

IDENTIFYING FACTORS THAT INFLUENCE DROPOUT RATES
IN LEE COUNTY, NORTH CAROLINA

By

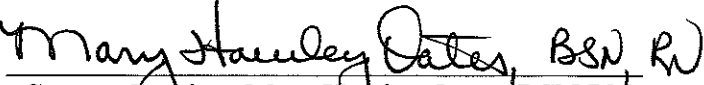
Heather L. Vahdat

27 July 2007

A Master's paper submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the School of Public Health, Public Health Leadership Program.

Approved by:


Second Reader: Cheryl Lesneski, DrPH, MA


Content Reader: Mary Hawley Oates, BSN, RN

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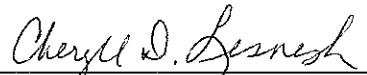
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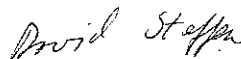
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Abstract

Lee County, North Carolina has been challenged by a steadily increasing dropout rate since 2002. During the 2005-2006 school year, Lee County Schools experienced the third highest dropout rate in the state of North Carolina, prompting school administrators to intensify efforts to identify and address contributing factors.

Dropout data are collected annually on the state level and made publicly available through the North Carolina Department of Education website. Analysis of these data between the years 1999-2005 clearly shows a link between age and dropout with students between the ages of 15-16 years experiencing a significantly higher rate of dropout than all other ages ($p < 0.001$). Analysis of gender and race issues is also quite telling, with males having a greater rate of dropout than women overall ($p < 0.001$) and White females and White males and females combined experienced a much higher rate of dropout than the corresponding Black students ($p = 0.006, 0.03$, respectively).

The Department of Education data also provides information pertaining to reasons for dropout based on up to 20 indicators. The most frequently reported reasons for dropout in Lee County between the years 1999-2005 were attendance (excessive absences) and academic issues. Unfortunately these classifications are non-specific in nature and could be the result of any number of other issues such as behavioral problems, social issues, or language barriers.

Based on this analysis, a determination was made that additional information is required to identify specific factors that could explain the high dropout rate in Lee County before potential interventions can be explored. The best means of obtaining this information will be approaching students who have left school early in the past. To aid in

this effort, a modified version of the 2002 Educational Longitudinal Study questionnaire for dropouts was developed (National Center for Education Statistics, 2002). Additional questions were added to address specific concerns within Lee County Schools related to the growing Hispanic population. This questionnaire will serve as a critical tool in gathering the data necessary to ensure that a relevant intervention strategy is developed to address the specific dropout issues faced in Lee County.

Introduction

During the 2005-2006 school year, Lee County Schools (LCS) experienced the third highest dropout rate in the state of North Carolina at 7.8 percent, which far exceeds the state average dropout rate of 5.04 percent (Owens, 2007). This rate represents an 8.33% increase from the 2004-2005 dropout rate and continues a trend of steadily increasing dropout rates since 2002 (NC Department of Public Instruction, 2007; Table 1). The purpose of this practicum was to work with county school administrators to identify factors that contribute to the high dropout rate observed in LCS through the application of skills associated with the Essential Public Health Services (EPHS), Core Competencies of Public Health Professionals (CCPHP), and Public Health Leadership.

As a means of assessing the problem of dropout in LCS, data related to health status, race, ethnicity, and socio-economic factors were analyzed to determine what roles these factors may have in influencing the dropout rate. Other factors considered include school policies, processes for identifying and communicating with students at risk for dropout, and programs in place to support students who are at risk for dropout.

Table 1. North Carolina School Systems Ranked by Ten Highest Dropout Rates*

Rank	School System	2005-2006		% Change from 2004-05		# of Schools	# of HS
		Count	Rate	Count	Rate		
1	Vance County Schools	217	8.26	13.02	9.84	15	3
2	Northampton County Schools	87	8	47.46	49.81	10	2
3	Lee County Schools	230	7.8	11.11	8.33	14	3
4	Perquimans County Schools	47	7.75	30.56	30.91	4	1
5	Tyrrell County Schools	17	7.56	21.43	26	3	1
6	Robeson County Schools	548	7.46	4.38	2.47	43	8
7	Lenoir County Public Schools	246	7.43	37.43	31.27	19	3
8	Edgecombe County Schools	181	7.3	25.69	22.28	16	4
9	Nash-Rocky Mount Schools	411	7.07	17.77	15.33	29	5
10	Roanoke Rapids City Schools	68	7.04	9.68	7.65	5	1

* Modified from the Report to the Joint Legislative Education Oversight Committee: Annual Report on Dropout Events and Rates (February 2007).

Within the North Carolina Public School System, a dropout is defined as a student enrolled in school at some point during the reporting school year that was not enrolled on day 20 of the current year, that has not graduated from high school or completed an approved program, and does not meet given exclusion criteria (transfers, temporary absences due to illness or suspension, death) (Public Schools of North Carolina, 2006). In addition, individual Local Education Agencies (LEAs) determine cut-off policies for the maximum number of allowable absences per school year. If a student exceeds this number of absences, he or she is automatically considered a dropout for the reporting period. The absence cutoff is currently set at eight days per semester for LCS (Lee County Board of Education, 2007).

Literature Review

A review of the literature conducted using PubMed (U.S. National Library of Medicine), Education Full Text (H.W. Wilson Company, 2007), and Google (Google, 2007) provided insight into potential indicators of dropout observed in other community settings. The most common areas addressed in the literature with respect to high school dropout include teen pregnancy, drug abuse, domestic conditions, race/ethnicity, and socio-economic indicators such as immigration status.

Bohon, Garber, & Horowitz (2007) examined the relationship between dropout and several social factors, including: maternal behaviors, presence of male head of household, and student behaviors by conducting questionnaires and interviews of 240 mothers and adolescents annually between 6th and 12th grade. The findings of this study indicate a higher risk of dropout among children who experience substance use disorders before ninth grade and children of mothers with lower levels of educational attainment. When

considering maternal depression, as was the focus of this report, factors found to be associated with decreased likelihood of dropout among children of mothers with no or mild depression included higher IQ and presence of male head of household. However, these factors were not found to decrease the dropout rates among children of chronic and severely depressed mothers (Bohon, Garber, & Horowitz, 2007).

The relationship between teen pregnancy and high school dropout was assessed by multiple educational researchers. Hofferth, Reid and Mott (2001) found that teenage mothers completed on average 1.9-2.2 fewer years of education than women who experience their first birth at age 30 or older. With specific consideration of completing a high school education, the percentage of teen mothers who complete high school is 10-12% lower than that of women who delay childbirth until age 30 or older (Hofferth, et al. 2001). In a review of literature related to educational attainment of teen mothers, SmithBattle (2006) found that up to 60% of teens mothers actually dropout of high school before they are pregnant and that these students are less likely to complete high school than pregnant teens that remain in high school.

Child Trends, a social research center focused on supporting child and youth research activities, conducted an analysis of age, race, and gender using dropout data obtained from the National Center for Education Statistics (NCES) (Child Trends, n.d.). This study found that between the years 1972-2004, Black and Hispanic students showed a greater likelihood of dropping out of high school than White students, with particularly high rates observed among Hispanics. In addition, when assessing data for individuals aged 16-24, the study found greater risk for dropout among males when compared to females, and among foreign-born students when compared to American born children of

foreign-born parents. Overall findings for this study indicate a general decline in dropout rates between 1972 and 2004. Interestingly, the authors indicate an association between decreased dropout rates among Black students and increased rates of incarceration among Black youth, which would preclude them from the NCES data set (Child Trends, n.d.).

Methods

Analytic and assessment skills provide a foundation for all of the EPHS through problem identification and definition; conduct of thorough reviews of available and relevant data; and collection, storage, evaluation, and interpretation of data all within the guiding principle of ethical practice (Council on Linkages Between Academia and Public Health Practice, 2006). In utilizing these skills, a review of the current literature and other publicly available data was conducted and analyzed to identify areas of focus for potential interventions to reduce dropout rates in LCS.

Data Resources

Descriptive data pertaining to dropout rates in Lee County were obtained from the Education Statistics Access System (ESAS), a publicly available resource provided by the North Carolina Department of Public Instruction (North Carolina Public Schools). The ESAS tool provides comprehensive data reporting for dropouts by grade, reason, race, gender, age, school year, and LEA number for the school years 1999-2000 through 2005-2006. Each of the factors available via ESAS was assessed to determine trends related to the dropout rate in Lee County.

As data related to reasons for dropout provided general information, a dropout survey tool was developed to assess more specific and/or complex reasons that influence student drop out experiences. The survey has not been implemented in Lee County to

date; however it is anticipated that future studies related to drop out prevention in Lee County will include the use of this data collection tool. The survey is described in greater detail in the discussion section.

Information pertaining to race and pregnancy rates was obtained from the Lee County Community Health Assessment (LCCHA) conducted in 2006 (Lee County Public Health and Lee Community Action Network, 2007). However, it should be noted that all data related to these indicators were validated against and referenced by their primary data sources rather than the by the LCCHA itself to ensure that the most up to date information possible is presented

Data were collected and analyzed using Microsoft® Excel® 2007 and were stored on the computer of the reporting investigator. All comparative analyses were conducted using the one-way Analysis of Variance (ANOVA) procedure. Hard copies of data were filed on-site by the reporting investigator.

Results

Reasons for Dropout

ESAS provides 20 reason codes for reporting dropout data; however over time the number of codes has been reduced, with the Dropout Data Collecting and Reporting: Procedures for 2006 providing 17 codes. These codes are detailed in Table 2.

Based on the data provided by ESAS, attendance was the most frequently reported reason for dropout during the 2005-2006 school year (84 students), followed by academic problems (65 students), and moved school status unknown (23 students). Looking at historical trends in reasons provided for dropout (Figure 1), attendance has been a leading indicator of dropout throughout all school years assessed, steadily increasing since the

Table 2. Reason Codes for Dropout Reporting

Reasons	ESAS	2006 Reporting Manual
Academic Problems	X	X
Attendance	X	X
Attendance Family	X	-
Attendance Personal	X	-
Attendance School	X	-
Attendance Work	X	-
Choice of Work over School	X	X
Community College Dropout from Approved Program	X	-
Discipline Problem	X	X
Employment Necessary	X	X
Enrollment in a Community College	-	X
Expulsion (Permanent)	-	X
Health Problems	X	X
Incarcarated in Adult Facility	X	X
Long-term Suspension	X	X
Marriage	X	X
Move, school status unknown	X	X
Need to Care for Children	X	X
Pregnancy	X	X
Runaway	X	X
Suspected Substance Abuse	X	X
Unstable Home Environment	X	X

2001-2002 school year. Academic problems have also been a consistent indicator of dropout, presenting as the leading indicator between the school years 1999-2000 and 2002-2003, taking second place to attendance issues since 2003-2004. The third consistent overall indicator of dropout, moved school status unknown has been a particular challenge to school administrators due to an increasing Hispanic population. It is common for Hispanic students to leave school for extended periods of time to visit family members still living in their home countries. Often these students return to the school system; however their initial absence is still reported as a dropout (personal communication).

In addition, LCS was ranked 28th in attendance for the 2005-2006 school year, 23rd in attendance for the 2004-2005 school year, and 14th in attendance for the 2003-2004 school year providing an overall three-year ranking of 18th out of 115 schools (North Carolina Public Schools; Table 3). As such, LCS has targeted attendance issues as a high priority for intervention efforts to reduce dropout rates.

Table 3. Lee County Schools Attendance Rankings

LEA NAME	2003-04				2004-05				2005-06				3-YR	
	ADA	ADM	RATIO	RANK	ADA	ADM	RATIO	RANK	ADA	ADM	RATIO	RANK	RATIO	RANK
ELKIN CITY	1,140	1,183	96.37	1	1,172	1,205	97.26	1	1,177	1,221	96.40	1	96.67	1
STANLY COUNTY	9,373	9,778	95.86	8	9,317	9,601	97.04	2	9,222	9,606	96.00	6	96.30	2
CHAPEL HILL-CARRBORO	10,189	10,580	96.21	2	10,302	10,705	96.24	4	10,543	10,973	96.08	5	96.18	3
CATAWBA COUNTY	15,850	16,506	96.03	5	16,126	16,803	95.97	7	16,347	17,004	96.14	2	96.04	4
IREDELL-STATESVILLE	18,047	18,922	95.38	25	18,589	19,291	96.36	3	19,412	20,201	96.09	4	95.95	5
ASHEBORO CITY	4,204	4,384	95.89	6	4,287	4,477	95.76	13	4,335	4,510	96.12	3	95.92	6
UNION COUNTY	25,499	26,621	95.79	10	27,365	28,535	95.90	10	30,046	31,330	95.90	8	95.87	7
JONES COUNTY	1,301	1,359	95.73	12	1,293	1,349	95.85	12	1,264	1,317	95.98	7	95.85	8
CHATHAM COUNTY	6,935	7,243	95.75	11	7,069	7,374	95.86	11	7,147	7,471	95.66	9	95.76	9
TRANSYLVANIA COUNTY	3,611	3,759	96.06	4	3,576	3,752	95.31	39	3,680	3,743	95.65	11	95.67	10
LENOIR COUNTY	9,685	10,106	95.83	9	9,370	9,788	95.73	14	9,357	9,806	95.42	24	95.66	11
PERSON COUNTY	5,491	5,742	95.63	16	5,505	5,759	95.59	24	5,609	5,759	95.66	10	95.63	12
WAKE COUNTY	103,547	108,396	95.53	18	108,620	113,547	95.66	20	115,039	120,367	95.57	15	95.59	13
HENDERSON COUNTY	11,508	12,048	95.52	20	11,758	12,292	95.66	22	12,022	12,578	95.58	14	95.58	14
PITT COUNTY	19,904	20,905	95.21	30	20,505	21,374	95.93	9	20,960	21,925	95.60	13	95.58	15
THOMASVILLE CITY	2,474	2,573	96.15	3	2,407	2,522	95.44	33	2,454	2,580	95.12	38	95.57	16
MONTGOMERY COUNTY	4,229	4,423	95.61	17	4,266	4,459	95.67	17	4,271	4,477	95.40	25	95.56	17
LEE COUNTY	8,542	8,924	95.72	14	8,657	9,056	95.59	23	8,710	9,133	95.37	28	95.56	18
SURRY COUNTY	8,111	8,492	95.51	21	8,232	8,622	95.48	31	8,270	8,658	95.52	18	95.50	19
ALLEGHANY COUNTY	1,409	1,472	95.72	13	1,422	1,489	95.50	27	1,448	1,520	95.26	30	95.49	20

ADA = Average Daily Attendance; ADM = Average Daily Membership

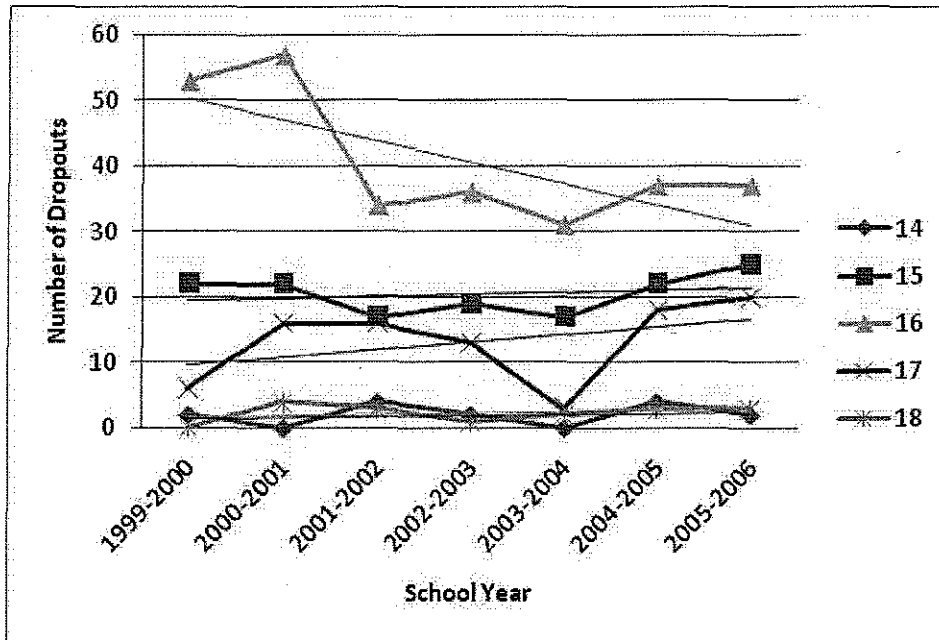
Age

When considering the age at which students left school, assuming the high school age range to be between 14 and 18 years of age, students in the age range of 15-16 years were shown to have a significantly higher risk of dropout than all other ages combined ($p < 0.001$) (Table 4; Figure 2).

Table 4. Number of Dropouts in the Lee County Schools Dropout Data by Age

AGES	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	Age Total
14	2	0	4	2	0	4	2	14
15	22	22	17	19	17	22	25	144
16	53	57	34	36	31	37	37	285
17	6	16	16	13	3	18	20	92
18	0	4	3	1	2	3	3	16
School Year Total	83	99	74	71	53	84	87	551

Figure 2. Number of Lee County Schools Dropouts by Age



As the average age of Lee County dropouts that fall within the 15-16 age range tend to be in the 9th or 10th grade (Table 5), it is clear that targeting students at risk for dropout as early as possible in their high school career is a critical step for reducing the overall dropout rate.

Table 5. Average Age of Lee County Dropouts by Grade and School

Grade	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	Cumulative Average
9	15.76	16.02	15.96	15.89	15.81	15.93	15.97	15.90
10	16.68	16.76	16.60	16.43	16.69	16.83	16.85	16.69
11	17.18	17.09	17.21	16.92	17.23	17.22	17.22	17.15
12	17.70	17.69	17.55	17.50	17.58	17.62	17.64	17.61

Grade

The need to focus intervention early in the high school experience is further supported when considering the grade in which students drop out. The ESAS data clearly show a significant difference between grades with respect to dropout rates ($p < 0.001$; Table 6; Figure 3). Specific comparisons by grade show that 9th graders have a

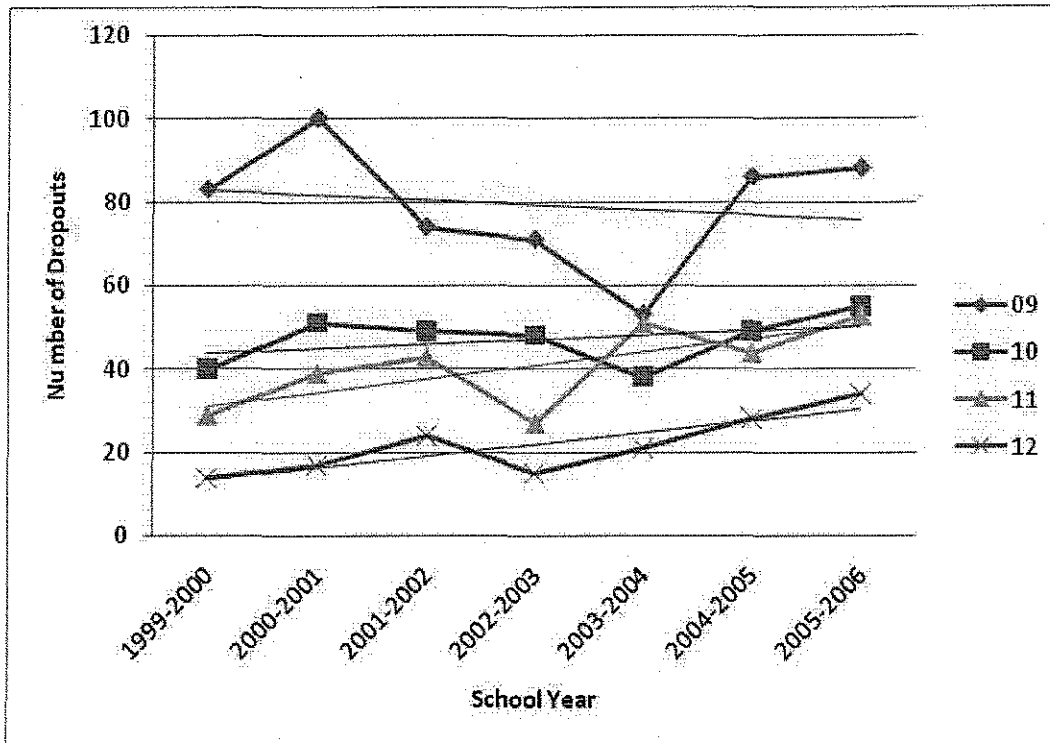
significantly higher rate of dropout when compared to all other grades ($p < 0.001$ for all comparisons) and that 9th and 10th graders combined have a significantly greater risk of dropout than 11th and 12th graders ($p < 0.001$).

Table 6. Count of Lee County Dropouts by Grade (1999-2006)

Grades	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	Grade Total
09	83	100	74	71	53	86	88	555
10	40	51	49	48	38	49	55	330
11	29	39	43	27	51	44	53	286
12	14	17	24	15	21	28	34	153
<i>School Year Total</i>	<i>166</i>	<i>207</i>	<i>190</i>	<i>161</i>	<i>163</i>	<i>207</i>	<i>230</i>	<i>1324</i>

Additional comparisons indicate that 10th and 11th graders when considered individually also have a higher risk of dropout than 12th graders ($p < 0.001$, $p = 0.002$, respectively). Although significant risk of dropout is present as late as 11th grade, which indicates a need for some level of intervention at all grade levels, significant efforts focused on rising or current 9th grade students will not only address the group with the greatest risk overall, but may actually contribute to an associated reduction in dropout among later grades.

It is worth noting that in the state of North Carolina the reported year of dropout may be misleading with respect to the time at which a student left school. The state *Dropout Data "Collecting and Reporting Procedures – 2006"* state: "A school year is defined as the period of time beginning with the first day opening of school to the last day of summer vacation...students who fail to report for the opening of school are counted as dropouts from the last grade and school in which they were actually enrolled". This policy means that even if a student successfully completes a given grade, if they do not enroll in school the following year, they are counted as a dropout from the completed year, which may lead to potential bias towards the earlier grades.

Figure 3. Lee County Schools Dropouts by Grade (1999-2006)

Race and Gender

ESAS provides six indicators of race between the years 1999-2006. These categories include: Asian, Black, Hispanic, Indian, Multiracial, and White.

Analysis of gender as an independent variable clearly indicates a higher risk of dropout among males ($p < 0.001$), which coincides with the findings reported by the Child Trends study (Child Trends, n.d.). Additional analyses comparing ESAS data across race and gender were conducted using adjusted dropout rates, which were normalized using actual enrollment rates for the same time periods (Table 7; Figure 4). Normalization was achieved by first determining the percentage of the total enrolled population that each race constituted during the period of interest by dividing the number of students enrolled for a given race by the total number of students enrolled for the period. Each reported

Table 7. Lee County Normalized Dropout Rate Data by Gender and Race

Race	Gender	2001-2002 Normalized	2002-2003 Normalized	2003-2004 Normalized	2004-2005 Normalized	2005-2006 Normalized
Asian	BOTH GENDERS	0.0076	0.0000	0.0000	0.0000	0.0000
Black	BOTH GENDERS	0.0644	0.0037	0.0045	0.0052	0.0046
Hispanic	BOTH GENDERS	0.0644	0.0041	0.0023	0.0059	0.0064
Indian	BOTH GENDERS	0.0000	0.0002	0.0000	0.0000	0.0002
Multiracial	BOTH GENDERS	0.0038	0.0000	0.0007	0.0007	0.0004
White	BOTH GENDERS	0.1402	0.0083	0.0045	0.0077	0.0077
ALL RACES	BOTH GENDERS	0.2803	0.0164	0.0120	0.0195	0.0193
Asian	Female	0.0000	0.0000	0.0000	0.0000	0.0000
Black	Female	0.0227	0.0009	0.0014	0.0007	0.0018
Hispanic	Female	0.0265	0.0025	0.0009	0.0030	0.0024
Indian	Female	0.0000	0.0002	0.0000	0.0000	0.0000
Multiracial	Female	0.0038	0.0000	0.0002	0.0005	0.0000
White	Female	0.0341	0.0025	0.0020	0.0023	0.0022
ALL RACES	Female	0.0871	0.0062	0.0045	0.0064	0.0064
Asian	Male	0.0076	0.0000	0.0000	0.0000	0.0000
Black	Male	0.0417	0.0028	0.0032	0.0045	0.0028
Hispanic	Male	0.0379	0.0016	0.0014	0.0030	0.0039
Indian	Male	0.0000	0.0000	0.0000	0.0000	0.0000
Multiracial	Male	0.0000	0.0000	0.0005	0.0002	0.0004
White	Male	0.1061	0.0058	0.0025	0.0055	0.0055
ALL RACES	Male	0.1932	0.0101	0.0075	0.0132	0.0129

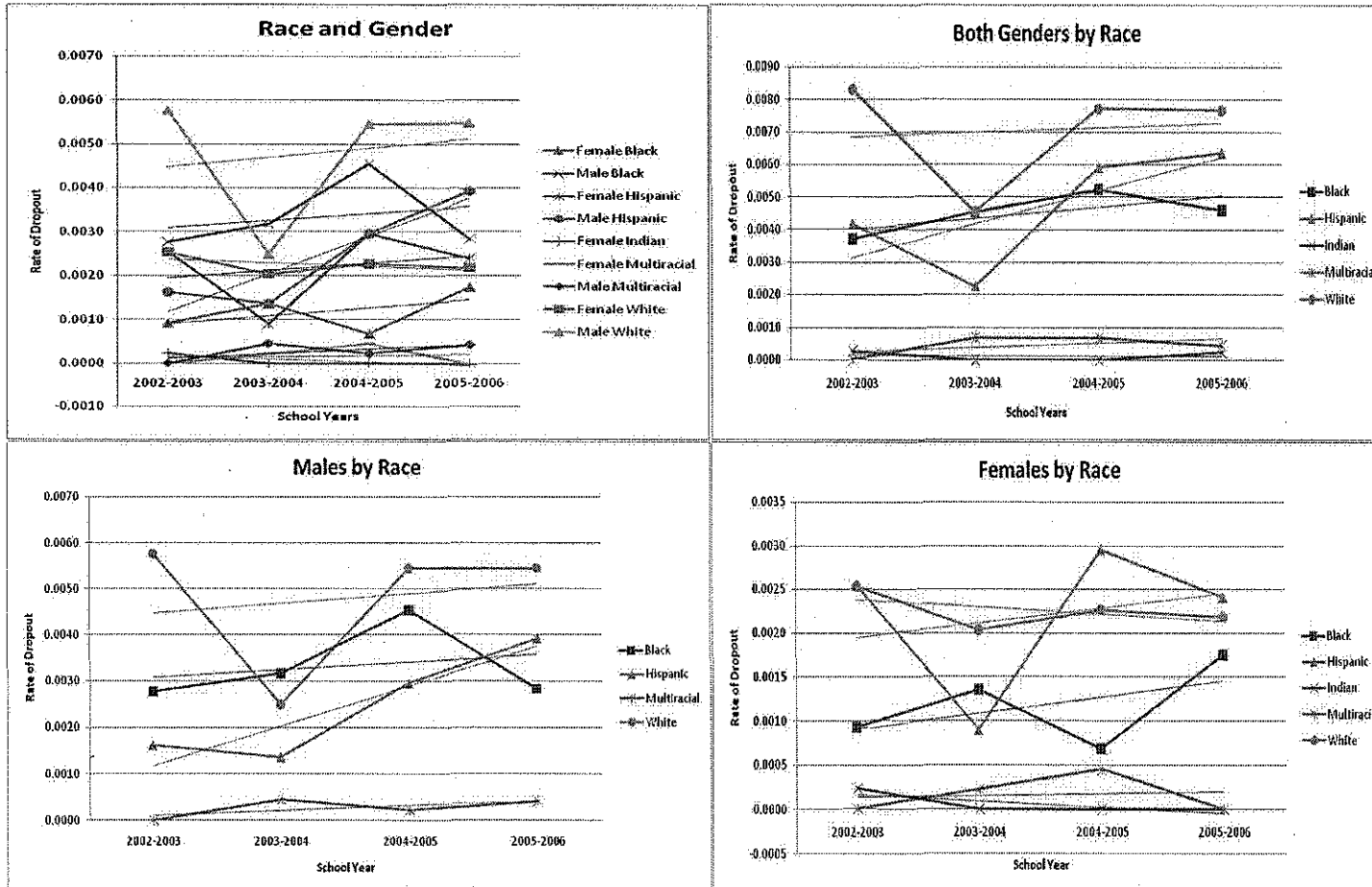
dropout value for a given race was then multiplied by this coordinating to determine the adjusted dropout rate.

The adjusted data show that no individual race/gender combination was shown to have a significantly higher risk of dropout than all of the other races combined. However, analysis of differences in dropout rates between White, Hispanic, and Black students indicated a higher risk among White females when compared to Black females ($p=0.006$) and a higher risk among White males and females combined when compared to Black males and females combined ($p=0.03$). These findings differ from the national findings reported by the Child Trends study, which indicated a greater risk of drop out among Blacks and Hispanics compared to Whites.

Discussion

The results of the analyses conducted clearly indicate that younger students are at a much greater risk of dropout than those in upper classes. It is believed that one major contributing factor to the higher rates of dropout in the earlier grades may be the

Figure 4. Lee County Schools Dropout Rates by Gender and Race** (2002-2006)



**Female Asian, Male Asian, and Male Indian students did not present any dropouts during the period assessed and were not included in this graph.

differences between high school and elementary/middle school policies with respect to the number of allowable absences per school year (personal communication). The current maximum number of both excused and unexcused absences allowed in Lee County High Schools is eight days, which is exactly half the number of days allowed at all other grade levels (Lee County Board of Education, 2007). This shift in policy once students enter high school has the potential to prove extremely challenging to those students and parents who may be more accustomed to having greater flexibility in attendance policies. Of particular concern are students whose parents may face limitations with respect to flexibility in the workplace. If a child is not feeling well or if there are issues with motivating a student to go to school, parents with inflexible work situations may be more inclined to let a child stay home than risk missing or being late to work due to concerns of reprimand, punishment, or dismissal.

With respect to race, a higher risk is clearly associated with White, Black, and Hispanic students, with an increasing trend in dropout over time among Black and Hispanic students overall, Hispanic males, and White and Black females. The intra-WHB comparisons also show a clear distinction between White and Black females and White and Black combined genders. These data suggest that interventions for dropout prevention should involve factors that may be specific to these student populations.

Unfortunately, the reason codes provided by the ESAS tool provide little insight into what factors are actually impacting the dropout rates in LCS. Attendance issues and academic problems, the two most frequent reasons provided during the period assessed, are general observations of student activity that can be the outward manifestation of any number of other factors in a student's life. Further, the instructions provided in the

dropout reporting manual state that in cases where a student's reason for dropping out is unknown, the attendance code may be used. Although the manual also clearly states that efforts should be made to follow-up with a more relevant code whenever possible, it is unlikely that updates to these codes are made on a regular basis.

Other indications that the ESAS data may not provide an accurate reflection of the issues at hand include the fact that there are so few reports of pregnancy-related dropouts. Although Lee County had the tenth highest teen pregnancy rate in the state of North Carolina between the years 2001-2005 (226 per 1,000 population) (North Carolina State Center for Health Statistics, 2007), only six pregnancy-associated dropouts were reported during the same period. This is a much lower number than one would reasonably anticipate. This discrepancy could be the result of programs in place within Lee County to assist young mothers, such as home tutoring, or a phenomenon similar to that reported by SmithBattle where the pregnancies are occurring after students dropout. However, this type of discrepancy highlights the need for gathering additional data.

The challenge, then, in addressing dropout rates in Lee County lies in determining what factors are contributing to the end results that are being observed and reported. There is currently no formal process for obtaining such information from students who do leave school early, such as an exit or follow-up interview, however obtaining some level of detailed information would prove beneficial. These data could be used to identify target areas for intervention on both the county level and at the individual school level. In an effort to provide a means of collecting such data, it was determined that developing a questionnaire to would be the first step in a larger effort to address the dropout issues in Lee County.

Identifying these gaps in the current knowledge related to reasons for drop out presented a leadership challenge in that it requires a complete shift of the initial focus and effort of the project, which was to identify and introduce possible interventions to combat high drop out rates. Although the answer to the proposed question “why are drop out rates in Lee County higher than in other parts of the state” is not imminent, this is not to say the problem solving process has been fruitless. The process of analyzing currently available data has allowed for clear identification of the next steps required to ensure that future data collection efforts provide information that is useful and relatable to intervention efforts. In addition, by using this opportunity to solicit feedback from multiple individuals representing various areas within the educational system, an extremely useful and relevant assessment tool that is specific to the needs of LCS has been developed.

Data Collection Tools

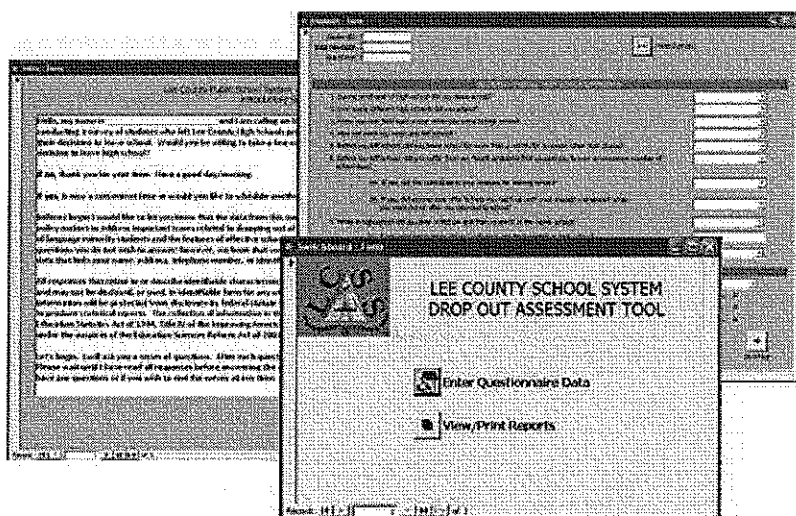
A questionnaire was developed by modifying the “Not Currently in School Questionnaire” created for the Education Longitudinal Study of 2002 (National Center for Education Statistics, 2002). The modified questionnaire consists of 24 questions related to: age, grade, and reasons for leaving school early, history of withdrawal/re-enroll in middle and high school, experiences while in high school, future educational plans, current and previous employment information, race/ethnicity/marital status, and primary language. A complete copy of the questionnaire is included in Appendix A.

Input was solicited from LCS administrators, teachers, and other staff members directly involved with students to ensure as many potential factors that impact student success in school were considered as possible. As a result, the questionnaire addresses

issues such as history of withdrawal/re-enrollment and attendance issues in both high and middle school, and health issues. In addition, special consideration was provided to Hispanic issues, such as the impact of perceived and actual roadblocks to attending post-secondary education on dropout rates. This focus is based on LCS' overall commitment to address the specific needs of a growing population in the area. The fact that Hispanic students are within the same spectrum of risk for dropout as White and Black students further supports a need to address any specific challenges that face these students.

A questionnaire-specific database was also developed to allow ease in data collection and management as well as to provide flexibility in data capturing techniques. The database was modeled exactly after the questionnaire to allow for greater efficiency in data entry in cases where pen-and-paper questionnaires are conducted. This format also allows for direct questioning and data entry similar to that provided by Computer Assisted Telephone Interviewing (CATI) systems. A screenshot of the database is provided in Figure 5.

Figure 5. Sample Data Entry Forms



Conclusions

It is apparent that there are many factors that impact the dropout rates. Although the data show that those at greatest risk for dropout are younger Caucasian, Hispanic, and Black male students, the reasons that these students leave school early are still unclear. Although the drop out trends in Lee County somewhat mirror the national trends with respect to gender and high prevalence among Black and Hispanic students, the increased risk among Caucasian students is unique to Lee County.

The current method of tracking and reporting reasons for dropout clearly identifies attendance and academic problems as the most frequently reported reasons for dropout, however these issues are multi-faceted involving more specific factors at their source. The best means of clarifying the reasons that individuals have left school early is to go directly to the source asking more direct and relevant questions. Although the necessary tools for collecting more relevant data have now been developed, there is still a great deal of work to be done prior to initiating questionnaire administration and data collection.

Future leadership challenges in the study of drop out rates in Lee County will continue to be rooted in the need for flexibility within the vein of continuous quality improvement. It is possible that as the study progresses, yet another path may appear that will divert efforts; however identification and acceptance of these potential diversions is key to ensuring that the ultimate findings are truly representative of student experiences and school processes. These findings will then provide a solid foundation for identifying and implementing powerful interventions.

Also critical in leading these efforts will be the ability to promote open dialogue among all stakeholders, and maintaining the persistence necessary to gather enough data

to be statistically relevant. Now that educational staff feedback has been considered to ensure the inclusion of assessment factors relevant to the experiences within LCS, input from focus groups regarding the administration of the tool is needed to ensure that the questionnaire is conducted in the most efficient manner (e.g. paper-and-pen versus telephone interviews) to promote respondent participation.

Recommendations for continuing the work that has been initiated to date include:

- Obtaining IRB Approval of the questionnaire and to conduct a pilot study
- Translating the questionnaire into Spanish
- Conduct a pilot study and/or focus group discussions to determine the best means for conducting the interview (e.g. paper-and-pen versus CATI; mailing questionnaires versus direct interviewing by telephone or other method).
- Initiation of full interviewing and data collection efforts for statistically relevant number of individuals.
- Compare collected data with those available via the ESAS system to determine if the questionnaire provides more detailed information regarding reasons for dropout among Lee County students.
- Introduction of the questionnaire into current 'exit' or follow-up procedures for dropouts or implementing new procedures to collect this data from all dropouts.
- Conduct a study of the number of days missed in elementary/middle school with dropout rates.

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APPENDIX A. Lee County Schools Dropout Assessment Tool

Hello, my name is _____ and I am calling on behalf of the Lee County Public School System. I am conducting a survey of students who left Lee County High Schools prior to graduation to determine what factors influenced their decisions to leave school. Would you be willing to take a few moments to answer some questions regarding your decision to leave high school?

→ If NO: Thank you for your time. Have a good day/evening.

→ If YES: Is now a convenient time or would you like to schedule another time to complete the interview?

Before I begin I would like to let you know that the data from this survey will be used by educators and by federal and state policy makers to address important issues related to dropping out of school, the education of the disadvantaged, the needs of language minority students and the features of effective schools.

Participation in this survey is voluntary. You may skip questions you do not wish to answer; however, we hope that you will answer as many questions as you can. No individual data that links your name, address, telephone number, or identification number with your responses will be reported.

All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used in identifiable form for any other purpose, unless otherwise compelled by law. Information will be protected from disclosure by federal statute (20 USC 9003a-9007, as amended). Data will be combined to produce statistical reports.

The collection of information in this survey is authorized by Section 404(a) of the National Education Statistics Act of 1994, Title IV of the Improving America's Schools Act of 1994, Public Law 103-382 and continued under the auspices of the Education Sciences Reform Act of 2002, Public Law 107-279.

Let's begin. I will ask you a series of questions. After each question, I will read a series of responses for you to choose from. Please wait until I have read all responses before answering the question. Please feel free to stop me at any time should you have any questions or if you wish to end the survey at any time.

Time Started

The following questions are related to your overall highschool experience.

1. During what year of high school did you leave school?

Freshman	<input type="checkbox"/>
Sophomore	<input type="checkbox"/>
Junior	<input type="checkbox"/>
Senior	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

2. How many different high schools did you attend?

1 school	<input type="checkbox"/>
2-3 schools	<input type="checkbox"/>
4-5 schools	<input type="checkbox"/>
6 or more schools	<input type="checkbox"/>
skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

3. Were you ever held back a year while you were in high school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

4. How old were you when you left school?

<input type="text"/>

5. Before you left school, did you ever leave school for more than a month for a reason other than illness?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

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6. Before you left school, did you suffer from any health problems that caused you to miss an excessive number of school days?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

If Yes, continue to questions 6a and 6b, otherwise move on to question 7.

6a If yes, did this contribute to your reasons for leaving school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

6b. If yes, did anyone ever offer to help you catch up with your missed coursework while you were out or after you returned to school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

7. While in high school did you ever withdraw and then re-enroll in the same school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

If Yes, continue to questions 7a, otherwise move on to question 8.

7a. If yes, how many times did you withdraw and then re-enroll in high school?

8. During your last year in high school, did you miss more than ten days of school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

I am now going to ask you a few questions about your time in middle school. Please take your time and provide the most accurate answers possible.

9. While in middle school did you ever withdraw and then re-enroll in the same school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

If Yes, continue to questions 9a, otherwise move on to question 10.

9a. If yes, how many times did you withdraw and then re-enroll in middle school?

10. While in middle school did you recall missing more than ten days of school in (MARK ALL THAT APPLY):

6th grade?	<input type="checkbox"/>
7th grade?	<input type="checkbox"/>
8th grade?	<input type="checkbox"/>

The next questions are related to your employment.

19. How many jobs have you held since you last left high school?

None	<input type="checkbox"/>
One	<input type="checkbox"/>
Two	<input type="checkbox"/>
Three	<input type="checkbox"/>
Four	<input type="checkbox"/>
Five or more	<input type="checkbox"/>

20. Are you currently employed?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

If Yes, continue to questions 20Ya and 20Yb, if No, continue to 20Na.

20Ya. How many hours per week are you working?

32 hours or more per week	<input type="checkbox"/>
less than 30 hours per week	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

20Yb. Which of the following best describes your current or most recent job?

Manager/Administrative	<input type="checkbox"/>
Professional/Technical	<input type="checkbox"/>
Sales/Marketing	<input type="checkbox"/>
Clerical/Administrative Support	<input type="checkbox"/>
Service Worker	<input type="checkbox"/>
Crafts Worker/Installer/Repairer	<input type="checkbox"/>
Operator/Assembler	<input type="checkbox"/>
Laborer	<input type="checkbox"/>
Other (specify):	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

20Na. If you are not working, are you:

Seeking employment	<input type="checkbox"/>
A homemaker	<input type="checkbox"/>
Student	<input type="checkbox"/>
Other (specify):	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

The last set of questions are related to your marital status, age, race and ethnicity.

21. What is your marital status?

Married	<input type="checkbox"/>
Divorced	<input type="checkbox"/>
Separated	<input type="checkbox"/>
Widowed	<input type="checkbox"/>
Never married	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

22. What is your date of birth? (MM/DD/YYYY)

<input type="text"/>

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23. How would you classify your race or ethnic group?

African American	<input type="checkbox"/>
Asian	<input type="checkbox"/>
Caucasian	<input type="checkbox"/>
Native American	<input type="checkbox"/>
Pacific Islander	<input type="checkbox"/>
Hispanic	<input type="checkbox"/>
Multiple Races (specify):	<input type="checkbox"/>
Other (specify):	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

24. Is English your primary language?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Skip	<input type="checkbox"/>
DK/NR	<input type="checkbox"/>

Time Completed

That completes the interview. Do you have any questions?
Thank you for your time. Good-bye.