
- g. The learning
- h. Other:

If possible specify \_\_\_\_\_



**Appendix C**  
**SPSS Results**

# Descriptives

## Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GENDER	43	1.00	2.00	1.7209	.45385
AGE	43	1.00	3.00	1.7209	.88171
MARRIAGE	43	1.00	3.00	1.6977	.55784
CHILDREN	43	1.00	2.00	1.4651	.50468
NOFCHILD	23	1.00	4.00	2.0435	.87792
PURPOSE	43	1.00	2.00	1.7907	.41163
FAMILYSU	43	1.00	2.00	1.2093	.41163
DROPOUT	43	1.00	2.00	1.8372	.37354
QUITING	43	1.00	8.00	7.4186	1.84175
LIKEPROG	43	1.00	9.00	6.3953	3.23772
OPTION	41	1.00	2.00	1.8780	.33129
Valid N (listwise)	22				

# Frequencies

## Statistics

		GENDER	AGE	MARRIAGE	CHILDREN	NOFCHILD	PURPOSE
N	Valid	43	43	43	43	23	43
	Missing	0	0	0	0	20	0
Mean		1.7209	1.7209	1.6977	1.4651	2.0435	1.7907
Median		2.0000	1.0000	2.0000	1.0000	2.0000	2.0000
Mode		2.00	1.00	2.00	1.00	2.00	2.00

## Statistics

		FAMILYSU	DROPOUT	QUITING	LIKEPROG	OPTION
N	Valid	43	43	43	43	41
	Missing	0	0	0	0	2
Mean		1.2093	1.8372	7.4186	6.3953	1.8780
Median		1.0000	2.0000	8.0000	8.0000	2.0000
Mode		1.00	2.00	8.00	9.00	2.00

# Frequency Table

## GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	12	27.9	27.9	27.9
	female	31	72.1	72.1	100.0
	Total	43	100.0	100.0	

**AGE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid under 20	24	55.8	55.8	55.8
20-30	7	16.3	16.3	72.1
above 30	12	27.9	27.9	100.0
Total	43	100.0	100.0	

**MARRIAGE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid married	15	34.9	34.9	34.9
single	26	60.5	60.5	95.3
divorced	2	4.7	4.7	100.0
Total	43	100.0	100.0	

**CHILDREN**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YES	23	53.5	53.5	53.5
NO	20	46.5	46.5	100.0
Total	43	100.0	100.0	

**NOFCHILD**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1.00	7	16.3	30.4	30.4
2.00	9	20.9	39.1	69.6
3.00	6	14.0	26.1	95.7
4.00	1	2.3	4.3	100.0
Total	23	53.5	100.0	
Missing System	20	46.5		
Total	43	100.0		

**PURPOSE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid business purpose	9	20.9	20.9	20.9
personal purpose	34	79.1	79.1	100.0
Total	43	100.0	100.0	

**FAMILYSU**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	34	79.1	79.1	79.1
no	9	20.9	20.9	100.0
Total	43	100.0	100.0	

### DROPOUT

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	7	16.3	16.3	16.3
no	36	83.7	83.7	100.0
Total	43	100.0	100.0	

### QUITTING

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid not smart enough	3	7.0	7.0	7.0
lack of transportation	1	2.3	2.3	9.3
other	1	2.3	2.3	11.6
no	38	88.4	88.4	100.0
Total	43	100.0	100.0	

### LIKEPROG

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid teacher	4	9.3	9.3	9.3
learning on your own pace	7	16.3	16.3	25.6
one-on-one	1	2.3	2.3	27.9
flexible schedule	3	7.0	7.0	34.9
self confidence	1	2.3	2.3	37.2
learning	6	14.0	14.0	51.2
other	21	48.8	48.8	100.0
Total	43	100.0	100.0	

### OPTION

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	5	11.6	12.2	12.2
no	36	83.7	87.8	100.0
Total	41	95.3	100.0	
Missing System	2	4.7		
Total	43	100.0		

## Crosstabs

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
FAMILYSU * QUITTING	43	100.0%	0	.0%	43	100.0%

**FAMILYSU \* QUITING Crosstabulation**

Count

		QUITING				Total
		not smart enough	lack of transportation	other	no	
FAMILYSU	yes	2	1	1	30	34
	no	1			8	9
Total		3	1	1	38	43

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.809 <sup>a</sup>	3	.847
Likelihood Ratio	1.188	3	.756
Linear-by-Linear Association	.129	1	.719
N of Valid Cases	43		

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .21.

# Crosstabs

## Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
FAMILYSU * DROPOUT	43	100.0%	0	.0%	43	100.0%

## FAMILYSU \* DROPOUT Crosstabulation

Count

		DROPOUT		Total
		yes	no	
FAMILYSU	yes	6	28	34
	no	1	8	9
Total		7	36	43

## Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.223 <sup>b</sup>	1	.637	1.000	.543
Continuity Correction <sup>a</sup>	.000	1	1.000		
Likelihood Ratio	.240	1	.624		
Fisher's Exact Test					
Linear-by-Linear Association	.218	1	.641		
N of Valid Cases	43				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.47.

# Interactive Graph

# Crosstabs

## Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
MARRIAGE * DROPOUT	43	100.0%	0	.0%	43	100.0%

## MARRIAGE \* DROPOUT Crosstabulation

Count

		DROPOUT		Total
		yes	no	
MARRIAGE	married	2	13	15
	single	4	22	26
	divorced	1	1	2
Total		7	36	43

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.779 <sup>a</sup>	2	.411
Likelihood Ratio	1.329	2	.514
Linear-by-Linear Association	.683	1	.408
N of Valid Cases	43		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .33.

### Crosstabs

#### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGE * DROPOUT	43	100.0%	0	.0%	43	100.0%

#### AGE \* DROPOUT Crosstabulation

Count

		DROPOUT		Total
		yes	no	
AGE	under 20	2	22	24
	20-30	3	4	7
	above 30	2	10	12
	Total	7	36	43

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.741 <sup>a</sup>	2	.093
Likelihood Ratio	4.065	2	.131
Linear-by-Linear Association	.838	1	.360
N of Valid Cases	43		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.14.

# Crosstabs

## Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
CHILDREN * DROPOUT	43	100.0%	0	.0%	43	100.0%

## CHILDREN \* DROPOUT Crosstabulation

Count

		DROPOUT		Total
		yes	no	
CHILDREN	YES	5	18	23
	NO	2	18	20
Total		7	36	43

## Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.082 <sup>b</sup>	1	.298		
Continuity Correction <sup>a</sup>	.392	1	.531		
Likelihood Ratio	1.119	1	.290		
Fisher's Exact Test				.420	.269
Linear-by-Linear Association	1.057	1	.304		
N of Valid Cases	43				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.26.



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*Unitarians and Antislavery:  
A Study of the Reform Impulse*

*By*

*Angela R. Frye*

### *Unitarians and Antislavery: A Study of the Reform Impulse*

In the turmoil of the American Revolution some began to question the institution of slavery. The first challenges were based on both natural law, rational enlightenment principles such as found in the Declaration of Independence, and on religious, emotional, and moral arguments about the nature of man and the role of sin. The clash of arguments was indicative of the clash of factors that provided the impulse to reform society.

Unitarianism was a revolutionary idea, challenging what had been an established religious ideology. Unitarians rebelled against the traditional Calvinistic idea that God was a harsh, unyielding figure who was to be obeyed at all costs and feared at all times. Instead, Unitarians characterized God as a loving and benevolent entity with the same capacities and attributes of their fellowman.<sup>1</sup> In addition, the new religious sect rebelled against the tenets of Trinitarian Christianity. Unitarians rejected the notion of the Trinity. They believed that it was not scriptural, asserting that "... there is no distinction of persons in God, who sent the Son, and gives to those who ask for the Holy Spirit."<sup>2</sup> The revolutionary challenges to established theology combined with the secular ideas of the Enlightenment, opened the way to rethink fundamentals of society leading to a reform impulse. Unitarians felt that man's nature was not marked by depravity, but by an inherent goodness, in accordance with Enlightenment ideas. All of these changes, combined with the concept of progress, meant that traditional ideas could

and should be renovated and influenced by contemporary ideas. The Boston elite readily accepted these new ideas, thus facilitating the growth of the Liberal Faith among them. Thus, what had been a revolutionary force became established, which, in turn, became criticized by the new emerging evangelicals.<sup>3</sup>

One of the debates in American social and intellectual history has focused on the explanations for the emergence of the Antislavery movement in the Revolutionary and early 19<sup>th</sup> century. The reform impulse has been traced to a wide variety of factors: 1) growing moral awareness of the sin of slavery, 2) economic changes that slowly pitted an emerging urban capitalism of free labor against an agrarian plantation slave society, 3) a status revolution that left the old colonial Puritan elite without leadership, that began to see reform movements as a means to regain leadership in society, 4) emerging liberal enlightenment values that put an emphasis on man making progress by reforming both the individual and the institutions of society, 5) a growing fear that a changing, developing society would undermine old stables values, and therefore reform became a means of insuring social control. An examination of Boston Unitarians and their relationship to the antislavery movement will not resolve the historiographic disputes, but it will help illustrate how complex the issue of motivation for the reform impulse was in a society that was experiencing dynamic change.

Nineteenth century Boston Unitarians displayed a wide spectrum of antislavery views and seemed to fit into nearly every category of factors that motivate antislavery reformers. Conservatives were reluctant reformers who had helped to establish the faith

and had been instrumental in forming the official dogma. They feared that the antislavery reform impulse could lead to another impulse to reform the religion the conservatives had worked so hard to establish. When members of the congregation began to oppose slavery, conservatives feared that they would recognize some of the tension between Liberal Faith doctrine and the institution of slavery. A discovery of this tension could lead to members of the church to advocate not only antislavery reform, but also doctrinal reform. Thus, conservatives were afraid that the very dogma they had established could be in jeopardy. These conservative individuals, like William Ellery Channing, were reluctant to endorse the continued liberal movement of the sect. Channing remained the leader of the conservative faction of the denomination until his death and at the same time he remained unwilling to endorse antislavery efforts, although he did eventually become a moderate. Moderates upheld the basic beliefs of the Unitarian faith, and supported antislavery efforts. They did not want to radically change the faith, but they did argue that there should be a broadening of the doctrine. They did not want to overhaul Unitarianism completely, however they did want to resolve some of the tension between conservatives who refused to officially endorse slavery and the liberals who wanted make antislavery efforts a primary function of the church. Samuel Joseph May is a moderate who did endorse the antislavery efforts. May became a supporter of the faith and antislavery after attending Harvard, a liberal stronghold. He used his pulpit to make a moral appeal to parishioners to end slavery. May, due to his strong involvement in these movements, soon became a radical. Usually the radicals were new to the faith. They believed that the old doctrine should be modified and updated. Part of these changes should be to use Scripture and any other church means to endorse antislavery. To these liberals, changes in the religion could

help facilitate antislavery activities. Some Unitarians were radicals from the beginning. For example, Unitarian Theodore Parker was a radical who believed that slavery was a political problem. He felt that the solution to the problem was to use moral arguments to bring about legislation ending slavery. Unitarianism proved to be an attraction to other radicals who wanted an existing belief system to which they could attach their antislavery activities. William Lloyd Garrison used the Liberal Faith in this way. Lastly, even women like Lydia Maria Child, who were already Unitarians, used the growing antislavery movement in the denomination to further the fledgling feminist movement by associating the need for slaves' rights with the need for women's rights. This small sample of Unitarians reflects the diversity of antislavery sentiment in the general population. All of these individuals shared a common faith, yet they disagreed on strategy, tactics, and doctrine.<sup>4</sup>

William Ellery Channing was the most prominent of the reformers who approached the topic of slavery philosophically. A conservative who finally became a moderate, Channing was a minister to Boston's aristocracy. Channing had the attitude that calling for an end to slavery was to appeal to God how he should operate the world. He said, "We do not speak as Christians when we say that slavery *must* end and *shall* fall. Who are we, to dictate thus to Omnipotence?"<sup>5</sup> This was the message he preached to numerous Boston elites. He may have used this idea as a rationalization for not opposing slavery. Channing may have also based his lack of antislavery support on his notion that suffering was "the intention" of the Creator.<sup>6</sup> After all, he had himself lived with physical pain and could have built this into his theology. Channing also placed the responsibility to bring about change on the individual rather than the group. He indicated that, "... to produce moral

changes of judgment and feeling, the individual, in the long run, is stronger than combinations.<sup>7</sup> Therefore, his emphasis on the individual may have also contributed to his opposition of a large, carefully orchestrated protest of slavery.

Despite his efforts, “... Channing’s antislavery activity was unable to satisfy either the radical abolitionists or conservative Unitarians.”<sup>8</sup> After his death in 1842, the radical abolitionists’ sparse praise contrasted with the Unitarian conservatives’ disapproval of Channing’s antislavery involvement. Maria Lydia Child characterized him as a man that “... had been selected by a set of money-making men as their representative for piety.”<sup>9</sup> Nonetheless, Channing and his strain of antislavery contributed greatly to public opinion. His “... reputation enabled his writings to reach gentlemen who would never have picked up the *Liberator* nor read a radical abolitionist pamphlet. Public opinion was altered a little more because of Channing’s work ...”<sup>10</sup>

For other reformers, antislavery itself seemed to become a passion. Initially a moderate who became a radical, Samuel Joseph May linked his own Unitarian religion to antislavery. What resulted from May’s combining of the two was a comprehensive evaluation of American society. He claimed that, “Nothing is so indispensable to the purification of the American churches as well as the honor of this Republic as the entire extirpation of Slavery. It defiles everything it touches.”<sup>11</sup> He never doubted the righteousness of his Unitarian faith or his reform creed.<sup>12</sup> He saw a definite relationship between social reform, the end of slavery, and the philosophy of non-resistance with Unitarianism.<sup>13</sup>

Eventually, May reasoned that slavery gave rise to other immoralities and was the root of all evil in America. To May, slavery was the greatest sin of all because it caused so many other moral

deviations. Consequently, May and other religious reformers like him, viewed the Church as a tool which could be used to force slave owners to release their slaves in order to escape divine retribution for their sins.<sup>14</sup>

“Political abolitionists” are usually termed as those free souls who belonged to no antislavery society but were still fiercely abolitionist.<sup>15</sup> These reformers, like radical Theodore Parker, saw political power as a way to destroy slavery. In order to better achieve their goals, political abolitionists had to include other political aims in their platforms. The main goal of abolition advocates, however, remained not just the containment of slavery, but the end of it. Parker’s own understanding of slavery was rooted in his conception of the Constitution. If the Constitution sanctioned slavery, then it was open to amendment like other parts of the document. According to Parker, “What voters have made can voters unmake.”<sup>16</sup> Parker did express a desire to operate by the Constitution, but there were limits. He declared that, “I look at principles and ask, are they right, just, agreeable to the Constitution of the Universe? If so they must be kept.”<sup>17</sup> He cautioned that God’s law must first be obeyed, and whether or not a law was constitutional was a secondary concern.<sup>18</sup> He also distinguished between passive and active disobedience, the latter being an act in opposition of the law.

Parker made political appeals to his congregation’s sense of patriotism rather than moral appeals to their conscience. He feared that becoming an active politician to campaign for the end of slavery would not only lose him his pulpit, but it would damage his reputation to such an extent that no town in Massachusetts would even give him the position of “hog-catcher”. He chose instead to become the “chaplain” and correspondent to the antislavery



politicians in Washington.<sup>19</sup> His decision to become a distant supporter of the antislavery cause and other actions provoked conservative Unitarians in Boston. They deemed his ideas as un-Christian and was even asked to withdraw from the Boston Association of Ministers. (He refused to do so.) Parker remained a Unitarian minister, refusing to give up and leave perhaps because he wanted to reform the church from within, rather than without.

William Lloyd Garrison was also a radical, but he warned that political involvement would bring compromises that would cause dilution, or even worse, dissolution of the antislavery movement.<sup>20</sup> Consequently, Garrison focused on religious reform, believing that a "... right relationship with God required a belief in abolitionist principles."<sup>21</sup> This idea was a direct conflict with many Unitarians, but especially to Channing, who remained ambivalent about the role of religion in reform. In addition, they also differed in tactics, with Channing remaining passive while Garrison engaged in an active campaign to end slavery. Garrison and his followers were criticized for their harsh language and the severity of their actions. Critics cited that this alienated potential supporters of the movement. Ironically, Garrisonians did have a good deal of support from individual Unitarians, but they experienced indifference and opposition from official Unitarian agencies. Moreover, Garrison attracted many followers leaving other Unitarian leaders to feel threatened by his growing importance and recognition. The Garrisonians were the leading agitators in the 1840's and 1850's.<sup>22</sup> Garrison believed in action by the masses, and indeed his "masses" were noted for their bitter, angry tone, their endorsement of immediate emancipation, and their too democratic treatment of women, children, and men as well as their admission of colored people into

their societies. These actions alienated many potential supporters, perhaps in some way retarding the cause of freedom.<sup>23</sup>

Women, too, found a place and voice among the Unitarians. Most conservative Unitarians disapproved of their dual participation in the religion and slavery reform. Women like Lydia Maria Child began as a member of the Unitarian church who then became involved in the antislavery movement. Child cited the abolitionist movement as the best institution, as opposed to the Unitarian church, writing that “... the *only* true church organization [is] when heads and hearts unite in the working for the welfare of the human race ....”<sup>24</sup> In fact, she and her husband only attended their Unitarian church mainly because the minister there was a member of the antislavery society. She also attended “... not because of any doctrinal or birthright affinity with fellow Unitarians in attendance, but because she recognized a ‘firm, true antislavery spirit’ was present.”<sup>25</sup> She soon found that the antislavery work gave her a voice equal to that of the men. Her opinions concerned conservatives, but also propelled many women into working for women’s rights, because they equated their disenfranchised position in society to that of the slaves.

Unitarian “rationalism” opened the way for wider critiques of society, but it also reflected deep-seated clashes over tactics and methods for social change in society.

## Notes

<sup>1</sup> Sidney E. Ahlstrom and Jonathan S. Carey, eds., An American Reformation: A Documentary History of Unitarian Christianity (Middletown: Wesleyan UP, 1985) 14 – 17.

<sup>2</sup> Ahlstrom 37.

<sup>3</sup> Ahlstrom 18-19, 27, 90-91; Douglas C. Stange, Patterns of Antislavery Among American Unitarians (Rutherford: Fairleigh Dickinson UP, 1977) 97; Donald Yacovone, Samuel Joseph May and the Dilemmas of the Liberal Persuasion 1797 - 1871 (Philadelphia: Temple UP, 1991) 7 - 10.

<sup>4</sup> Stange 20.

<sup>5</sup> Stange 96.

<sup>6</sup> Stange 74.

<sup>7</sup> Stange 90.

<sup>8</sup> Stange 96.

<sup>9</sup> Stange 77.

<sup>10</sup> Stange 99.

<sup>11</sup> Stange 144.

<sup>12</sup> May 5.

<sup>13</sup> May 4.

<sup>14</sup> John R. McKivigan, The War Against Pro-Slavery Religion. (New York: Cornell UP, 1984) 13.

<sup>15</sup> Stange 36.

<sup>16</sup> Stange 146

<sup>17</sup> Stange 146.

<sup>18</sup> Stange 148 - 49.

<sup>19</sup> Stange 114.

<sup>20</sup> Stange 35 - 36.

<sup>21</sup> Stange 75 - 76.

<sup>22</sup> McKivigan 173.

<sup>23</sup> Stange 83.

<sup>24</sup> Stange 59.

<sup>25</sup> Stange 59.

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Running head: EFFECTS

**The Effects of Parental Involvement on the Education Performance of Upper  
Elementary/Lower Middle School Children in Southern West Virginia**

**Jason Gardner**

**Mentor: Cheryl Trull**

**Concord College**



The Effects of Parental Involvement on the Education Performance of Upper  
Elementary/Lower Middle School Children in Southern West Virginia

Abstract

This is a study designed to examine and better understand the differences in academic performance between those children in southern West Virginia who have parents involved in their education and those who do not. The main focus of the project is to expose this problem to school administrators, parents, and the children themselves. Based on previous research, it has been hypothesized that when a parent is more involved, a child has a greater academic success rate. Also, the lower achieving children tend to have parents who are considerably less involved with their child's education. The experimenter surveyed a wide range of children in southern West Virginia to discover if this hypothesis coincides with their academic levels.

Introduction

In the past, a parent's responsibility consisted primarily of getting the child to school, and maybe an occasional conference with the teacher. This has changed drastically in recent years. Parental involvement is now viewed as a critical component to the educational success of children. Many believe that, without parental involvement, a child will not, and cannot succeed. This influenced the experimenter to attempt to analyze the true effects of parental involvement of the educational success of our youth. The study was confined to late elementary/early middle school children in southern West Virginia. It is hypothesized that a lack of interest and involvement in a child's education leads to and encourages low academic performance levels. It is also hypothesized that a genuine

interest and involvement in a child's education leads to and encourages high academic performance levels. The independent variable is parental involvement, which is more precisely defined as the amount of time parents spend during the week involved with their child's homework; the amount of time children are engaged in their homework without parental supervision; the amount of time spent between parent and child, on a weekly basis, discussing academic issues; and the amount of displayed interest in the child's after school activities when applicable. The dependant variable is the grade point average of the child.

### Background

#### Statement of the Problem

This research proposes to identify and evaluate the differences in academic performance between those children whose parents are involved in their education and those children whose parents are not involved in their education.

1. The first sub-problem. Analyze and interpret gathered data to see if the levels of parental involvement are higher for children with higher levels of academic performance and lower for children with lower academic performance.
2. The second sub-problem. Determine if a higher level of frequency in the discussion of school related materials between a child and their parent(s) results in higher academic achievement, and if a lower level of discussion causes lower academic achievement.

Hypothesis

It is hypothesized that the amount of parental involvement directly influences the education performance of a child. Moreover, those children who have highly involved parents, also have a high academic success rate; and those children who have non-involved parents, have a low academic success rate.

Delimitations.

1. This study does not attempt to analyze the effects of broken homes, single parent households, adoptive parents, or any other non-tradition homes.
2. Things that can disrupt a household, which include, but are not limited to, drugs, abusive parents, and alcohol are not taken into account.
3. The amount of effort any or all educators are putting forth to make parents involved in the child's education is not taken into account.

This study is limited to only a select amount of public schools in southern West Virginia.

The Definition of Terms.

1. Parental Figure - Anyone acting in the position of a parent including but not limited to: the parents, adoptive parents, single parents, legal guardians, grandparents, brothers, and sisters.
2. NCPIE - National Counsel for Parental Involvement in Education.

Assumptions.

1. That the children surveyed in this study will honestly provide accurate information regarding their academic achievement as well as their parent's level of involvement.
2. That the sample schools chosen for this study are an accurate representation of the population of students, for this age range, in southern West Virginia.

The Need for Study.

The increasing lack of parental involvement is a problem in today's school system. This study is designed to expose this problem and bring it to the attention of everyone, including school administrators, teachers, parents, and the children themselves. Once the problem is exposed, steps can be taken to help correct it, making parents a more influential part of the educational process as a whole.

Literary Analysis.

Parents are at the core of the education system. This has been the case as far back as we can see. "Parental involvement in the education of children has been present since prehistoric times. The family provided the first informal education for the child through modeling, teaching, and praise or discipline (Berger, 69). The modern parent education movement began in the 1880's and 1890's. This is when the National Congress of Mothers created the now popular PTA (Parent Teacher Association). The role of the parent was a very minimal one during the early 20<sup>th</sup> century. This soon changed as America was confronted with great social change in the 1970's. Interest in parent involvement grew rapidly and soon became a significant educational movement of the

1970's (Coletta, 7). Many even view this as the crowning educational achievement of the decade. Why did this change? As time has progressed so has the amount of pressure on the parent. These pressures were brought about by the increased complexity and "bigness" of living, which have poisoned the traditional home-school partnership by discouraging close and personal parent-teacher communication. (Coletta, 18). Mother's were no longer staying at home to take care of the children. As society progressed, women were becoming a major role in the work force. Due to this, it also became more difficult for an effective parent-teacher relationship to occur with ease. This could not happen at a worse time. Now, more than ever, children needed an effective parent-teacher relationship to occur. More and more learning now takes place outside the formal framework of the school day. The next great advances in achievement and readiness for adult life depend on creating a system of out-of-school learning to complement the core curriculum (Bentley, 1). By 1994, the participation of parents in school had become such an issue that even the president himself was addressing it. Education Goal eight under the president's Goals 2000: Educate America act stated that by the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children (Carvalho, 17).

An educator cannot change the academic success of a child alone, no school nor teacher can assume total responsibility for a child's learning from birth through secondary education (Coletta, 13). This is due to the fact the parent has the opportunity to provide constant supervision and encouragement for a lifetime, not just a school year. The process of creating an intelligent child cannot be done just at school, the parents must

be involved. "Parent involvement is absolutely critical" says Bob St. Clair, executive director of the Minnesota Association of Secondary School Principals. "In 30 years as a principal, I've rarely found a youngster doing well in school without a parent taking an active role" (Smith, 1). Think about that, if this is true, it seems almost impossible for a child to succeed without parental involvement. It has even been stated that amount of parental involvement is the most influential component to a child's educational success, education has a much greater impact on academic success than factors such as how affluent the family is or whether the parents finished high school or college (Schlosberg, 1). Schlosberg is implying that even the heredity traits gained by ones' parents is outweighed by the amount of parental involvement. If this is true, the value of parental involvement is immeasurable. This means that, every single child has the ability to excel in an academic setting. It doesn't take money, the right genes, or a fancy school; all it takes is an involved parent.

Anyone would agree that the two most influential components in the education of a child are the teacher and the parent. The question that lies before us today is, how do you make these two work effectively? One of the greatest unresolved tensions in education systems across the world is the mismatch between the two most influential frameworks for learning; school and family (Brentley, 1). Parents and teachers are both striving to ensure the success of a child in school. What is often overlooked is that, these two often begin with very different starting goals. Roger Weissberg, a professor at the University of Illinois at Chicago and an expert in school-family partnerships stated that "If I'm a parent, my goal first and foremost is to make sure my child gets the best of everything, a

teacher's goal is to make sure everyone in the class has a good educational experience." (Rubiner, 1). It is obvious that the teacher is, or at least should be, concerned with the growth of the class as a whole, while the parent is only concerned with the growth of their child. This can easily cause friction between the teacher and the parent. If the parent does not believe the teacher is concerned enough with his or her student, they can become enraged, breaking off the often fragile relationship between the two.

There are several reasons why parents tend to steer away from becoming involved in their child's education. What many perceive to be a lack of interest could possibly be very far from that. "There's no question that some parents are intimidated about becoming involved," (Schlosberg, 1) says Kenneth Shore, Ph.D., a licensed psychologist who works for the Hamilton, New Jersey public school system. A child often exceeds his or her parent(s) educational success level in school. Especially in recent generations, many students who attend college are first generation students, surpassing their parent's education. Due to this, parents often are intimidated that the work is too challenging and that they will look stupid or be embarrassed if they try to help. It could even be the case that the parent is not educationally equipped to help the child with his or her homework.

Another reason for a lack of parental involvement is the fear of a high level of time demands on the parent. Especially in today's society, parents just do not have the time to spend working on homework with their child, or so they think. Experts emphasize that participation in a child's education does not have to be time-consuming or complicated. "I really believe that parent involvement can be done in manageable bite-size chunks,"

says Carroll Miller, coeditor of *The Education Today Parent Involvement Handbook*. (Schlosberg, 1).

The next reason that could drive a parent away from the involvement in his or her child's education is that they are just not welcome. Teachers often feel that involving anyone outside will just make their jobs harder. Moreover, a lot of teachers truly fear having parents in their classroom. Just as the parents might fear embarrassment in front of the child, the teacher too could fear the same embarrassment in front of the parent(s).

One final reason parents are less involved in their child's educational growth, a reason that is applicable to the age group studied in particular, is drop off in involvement with an increase in the child's age. Research says that parental involvement drops off dramatically when their child leaves elementary school. The reasons are varied and legitimate. The larger middle school environment can seem, to both students and parents, difficult to navigate. Often the school is farther from home. Instead of one teacher, the child has five or six, and the teachers certainly don't send notes home every week highlighting classroom activities (Smith, 1). This time period between the ages of 10-14 are often the time in which parental involvement drops off. Many parents are involved, to some degree in their child's primary education. Once the child become more independent, however, this level of involvement is known to decline dramatically. The biggest barrier may be the kids themselves. Children at this stage struggle for their independence. Instead of glowing with pride when parents show up, they're flushed with embarrassment (Smith, 1). This decline in the amount of parental involvement has



become an accepted trend. According to the National Education Goals Report of 1995, from one-third to one-half of parents of eighth-graders report that they do not attend conferences, PTA meetings, and school events; check homework; or even talk with their children about school. It is very alarming to see that our society does not see the importance of parental involvement at this age. This is a very fragile age in the development of a child, and one where support is needed. While it becomes trickier for parents to stay involved, the stakes increase dramatically as children confront career planning, more rigorous classes, and the pressure of negative peer influence. According to the Child Trends study, students whose parents show low involvement are twice as likely to have repeated a grade and three times as likely to have been suspended or expelled from school. Conversely, students whose parents participate tend to get better grades and be more involved in activities (Smith, 1).

## Method

### Participants

The participants were students from 10 elementary/middle schools in southern West Virginia. There were 301 participants, all being between the ages of 10 and 13, and between the 5<sup>th</sup> and 6<sup>th</sup> grades. This grade level was selected as an age at which, as hypothesized by the experimenter, a transition occurs. This transition is a result of the child reaching an age at which many parents become less involved due to the growth of their child from primary adolescent stage, defined as a more dependant stage in the growth process, to the intermediate adolescent stage, defined as a more independent stage

in the growth process. Personal questions such as gender and the specific name of the school are purposely being left undefined, as agreed to by the experimenter and the participating schools. The schools were carefully selected by the experimenter to represent a wide range of socio-economic levels, as well as a wide range of school academic reputations.

### Apparatus

A total of 500 surveys were sent out, 50 to each one of the 10 schools. They were put in large manila envelopes and included a return envelope with postage paid. A cover letter was included in the package, which explained the study and the reason for filling out the survey. It also included a promise to keep the identity of the school confidential and a request for the return of the completed surveys one month from the date they were sent out. The survey included eight questions, six multiple choice, and two short answer. The age of the student, the students overall grade point average, how many hours a week the student spent on homework with and without their parent(s), how often they discuss what's going on at school with their parent(s), if the student is involved in after school activities, if so what activities they are involved in and the ones their parent(s) attend were questioned. This package was sent to the principal of each specific school. The students filled out the surveys themselves. The name and gender of each specific student was requested to be left out as specified on each survey.

### Procedure

The experimenter created a survey that, in theory, will help to expose the relation between the academic success rate of a child, and the amount of parental involvement the

child receives. Five hundred copies of the survey were made and put into 10 large manila envelopes. A self addresses, postage paid, return envelope was also enclosed. A cover letter explaining the purpose of the experiment was the final component of the package. These packages were then sent out to 10 different schools, each package containing 50 surveys, the return envelope, and the cover letter. Students were asked not to put his or her name on the survey, and the principal was asked to return the completed surveys one month from the original date of postage. Once the completed surveys were returned, the experimenter input the data into the SPSS data analysis program.

### Results

A correlated T test was used to examine the relationship between a child's grade point average and the amount of time the child spent per week actively involved on homework with his or her parent(s). A significant difference was gained between the two groups,  $F = 1.3314 (300,300)df, p < |F| : 0.0134$ . A correlated T test was again used to examine the relationship between a child's grade point average and the frequency that a child discusses what's going on at school with his or her parent, on a weekly basis. A significant difference was gained between the two groups,  $F = 1.4853 (300,300)df, p < |F| : 0.0006$ . A bar graph, placed at the end of the report, also shows supporting results of the hypothesis made by the experimenter that a high level of parental involvement results in a higher level of academic achievement for a child.

### Discussion

The results of this research supported the hypothesis made that parental involvement is a direct factor in the educational success of a child. These results are very consistent

with the thoughts of educators nationwide. Hopefully, this study will awaken our region to a growing problem in the educational system, the need for parental involvement. With the increasing emphasis that is being put on student test scores, as well as the increasing pressure on students to do well on these tests, many have been looking for a way to boost academic achievement. The answer right in front of us, a child with parents who are involved in their education is an academically successful child.

One problem that arose in this study was ability, or lack thereof, to properly define and track parental involvement. Involvement could be defined a number of ways for a number of people. One parent's idea of high parental involvement might not fit another's definition of this. Also, activities that one person might constitute as being "parentally involved" in their child's education, might not coincide with another's view of the same concept.

To further research this topic, an experimenter might want to examine the issue on a more individualized basis. Although this approach is more time consuming, one could further examine the reason(s) for a lack of parental involvement in the household, as well as find corrective measure to alleviate the problem, providing the platform for future student success.

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Figure Caption

Figure 1. T-Test comparing the amount of hours spent weekly and the academic performance of a child.

Figure 2. T-Test comparing the amount of time spent weekly discussing what is going on at school and the academic performance of a child.

Figure 3. Bar graph comparing the amount of hours spent weekly and the academic performance of a child.

Figure 4. Bar graph comparing the amount of time spent weekly discussing what is going on at school and the academic performance of a child.

Figure 5. A sample of the letter sent to each school with the packet of surveys.

Figure 6. A sample of the survey sent to the schools.

### T-Test For Two Independent Samples Effects of Parental Involvement

Label	N	Mean	S.D.	S.E.
grades	301	2.0365	1.3500	0.0779
hours	301	1.7442	1.1700	0.0675

F-test for equality of variance:  $F = 1.3314$  (300,300)df,  $p < |F| : 0.0134$

T for equal variances: 2.8387       $p < |T| 0.0047$

T for unequal variances: 2.8387       $p < |T| 0.0047$

### T-Test For Two Independent Samples Effects of Parental Involvement

Label	N	Mean	S.D.	S.E.
grades	301	2.0365	1.3500	0.0779
frequency	301	1.6744	1.1077	0.0640

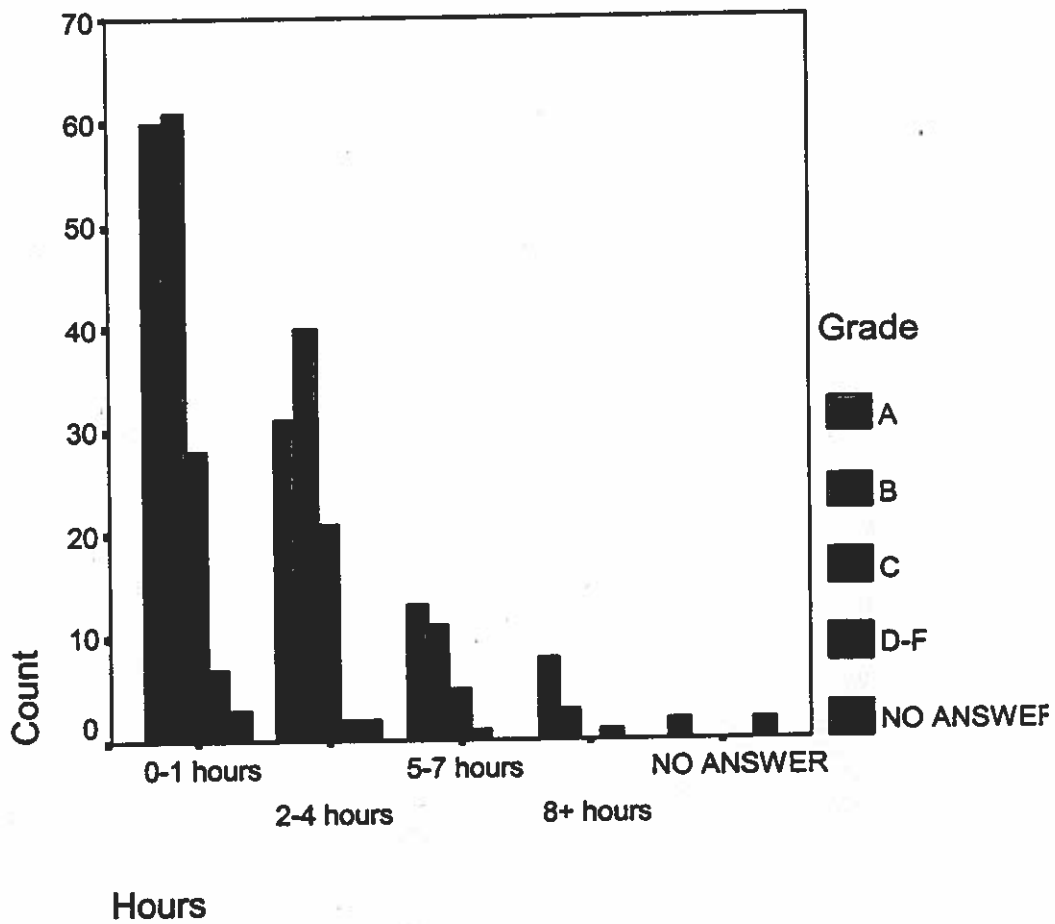
F-test for equality of variance:  $F = 1.4853$  (300,300)df,  $p < |F| : 0.0006$

T for equal variances: 3.5975       $p < |T| 0.0003$

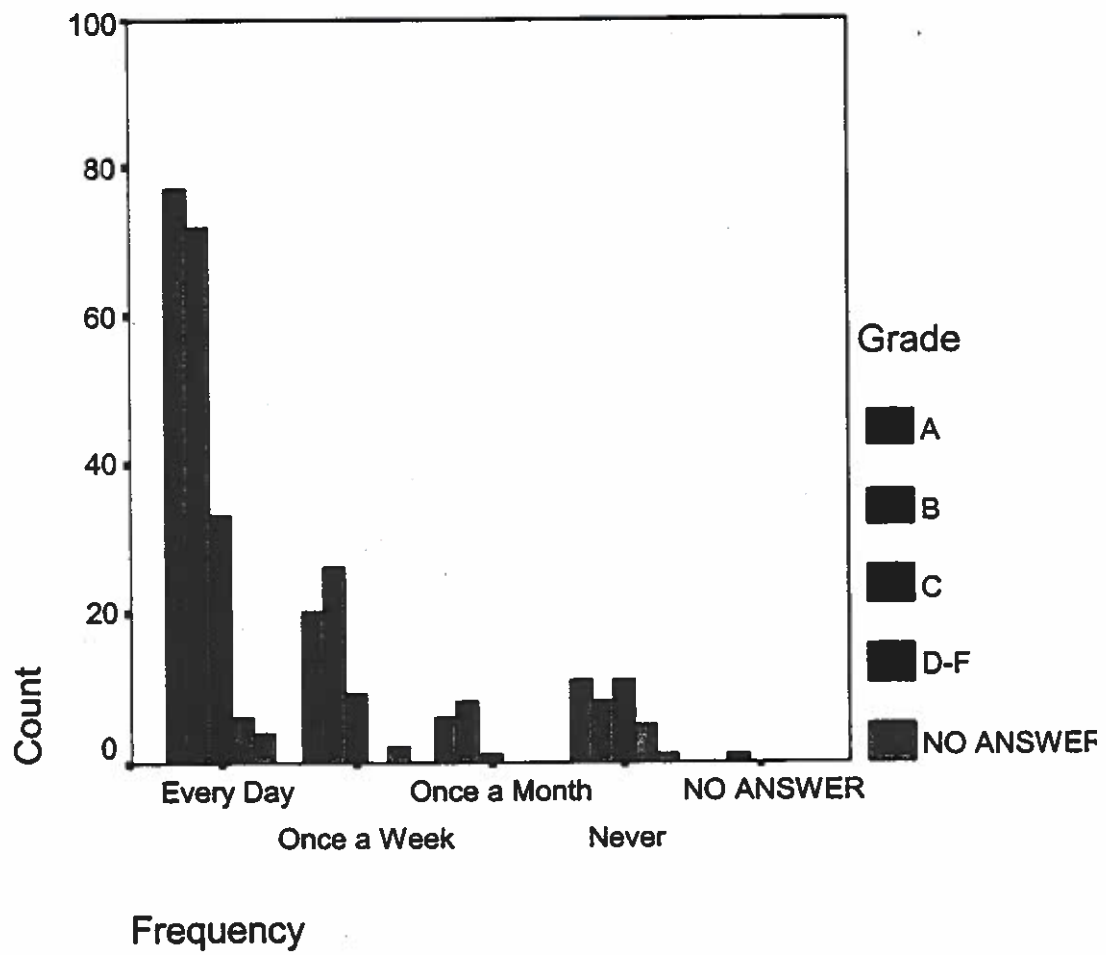
T for unequal variances: 3.5975       $p < |T| 0.0003$



## Influence of Parental Involvement on Academic Achievement



## Influence of Parental Involvement on Academic Achievement



McNair Scholars Program  
Campus Box D 145  
Concord College  
P.O Box 1000  
Athens, WV 24712  
February 4, 2000

Dear Principal or Administrator,

I am presently involved in the McNair Scholars Program at Concord College. This program is intended to aid and assist college students who plan on exploring post-graduate opportunities by giving them a chance to do an in depth research project. The goal of my research project is to better understand the effects of parental involvement on the educational performance of children in Southern West Virginia. It has been hypothesized that when parents get more involved, a child has a far greater academic success rate. I plan to survey a wide range of fifth and sixth grade children in the area to see if this hypothesis coincides with their academic levels. The main reason I chose this topic is to better expose this as a problem to administrators, parents, and also the children themselves.

The survey is designed to be easy for a child to complete and should only take two to three minutes to finish. Please administrator this survey to your 5<sup>th</sup> and 6<sup>th</sup> grade students. Once finished, all you have to do is put the completed surveys into the preaddressed envelope provided for you and send it back to me. If you agree to administer this survey it would greatly assist me in the completion of my research. I would like to thank you in advance for your time and cooperation. If you have any questions feel free to contact me at (304) 384-5634 or the McNair program at (304) 384-6019. Thank You

Thank-You

Jason Gardner  
McNair Scholar

Thank-You

Cheryl Trull  
McNair Mentor

RETURN DATE: If possible, please return by March 1<sup>st</sup>.

1. How old are you? \_\_\_\_\_
2. What is your approximate overall grade point average?
  - A. A
  - B. B
  - C. C
  - D. D or F
3. How many hours a week do you spend actively involved on homework or other school related activities with your parents?
  - A. 0-1 hours
  - B. 2-4 hours
  - C. 5-7 hours
  - D. 8+ hours
4. How many hours a week do you spend actively involved on homework or other school related activities without your parents (ex. With friends or teachers)?
  - A. 0-1 hours
  - B. 2-4 hours
  - C. 5-7 hours
  - D. 8+ hours
5. How often do you discuss what's going on at school with your parents?
  - A. Every day
  - B. Once a week
  - C. Once a month
  - D. Never
6. Are you involved in any after school activities?    Y        or        N
7. If you answered yes, please list those activities below:
  
8. What after school activities do your parents attend?"

**McNair Scholars Research Study**

**PLEASE DO NOT PUT YOUR NAME ON THIS SURVEY – THANK YOU.**

**Quality of Life and Life Satisfaction Benefits in Women Over Forty Due to  
Regular Physical Activity: A Southern West Virginia Study**

**Melissa K. Garretson**

**Concord College**

## THE PROBLEM

Our society obsesses about the stereotypical healthy body. Everyday reminders of our increasing obesity reveal themselves through different media. Whether a new survey on overweight percentages comes out or a waif model appears on the cover of your favorite magazine, America's preoccupation with weight is ruthless. Society teaches the very young to antagonize their obese counterparts, and this attitude continues in later life. Obesity is often associated with words such as lazy, fat and couch potato. Negative attitudes and ignorance blind society's view of contributing health problems and family histories which may be primary causes of obesity in many people. Instead of focusing energy into the way our bodies or others should look, individuals should strive for satisfaction in all aspects of life. Happiness and continued quality of life account for more in the long run than having the "perfect body."

The goal of many older adults and senior citizens is to age successfully and proceed with their normal daily routines. Research (King, Taylor, Haskell, & DeBusk, 1989; Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993) clearly shows that participation in a regular aerobic exercise program, such as jogging and walking, increases quality of life levels in healthy adults and senior citizens. However, little research exists to

show the effects of other types of activities on quality of life and life satisfaction. Consequently, this study investigated the effects of various other physical activities on life satisfaction and quality of life. The most basic information determined if individuals who exercise regularly, in any type of physical activity, were more satisfied with life as compared with individuals who did not exercise regularly. The study also concentrated on women in southern West Virginia ages 40 and above, regardless of physical or mental limitations. It revealed that exercise has broadened in definition, and women ages 40 and up improved their quality of life and life satisfaction through various regular exercise routines.

#### REVIEW OF RELATED LITERATURE

Increased life satisfaction, continued quality of life, and psychological benefits can be achieved through regular exercise (Emery, Hauck, Schein, & MacIntyre, 1998; Lavie & Milani, 1995; King, Taylor, Haskell, & DeBusk, 1989, King, Taylor, & Haskell, 1993, Stewart, King, & Haskell, 1993; Paffenbarger & Lee, 1996). Research continues to reveal additional benefits of exercise, yet 60% of US adults remain sedentary (Paffenbarger & Lee, 1996). West Virginia's sedentary levels rank even higher than the national average at 67.9% (Department of Health and Human Resources, 1997). Contradicting the positive aspects of exercise are negative perceptions like

pain, sweat, and drudgery. In reality, exercise can be fun. The definition of exercise has broadened to physical activity. The National Institutes of Health Consensus Statement (1995) defines exercise as “a planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness.” Many leisure activities are considered exercise if they are performed at moderate intensities for 30 minutes per day, such as informal dancing, mowing the lawn, or playing a game of badminton with the kids. Exercise does not have to be extremely vigorous. Participation in moderate intensity activities can achieve the majority of physical activity benefits (U.S. Department of Health and Human Services, 1995). Less strenuous activities, such as walking, share the same psychological benefits as very intense activities, such as running (Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993). In one study by Minor, the physiological benefits from a low-intensity workout may not be as significant as compared with a high-intensity workout, but quality of life benefits are comparably similar (as cited in Stewart, King, & Haskell, 1993). Putting your body in motion helps to secure a longer, happier life. As people age, they should not only desire long life, but also continued quality of life which can be achieved by remaining active (Young, Botella, Greig, & Skeleton, 1994).

Even when illness strikes, exercise increases psychological well-being



(Emery, Schein, Hauck, & MacIntyre, 1998; Lavie & Milani, 1995). Those with heart problems and other chronic illnesses can participate in exercise programs taylorred to meet their needs. Bypass surgery patients who follow their operations with rehabilitation programs report lower rates of rehospitalization (U.S. Department of Health and Human Services, 1995). In all individuals, exercise increases endorphin levels in the brain. Endorphins are chemicals that boost your mood and act as pain relievers (Slupik, 1996, p. 123). Endorphins are present throughout the entire length of life.

Internal and external comfort with your "self" is necessary for increased quality of life. These necessary individual comforts can be achieved through "pleasant-range" activities, activities which individuals enjoy and do not exhaust their energy. The social production theory suggests individuals make their own happiness by striving to reach physical well-being goals through activities that require physical effort (as cited in Ormel, Lindenburg, Steverink, & Vonkorff, 1997). This theory also emphasizes mental well-being. To increase life satisfaction, individuals should devote their energy to the positive areas in life and not dwell on things that cannot be changed. Exercise is a positive area of life over which a person has a high degree of control.

Several studies have shown the positive effects of exercise on quality

of life and life satisfaction (Lavie & Milani, 1995; King, Taylor, Haskell, & DeBusk, 1989; Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993).

Although the literature reviewed considered both men and women of varying adult ages, this literature review concentrates on quality of life and life satisfaction of women. Lavie and Milani discuss the benefits associated with participation in cardiac rehabilitation programs. They determined that nearly all aspects of quality of life improved in women after participation in cardiac rehab (Lavie & Milani, 1995). Not only has exercise improved quality of life in recovering individuals, but exercise positively benefits healthy individuals as well (King, Taylor, Haskell, & DeBusk, 1989; Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993). Physical activity increases quality of life in older women who have lived mostly sedentary lives (Slupik, 1996, p. 125). Research (e.g., Stewart, King, & Haskell, 1993) suggests that participation in regular, daily exercise determines quality of life benefits more than the levels of intensity and format that comprise your workout. Moderate-intensity, 30 minute walking workouts, five times per week result in similar quality of life benefits as compared to higher intensity, 60 minute jogging workouts, three times per week (Stewart et al., 1993).

This information seems to raise the following questions: Does quality of life improve through regular exercise? Is jogging more effective than walking? Are people who exercise regularly more confident than those who do not regularly exercise? Does life satisfaction increase by exercising five days per week as compared to three days per week? These are common questions among people who currently exercise and those considering exercise. The following studies can help answer these and many more questions.

#### REGULAR EXERCISE & AN UNHEALTHY POPULATION

Research (e.g., Lavie & Milani, 1995) on the involvement of women in cardiac rehabilitation programs suggests that the cardiac rehabilitation field neglects women. Doctors do not refer their female patients to cardiac rehab nearly as much as they refer their male patients. If women do participate in cardiac rehab, they are not positively reinforced as much as compared with their male counterparts (Lavie & Milani, 1995). This kind of treatment counteracts any positive steps older women may have made toward increased exercise before their illness. Women live longer than men, so they are often left alone. They must become independent in performing their everyday duties. This independence can be achieved through the increase in a person's quality of life areas. Individuals who remain active

and take care of their health can remain independent well into their senior years.

Lavie and Milani performed a 12 week outpatient cardiac rehabilitation and exercise program with 458 participants. Eighty-three were women. The participants attended 36 educational and exercise programs. Upon entry into the program, participants completed questionnaires on behavior and their quality of life. Assessments were taken of their physical health four to eight weeks after their major coronary artery disease event and before rehab and then again one week before the end of the program. Exercise capacity was assessed at baseline and after the program (Lavie & Milani, 1995).

The 12 week cardiac rehabilitation study found women to be less healthy in many aspects compared to men. For example, women were more obese than men. After the exercise program, women showed a vast number of improvements, such as improvements in their exercise capacity and percent of body fat. Their quality of life scores also improved in most areas except depression, hostility and mental health (Lavie & Milani, 1995). This could have been a result of the type of participants referred to participate in the study. There were only 83 women out of 458 participants involved. The short duration of the study may not have been long enough to alter

depression after a serious operation involving a coronary bypass.

The study reinforces the fact that exercise benefits everyone, whether a person is obese, chronically ill, or extremely healthy. Exercise benefits all ages (Slupik, 1996, p. 125). However, if individuals begin early, they can reverse the road toward bad health and in effect, stay out of the hospital and age successfully (Paffenbarger & Lee, 1996). Although the study did not detail the type or duration of the particular exercises, it did result in positive outcomes.

#### REGULAR EXERCISE & HEALTHY MIDDLE-AGED ADULTS

King, Taylor, Haskell, & DeBusk (1989) studied the effects of regular aerobic exercise on healthy, sedentary, middle-aged adults. One hundred twenty individuals participated in a six month, staff monitored, home-based aerobic exercise training program. Sixty participants, with an average age of 47, were women. Once every three to four weeks, throughout the six month period, staff members called participants to answer any questions they may have had about the program. Social support therefore, was provided in this study as well as the Lavie and Milani cardiac rehab study previously cited. However, the social support did not seem to create a difference among the various group results. Social support did not potentiate the positive, psychological effects of exercise (Stewart, King, & Haskell, 1993; King,

Taylor, & Haskell, 1993). This program consisted of mainly brisk walking and jogging. Participants rated their psychological wellness at baseline and bi-weekly throughout the six month period. They were to rate how they felt during the previous week. Compiling the ratings multiple times makes it possible to determine exactly when the most drastic effects took place during the six month period (King, Taylor, Haskell, & DeBusk, 1989).

In healthy, middle-aged adults participating in the six month program, depression decreased. The exercisers and the control group rated themselves similar psychologically at the baseline, but the people who exercised rated many more positive variables after the six month training. They felt better about their appearance, physical fitness level, and their current weight. These variables, in effect, gave women more confidence and decreased dysphoric/depressed moods. Women were more alert and increased their ability to concentrate on tasks (King, Taylor, Haskell, & DeBusk, 1989).

#### REGULAR EXERCISE & OLDER ADULTS

The next two studies were very similar in scope. Stewart, King, & Haskell (1993) and King, Taylor, & Haskell (1993) both used 50-65 year olds in a one year long program. The study by Stewart (Stewart et al., 1993) consisted of three experimental groups:

Group 1: group based training of higher intensity – This group

participated in brisk walking or walking/jogging, three times per week for 40 minutes each session.

Group 2: supervised home-based training of higher intensity – This group participated in brisk walking or walking/jogging, three times per week for 40 minutes per session. They received phone calls during the entire 12 months from staff members to answer questions.

Group 3: supervised home-based training of lower intensity – This group participated in five exercise sessions per week for 30 minutes each session. They also received phone calls. Their target heart rate was to remain lower than group 1 and group 2 (Stewart et al., 1993).

One hundred ninety-four healthy, sedentary people aged 50-65 participated. Subjects completed self-administered quality of life questionnaires within six weeks of completing the one year evaluation (Stewart et al., 1993). The second (King, Taylor, & Haskell, 1993) study included the same groups as the first (Stewart et al., 1993) but added a control group. No lower-intensity group-based variable was included in either study. Measures were taken to better differentiate the higher and lower intensity groups. The workouts for group 1 and group 2 increased to 60 minutes per session and a walking/jogging routine. Group 3 stayed the same and group 4, the control group, was asked to not alter their daily routine

during the year. Psychological measures for all groups were taken at baseline and at the end of 12 months. The control group was needed for comparison reasons. The population consisted of 357 well-educated, sedentary, predominantly white people between the ages of 50-65. One hundred sixty women were included (King, Taylor, & Haskell, 1993). Due to the increased number of subjects and the length of the program, these studies produced more valid results than the shorter studies discussed earlier.

These two similar studies answered many important questions. Does intensity, type of activity, or duration of activity influence quality of life and life satisfaction? This research suggests higher levels of exercise participation, or increased exercise sessions per week, resulted in greater physical health, physical functioning, and positive pain scores. Intensity and format, or type of activity, did not affect the scores. Subjects exercising at home reported greater adherence than the group-based subjects. People who exercise reported improvements in quality of life variables, such as stress, depression, sleep quality, confidence and well-being, among others.

### IMPORTANCE OF THIS STUDY

Exercise benefits all adult age levels both physically and mentally. It has shown to improve most quality of life areas, such as energy levels, sleep patterns, and alertness. More research is needed on different geographic



areas and more studies need to target women. The studies previously discussed excluded many variations prevalent in the general population that will be included in my study. Individuals taking medications, those that were obese, those with chronic conditions, and women on hormone replacement therapy were excluded from one or all of the studies (Lavie & Milani, 1995; King, Taylor, Haskell, & DeBusk, 1989; Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993). Many adults are considered obese, but lead happy and healthy lives. Many obese people exercise, and for various reasons, such as slower metabolisms, find it hard to shed those extra pounds. Why exclude anyone? The general public is full of people with differing levels of health and physical fitness. How does exercise positively benefit the population as a whole while considering all their illnesses and imperfections? Can exercise affect everyone?

Similarly, women taking hormone replacement therapy are just as healthy as those not taking it. Doctors believe there are many benefits from the therapy and it also helps build bone density (Slupik, 1996, p. 123). Increased bone density benefits quality of life by enabling individuals to age successfully. Decline in muscle function may reduce women's health (Young, Botella, Greig, & Skeleton, 1994). Strong bones will guard women against broken bones during falls. Women will remain active through their

older years.

More activities need to be defined as exercise. Exercise was limited to walking and jogging in the studies reviewed (King, Taylor, Haskell, & DeBusk, 1989; Stewart, King, & Haskell, 1993; King, Taylor, & Haskell, 1993). Are there other activities in which people participate that result in the same improvements found in the previous studies? The studies primarily focused on sedentary subjects. Individuals should not have to alter their daily activities to determine what and how much activity is beneficial. Do those who have exercised all their lives report greater life satisfaction levels than those who just began exercising? What benefits and satisfactory levels are the normal population receiving in their everyday life?

#### RESEARCH QUESTION

Is regular physical activity associated with improved quality of life and life satisfaction in healthy and seemingly unhealthy women ages 40 and older in southern West Virginia?

#### METHOD

##### Participants

The target population studied was found in southern West Virginia. Surveys were distributed to 240 women ages 40 and over. One hundred twenty surveys were distributed to various fitness centers located in

Charleston, Beckley, Princeton, Bluefield, and Athens, West Virginia. The remaining one hundred twenty surveys were distributed to the general public personally by the researcher, through the mail, and by the snowball distribution through friends and family. The surveys were distributed to individuals without prior knowledge of fitness levels. Thirty activity journal participants, also completing surveys, of differing exercise levels produced a more in-depth focus when comparing the six week journal entries with the survey answers. Journal participants were contacted through family and friends. The subjects involved in this study were women of 40 years of age and older and included all health and physical fitness levels.

Subproblem one. The first subproblem was to determine if women ages 40 and over who exercise regularly were more satisfied with their lives as compared with women ages 40 and over who did not exercise regularly.

#### The Data Needed

The data needed for solving subproblem one was compiled through comparing life satisfaction responses on the surveys among the different exercise classification groups.

Subproblem two. The second subproblem was to determine if income level affected quality of life and life satisfaction levels in women ages 40 and over.

### The Data Needed

The data needed for solving subproblem two was determined by investigating those survey participants with the highest income levels and determining if it was related to positive or negative life satisfaction levels.

### DATA COLLECTION

The data was obtained by distributing self-administered surveys to the target population, women in southern West Virginia ages 40 and over. An introduction page for the survey was drafted that explained the purpose and procedures of the study to the participants (Appendix A). The survey was formulated with questions focusing on life satisfaction and quality of life levels. Other questions focused on exercise habits to distinguish between the persons who regularly exercise and those who did not regularly exercise (Appendix B). Fitness centers located in Charleston, Beckley, Princeton, Bluefield, and Athens, West Virginia were contacted for permission to distribute the surveys. Large envelopes were provided in which to place the participating members' completed surveys. Social groups, family and friends were contacted to complete surveys. Surveys were administered anonymously to subjects in the general public and others were sent through the mail. Self-addressed stamped envelopes were provided. Activity journals were distributed using snowball distribution. Interested family and friends

were contacted at least six weeks prior to compiling the data. Activity journal participants explained the type of activity they were involved in every day, how long they performed the activity, and rated their physical and mental satisfaction on a scale from one to ten, one being poor and ten representing great. Surveys and activity journals were collected. The data was compiled. Life satisfaction levels and exercise participation levels, in general, were compiled from the surveys. Daily life satisfaction levels during a six week period and exercise participation levels were compiled from the activity journals. Charts were formulated to visually display findings, such as average life satisfaction levels.

#### METHOD OF ANALYSIS

Two groups were classified using the survey findings. Group 1 represents individuals that exercised regularly, and group 2 represents individuals that did not exercise regularly. The two groups were separated by the amount of exercise individuals reported on the surveys. According to the American College of Sports Medicine (1991) subjects who reported exercising three or more times per week for 20 or more minutes each session were classified as the exercise group. The other subjects reporting two or less exercise sessions per week were classified in the group that did not exercise. As a result, 99 of the 156 returned surveys were classified in the

exercise group, and 57 of the respondents were classified in the group that did not exercise. After determining this, totals for the whole population were considered. Means and ranges were calculated for each life satisfaction question on the survey. Percentages were calculated for "yes" and "no" questions and for the demographic section of the survey. Next, the same data was analyzed within each group. The two groups were then compared. The group was separated into five different age groups to analyze the average satisfaction levels for each life area. Then, the life satisfaction levels were analyzed by breaking the group into seven different income levels. Disability was also considered. Life satisfaction as a whole was analyzed with current employment in a paying job. The fitness level of the exercise group was compared with life satisfaction as a whole. The reported time of their average exercise sessions were analyzed, and the number of various activities in which they reported participation. Data analysis was conducted using the SPSS computer application.

#### LIMITATIONS OF THIS STUDY

There are several weaknesses to this study. Some of these include the fact that participants may rate their general life satisfaction levels as they feel on the particular day of completing the survey, instead of as their life as a whole. Subjects may exaggerate the amount of exercise they perform each

week on the surveys. Subjects who perform nontraditional physical activities, such as mowing the lawn and informal dancing, may not consider these activities as exercise sessions. People who exercise may be easier to find as compared to people who do not exercise. This is due to the fact that people who exercise tend to congregate in groups, such as at fitness centers. Subjects may be embarrassed to admit that they do not exercise. Activity journal participants may not be diligent in filling out their journals every day, and the length of six weeks may not be long enough to determine significant findings. Also, this study was limited in time and money.

## RESULTS

### Life Satisfaction: Exercise vs. Do Not Exercise

The ten life satisfaction areas were analyzed for the entire responding sample population. One hundred fifty-six surveys were promptly returned and completed correctly to facilitate data analysis. The ten life satisfaction areas considered were: social life, sleep habits, weight, personal life, family life, energy, economics, body, career, and life in general. The respondents chose their satisfaction levels based on a scale that ranged from "completely satisfied" to "not at all satisfied." The variables used in data analysis ranged from four to zero, respectively. The group as a whole reported the following averages for each area: social - 2.63, sleep - 2.16, weight - 1.37, personal -

2.87, family - 2.76, energy - 1.93, economics - 2.32, body - 1.63, career - 2.67, and life in general - 2.71 (Table 1). Upon separating the group into regular exercise and those that do not exercise, the results were somewhat different.

Table I

Mean Life Satisfaction Scores of the Group as a Whole, Exercise Group, and Non-Exercise Group

Quality of Life Areas	Whole Group	Exercise	Non-Exercise
1. Social Life	2.63	2.64	2.62
2. Sleep Habits	2.16	2.25	2.00
3. Weight	1.37	1.47	1.20
4. Personal Life	2.87	2.94	2.75
5. Family Life	2.76	2.93	2.48
6. Energy	1.93	2.06	1.70
7. Economics	2.32	2.44	2.12
8. Body	1.63	1.74	1.45
9. Career	2.67	2.75	2.51
10. Life In General	2.71	2.78	2.59

Note. Average score range 0 – 4. 0=not at all satisfied; 1=not very

satisfied; 2=somewhat satisfied; 3=very satisfied; 4=completely satisfied



The exercise group reported higher averages in all life satisfaction areas. The reported averages for the exercise group for each area: social - 2.64, sleep - 2.25, weight - 1.47, personal - 2.94, family - 2.93, energy - 2.06, economics - 2.44, body - 1.74, career - 2.75, and life in general - 2.78 (Table 1). The reported averages for those who did not exercise regularly for each area: social - 2.62, sleep - 2.00, weight - 1.20, personal - 2.75, family - 2.48, energy - 1.70, economics - 2.12, body - 1.45, career - 2.51, and life in general - 2.59 (Table 1). The three areas exhibiting the most notable differences were family, economics and body satisfaction areas.

#### Life Satisfaction Based on Age

Variations in age introduced interesting findings. The age groups were separated as follows: group 1 = 40-49 years (n = 57), group 2 = 50-59 (n = 26), group 3 = 60-69 (n = 29), group 4 = 70-79 (n = 25) and group 5 = 80+ (n = 9). Group 5 scored higher in six of the life satisfaction areas, including social – 3.22, personal – 3.50, energy – 2.38, body – 2.00, career – 3.80 and life in general – 3.11. Group 4 reported the highest satisfaction with their weight – 1.84 and economic situation – 2.77. Group 2 reported the most satisfaction with sleep – 2.50. The groups reported similar scores for their family satisfaction with an average of 2.76.

For the exercise group, group 4 reported the highest scores in four of

the life satisfaction areas, although scores were close in most areas. Group 4 was more satisfied with energy – 2.29, sleep – 2.44, economics – 2.70 and their bodies – 2.06. Group 5 reported highest satisfaction in three of the areas, including weight – 2.20, personal – 3.40 and career. Their career average was 3.75 with the next closest score coming from group 3 with 2.92. Group 3 reported greater satisfaction with life in general – 3.18, and the groups were very close in the family area, around 2.92 (Table 2).

Table II

Mean Life Satisfaction Scores Based On Age – Exercise Group

Quality of Life Area	Group 1	Group 2	Group 3	Group 4	Group 5
1. Social Life	2.84	2.53	2.76	2.76	2.80
2. Sleep Habits	2.11	2.35	2.29	2.44	2.20
3. Weight	1.51	1.24	1.12	1.71	2.20
4. Personal Life	2.84	2.63	3.24	3.12	3.40
5. Family Life	2.89	2.76	3.06	3.00	3.00
6. Energy	2.11	1.76	1.76	2.29	2.20
7. Economics	2.24	2.47	2.47	2.70	2.20
8. Body	1.68	1.71	1.47	2.06	1.80
9. Career	2.65	2.69	2.92	2.58	3.75
10. Life In General	2.59	2.63	3.18	2.81	2.60

Note. Grp.1-n = 37; Grp.2-n = 17; Grp.3-n = 17; Grp.4-n = 17; Grp.5-n = 5

Table III

Mean Life Satisfaction Scores Based On Age – Non-Exercise Group

Quality of Life Area	Group 1	Group 2	Group 3	Group 4	Group 5
1. Social Life	2.25	2.78	2.67	2.78	3.75
2. Sleep Habits	1.90	2.78	2.09	1.56	1.00
3. Weight	0.75	1.44	1.25	2.13	1.25
4. Personal Life	2.70	2.56	2.67	2.88	1.67
5. Family Life	2.60	2.78	2.33	2.22	2.25
6. Energy	1.45	2.44	1.42	1.44	2.67
7. Economics	2.00	1.78	2.00	2.89	1.50
8. Body	1.05	1.67	1.58	1.78	2.25
9. Career	2.47	2.00	2.55	2.67	4.00
10. Life In General	2.45	2.89	2.17	2.75	3.75

Note. Grp.1-n = 20; Grp.2-n = 9; Grp.3-n = 12; Grp.4-n = 9; Grp.5-n = 4

For those that reported not exercising on a regular basis, scores were somewhat lower in all areas. Group 5 reported the highest levels in six of the satisfaction areas, including social – 3.75, personal – 3.67, body – 2.25, energy – 2.67 and life in general – 3.75. Career was also included but only one subject reported in this area for this age group. This group showed much variation in their satisfaction with life in general. Group 5 reported

3.75, and group 3 reported a score of 2.17. Group 4, for those who reported no regular physical activity, scored highest in economic – 2.89 and weight satisfaction – 2.13. Weight satisfaction levels dropped as low as .75 reported by group 1. Family satisfaction scores varied slightly in this group with group 2 reporting an average 2.78 and group 4 reporting 2.22. Group 2 was also highest in sleep satisfaction – 2.78. This area also reported considerably low average satisfaction levels with group 5 reporting 1.00 (Table 3).

#### Life Satisfaction Based on Income

Income levels were broken down as follows by reported average yearly income: group 1 = \$0-\$14,999 (n = 26), group 2 = \$15,000-\$29,999 (n = 20), group 3 = \$30,000-\$44,999 (n = 21), group 4 = \$45,000-\$59,999 (n = 19), group 5 = \$60,000-\$74,999 (n = 18), group 6 = \$75,000+ (n = 14) and group 7 = "no comment" (n = 31). Social life for the entire group was most satisfying for group 1 with an average score of 3.04. However, group 6 was found to be more satisfied with most of the other areas, although all scores were very close. Group 6 was also most satisfied with their economic situation – 2.86 and career – 3.00. Group 3 reported the most satisfaction with life in general with 2.90 average score, and the "no comment" group reported the lowest, 2.43.

Table IV

Mean Life Satisfaction Scores Based on Income – Exercise Group

Quality of Life Area	Grp. 1	Grp. 2	Grp. 3	Grp. 4	Grp. 5	Grp. 6	Grp. 7
1. Social Life	3.19	2.55	2.76	2.67	2.75	2.82	2.47
2. Sleep Habits	2.46	2.55	2.41	1.83	2.75	2.09	1.80
3. Weight	1.13	1.45	1.71	1.75	1.25	1.36	1.53
4. Personal Life	2.63	3.09	3.00	2.83	3.25	3.00	3.07
5. Family Life	2.69	3.00	3.18	2.67	3.33	3.18	2.60
6. Energy	1.94	2.09	2.41	2.08	1.92	2.00	1.73
7. Economics	1.88	2.00	2.76	2.25	2.75	3.09	2.33
8. Body	1.50	1.64	2.00	1.75	1.67	1.73	1.73
9. Career	2.58	2.56	2.63	3.00	3.00	3.00	2.50
10. Life In General	2.63	2.82	3.00	2.58	3.00	2.73	2.50

Note. Grp.1-n = 16; Grp.2-n = 11; Grp.3-n = 16; Grp.4-n = 12; Grp.5-n = 12; Grp.6-n = 11; Grp.7-n = 14

When analyzing the exercise group, group 1 reported the highest satisfaction with their social life – 3.19. Group 5 was most satisfied with their personal life – 3.25 and family – 3.33. The highest weight satisfaction was reported by group 4, 1.75. Group 3 reported highest energy satisfaction, 2.41. The life in general category revealed a two way tie of 3.00 between

groups 3 and 5. There was a three way tie for the highest career satisfaction between groups 4, 5 and 6. Mysteriously, group 7, the “no comment” group, reported low average satisfaction levels in most areas (Table 4).

Table V

**Mean Life Satisfaction Scores Based On Income – Non-Exercise Group**

Quality of Life Areas	Grp. 1	Grp. 2	Grp. 3	Grp.4	Grp. 5	Grp. 6	Grp.7
1. Social Life	2.80	2.78	2.25	2.71	2.50	2.67	2.63
2. Sleep Habits	1.30	1.89	2.75	3.00	2.17	1.67	1.60
3. Weight	1.60	0.56	0.25	1.86	1.17	0.33	1.47
4. Personal Life	3.00	2.56	3.00	2.71	2.67	3.67	2.60
5. Family Life	2.20	2.56	2.75	2.71	2.67	3.67	2.25
6. Energy	1.50	1.89	1.75	2.29	1.83	1.33	1.27
7. Economics	1.78	1.67	2.25	2.57	2.50	2.00	2.07
8. Body	1.30	1.00	0.75	1.86	1.83	0.67	1.81
9. Career	3.00	2.38	2.50	2.50	2.50	3.00	2.29
10. Life In General	2.89	2.33	2.50	3.00	2.50	3.33	2.38

Note. Grp.1-n = 9; Grp.2-n = 9; Grp.3-n = 4; Grp.4-n = 7; Grp.5-n = 6;

Grp.6-n = 3; Grp.7-n = 16

A significant variation in sleep satisfaction was reported. For the group reporting no regular exercise, group 4 income level reported the

highest satisfaction with 3.00, and group 1 reported the lowest satisfaction with 1.3. Once again, weight reveals very low satisfaction levels among all the groups. Group 4 was highest with 1.86 average, and group 3 was the lowest with .25 average. The average weight satisfaction level for the whole group that did not exercise was a low 1.20. Family satisfaction showed much variation, also. Group 6 reported the highest average of satisfaction with 3.67, and group 1 reported the lowest with 2.20. Life in general for the whole group averaged a 2.61 with group 6 reporting the highest with 3.33 (Table 5).

#### Life Satisfaction Based on Disability

Analyzing the group as a whole, 18 reported a disability. Their life in general satisfaction score as a whole was 2.61, compared with those who were not disabled found only a small difference with an average of 2.71. Separating the groups into exercise and those that did not exercise regularly provided the same results.

#### Life Satisfaction Based on Employment

For those that worked for pay, the group as a whole reported a life in general satisfaction score was 2.60. Those that did not work reported a higher satisfaction with an average 2.83. The group reporting regular physical activity reported life in general satisfaction scores of 2.62 for those

that worked and 2.93 for those that did not work. The group that did not exercise reported life in general scores of 2.55 for those that worked and 2.67 for those that did not work (Table 6).

Table VI

Mean "Life in General" Satisfaction Scores Based On Employment

Group	"Life in General" Average
<b>Whole Group</b>	
a. Employed N = 84	2.60
b. Non-working N = 64	2.83
<b>Exercise Group</b>	
a. Employed N = 53	2.62
b. Non-working N = 40	2.93
<b>Non-Exercise Group</b>	
a. Employed N = 31	2.55
b. Non-working N = 24	2.67



Table VII

Mean "Life in General" Satisfaction Scores Based on Marital Status

Group	Marital Status	Average
Whole Group	a. Single - Never Been Married N = 3	2.33
	b. Married N = 88	2.68
	c. Separated or Divorced N = 22	2.59
	d. Widowed N = 30	2.90
Exercise Group	a. Single - Never Been Married N = 2	2.50
	b. Married N = 57	2.75
	c. Separated or Divorced N = 13	2.85
	d. Widowed N = 19	2.68
Non-Exercise	a. Single - Never Been Married N = 1	2.00
	b. Married N = 31	2.55
	c. Separated or Divorced N = 9	2.22
	d. Widowed N = 11	3.27

Life Satisfaction Based on Marital Status

The subjects reporting their marital status as widowed reported the highest satisfaction level for life in general. Analyzing the group as a whole, the widowed group averaged 2.90. Those reporting single status were the

least satisfied with an average of 2.33. Among the exercise group, the highest satisfaction level for life in general was reported by the separated or divorced group with an average 2.85 score. The group scoring the lowest among those who exercised was the singles with 2.50. Those that did not exercise reported greater variance in the life in general satisfaction levels. The widowed group was highest with 3.27 average, and the single group was lowest with 2.00 score (Table 7).

#### Life Satisfaction Based on Exercise Patterns

Looking specifically at the exercise group, life in general levels were compared with exercise program differences. Levels were similar for those exercising alone or with others. The amount of time spent exercising did not seem to matter. The one hour range reported a slightly higher life in general satisfaction average, 2.83. Participation in a variety of activities proved to be somewhat positive. Reports of five or more activities resulted in slightly higher satisfaction levels for life in general. Those involved in a regular exercise program for one year or less reported 2.57 satisfaction with life in general score. Those reporting involvement in regular physical activity for lengthier periods, as a whole, reported 2.70 or above for their satisfaction with life in general. When asked to rate their physical fitness level, five subjects reported a poor level, 22 subjects reported a fair level, 39 subjects

reported an average level, 27 subjects reported an above average level and four subjects reported an excellent physical fitness level. Those reporting an excellent fitness level scored an average 3.00 on satisfaction with life in general. The "above average" group reported an average satisfaction with life in general of 2.78. The "average" group reported 2.90 average satisfaction with life in general. The two lowest fitness levels reported averages of 2.50 and 2.60.

### CONCLUSIONS

Based on the results of this study, we can conclude that subjects who participated in regular physical activity seemed to be more satisfied with their lives as compared with those subjects who did not participate in regular physical activity. The exercise group reported participation in various activities, such as walking, swimming, weight training, aerobics, mowing grass, gardening, skiing, golfing, playing tennis, yoga, stretching, step aerobics, hiking, biking, cleaning house and others. Considering the various age groups, those subjects reporting in the 80+ group, rated themselves more satisfied in six of the ten life satisfaction areas. They were even more satisfied with their bodies despite the fact that the body tends to atrophy as we get older. Another significant finding was the extremely low satisfaction levels with weight. The weight satisfaction level dropped to .75 for the

youngest group researched among the group that did not exercise.

Especially during this age of major hormone changes, the 40 – 49 years old group should seriously consider beginning an exercise program. Life

satisfaction based on employment status, also, found very positive results.

Non-working women who exercise were the most satisfied with life in general among the groups in this study. Analyzing the marital status results, the widowed group reported the highest satisfaction with life in general among the entire group and the non-exercise group. However, the separated or divorced group reported the highest satisfaction with life in general among the exercise group. These conclusions should not be generalized for the entire population, but are specific to the population surveyed.

The study conducted on life satisfaction levels in women over 40 due to regular physical activity warrants further research. The response rate was significant and provided much insight. However, to determine if the individuals participated in nontraditional exercises the survey requires restructuring. It should be more detailed and consist of greater explanations to what outcome is desired by the researcher. The 30 activity journals that were distributed to supplement the survey research and probe deeper into the lives of the individuals were met with much resistance. Only 18 of the journals were properly filled out resulting in insufficient findings. However,

those that were returned proved parallel results with the surveys. For future research, a reward could be offered to those participating with the journal research considering the time constraints of today's woman. Through further research, wellness programs and general encouragement, the increase of southern West Virginia women involved in regular physical activity would significantly improve the health of the state. It is apparent that those who involve themselves in regular physical activity are more satisfied with their lives.

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# HI!

Thank you for taking an interest in my survey! My name is Melissa Garretson. I am a student and McNair Scholar at Concord College. The McNair program is a summer research program that provides support for attending graduate school. I chose to research quality of life and life satisfaction in women over 40. Your participation in my survey will help in my research progress.

- The survey is completely anonymous and voluntary. There is no need to put your name anywhere on the survey.
- Please answer the survey questions honestly. This will make my results more valid.
- If you are interested in the results of my research, the final paper will be at the McNair office, located on Concord College's campus, around the end of October.
- Please turn your completed survey in before July 24. An envelope is provided at the desk for completed surveys.
- Thanks again for your participation. It is appreciated.

Sincerely,  
Melissa Garretson

\*Please begin on the back of this sheet.



**QUALITY OF LIFE AND LIFE SATISFACTION QUESTIONNAIRE**

**AGE:**  40 - 49 **CURRENT MARITAL STATUS:**  Single - never married  
 50 - 59  Married  
 60 - 69  Separated or Divorced  
 70 - 79  Widowed  
 80+

**FAMILY INCOME:**  \$0 - \$14,999  \$45,000 - \$59,999  
 \$15,000 - \$29,999  \$60,000 - \$74,999  
 \$30,000 - \$44,999  \$75,000+  
 no comment

Do you currently work for pay?

Yes  No

Would you consider your job stressful? (circle appropriate number)

1 = not at all 10 = very stressful

1 2 3 4 5 6 7 8 9 10 N/A

**CURRENT LIMITATIONS:**

Have you been physically disabled?  Yes  No If yes, please explain \_\_\_\_\_

**SATISFACTION LEVELS:**

Circle the abbreviation that applies to you after each question.

CS = Completely satisfied

VS = Very satisfied

SS = Somewhat satisfied

NVS= Not very satisfied

NAS= Not at all satisfied

- |     |   |    |    |    |     |     |
|-----|---|----|----|----|-----|-----|
| 1.  | In general, are you satisfied with your social life?  | CS | VS | SS | NVS | NAS |
| 2.  | In general, are you satisfied with your personal life?  | CS | VS | SS | NVS | NAS |
| 3.  | In general, are you satisfied with the way your body looks?                                   | CS | VS | SS | NVS | NAS |
| 4.  | In general, are you satisfied with your current economic status?                              | CS | VS | SS | NVS | NAS |
| 5.  | In general, are you satisfied with your career choice?  | CS | VS | SS | NVS | NAS |
| 6.  | In general, are you satisfied with your energy level?   | CS | VS | SS | NVS | NAS |
| 7.  | In general, are you satisfied with your sleep patterns?                                       | CS | VS | SS | NVS | NAS |
| 8.  | In general, are you satisfied with your family environment?                                   | CS | VS | SS | NVS | NAS |
| 9.  | Are you satisfied with your current weight?   | CS | VS | SS | NVS | NAS |
| 10. | Now please think about your life as a whole.<br>In general, are you satisfied with your life? | CS | VS | SS | NVS | NAS |

**EXERCISE HABITS:**

Do you currently exercise on a regular basis?     Yes     No

If yes, please fill out the back.

**EXERCISE HABITS:**

1. Do you normally exercise  alone or  with others?
2. How many times per week do you exercise? \_\_\_\_\_
3. How long do you exercise per session? \_\_\_\_\_
4. How long have you been involved in a regular exercise schedule?  
\_\_\_\_\_ years \_\_\_\_\_ months
5. What types of exercise do you perform? (include walking, mowing the lawn, gardening, weight lifting, tennis, etc...)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Mark all that apply to your regular exercise workout:  
 aerobic  
 strength training, weightlifting  
 stretching, yoga  
 other \_\_\_\_\_
7. How would you rate your level of fitness?  
 Poor  Fair  Average  Above Average  Excellent

