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Who Chooses and Why in a Universal Choice Scholarship Program: Evidence from Douglas County, Colorado

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Introduction

In March 2011, the school board in Douglas County, Colorado, approved a one-year pilot choice program that would give up to 500 qualifying district students a scholarship of \$4,500 to attend the school of their choice. Qualifying students was defined as those who are Douglas County School District (DCSD) students and enrolled in a DCSD school during the 2010-2011 school year. Scholarships could be used at any participating school—including private religious schools—and were not limited by geography. In other words, the destination school did not have to be located in Douglas County.

As of this writing, the program has not been implemented due to litigation that enjoined its execution. However, parents applied for and received scholarships (or notice of the award), which facilitated the study of a particular topic of interest in school choice: “Who chooses and why?” Consistent with others like it, the focus of this study is on the demographics of choosers (focusing particularly on parent or family characteristics) and the reasons given by parents for their particular choices—whether to enroll their child at a school of choice or to remain in the public school.

What makes the DCSD program so unique in this type of research is its scope and context. While other programs are means-tested (Martinez, Kemerer, & Godwin, 1993; Paul, Legan, & Metcalf, 2007), the DCSD program was open to all applicants, no matter their socio-economic background. Moreover, unlike the urban settings of most private choice programs, Douglas County is a comparably homogeneous, middle- to upper-income school district with well-regarded schools and high performing students. Consequently, a study of parental decision making in such a context is an unusual opportunity.

Through a survey of DCSD parents, we found applicants and non-applicants looked similar in many respects, with some statistically significant but small differences in race/ethnicity, education level, marital status, income, religious preferences, parental involvement, and being choice-minded prior to the program’s advent (i.e., applying for a charter or other choice school in prior years). On several measures, both groups appeared similarly involved in their child’s education. Differences of note included the frequency of communication with the school and involvement at the school, including volunteering, attending conferences, parent teacher organizations, and belonging to other school-related organizations. On these measures, applicants consistently reported being more involved than non-applicants.

Some of the greatest differences between groups appeared to be in levels of satisfaction—applicant parents appear to have been far less satisfied across multiple indicators. Applicant parents more often reported serious or very serious problems in their school (fighting, drugs/alcohol, etc.) and also were more likely to give their school a C- or below on a traditional A to F grading scale. Differences between groups in levels of satisfaction were evident even after controlling for background characteristics of respondents. Satisfaction also represented a

significant predictor of applying for a scholarship and remained so after controlling for participant background variables, several of which were significant predictors themselves.

Background

Since the advent of modern school choice programs, a perennial and important topic of interest has been parental decision making in the school choice process. In particular, choice research has focused on two primary questions: (1) What are the characteristics of families who choose, and (2) Why do parents choose (Goldring & Hausman, 1999; Witte & Thorn, 1996)? Because most, or at least the oldest, programs to date have been of the means-tested variety, the context has been—by definition—limited to a particular socio-economic sample. But that does not mean the questions are not equally interesting or important for other social sectors, such as middle class parents. As Bosetti (2007) notes, middle class parents increasingly see schooling as a way to provide their children a social and economic competitive edge. Thus, one would expect that reasons provided for pursuing choice options would be aligned with such motivations. To date, however, researchers have had little opportunity to test that supposition with middle class parents.

In addition, the historical trajectory of choice during the past several decades has been one of additional choice programs in an increasing number of states (Carpenter & Kafer, 2012). Some of this is an expansion of public choice, such as charter or magnet schools, but private choice has also seen growth in the form of voucher and tax credit scholarship programs. Assuming this trajectory continues, schools in all kinds of contexts will increasingly compete in an educational market. As Manna (2002) notes, both receiving schools and sending schools would learn something beneficial from knowing who chooses to leave and why.

Finally, as Weiss (1998) and others (Bosetti, 2004; Witte & Thorn, 1996) observe, policy theories of school choice place significant weight on the power of parental choices. A fundamental assumption in these policies is rational choice theory, which suggests parents are utility maximizers who make decisions based on calculations of costs, benefits, and probabilities of success. Some scholarship, however, has begun to question the accuracy of such assumptions, positing a decision making process influenced by social relationships and personal values in addition to traditional rationalities (Ball, 2003; Bauch & Goldring, 1995; Bosetti, 2000; Bosetti, 2001; Reay & Ball, 1996; Reay & Lucey, 2000). Consequently, choice observers have called for further research to illuminate factors that contribute to the decisions parents make when exercising choice (Goldring & Hausman, 1999; Manna, 2002), particularly in light of the still-small literature that is consistent on some findings but quite mixed on others.

Of studies that have examined the questions of who chooses and why, particular attention has been paid to several constructs: characteristic differences between choosers and non-choosers (Wolf, Eissa, & Gutmann, 2006), parental satisfaction, and reasons given for choosing. Each of these is reviewed briefly below.

Characteristic Differences between Choosers and Non-Choosers

Because educational choice is often criticized for its potential to result in segregation by personal characteristics such as race/ethnicity, socio-economic status and the like, prior research has examined how choosers and non-choosers differ in these various respects (Neild, 2005).

Although findings have been described as “mixed” by some (Goldring & Hausman, 1999), a collection of studies generally indicate parents who actively choose schools are better educated, have higher levels of income, and are less likely to be unemployed than non-choosing parents (Carnegie Foundation for the Advancement of Teaching Report, 1992; Godwin, Kemerer, & Martinez, 1998; Goldthorpe, 1996; Hatcher, 1998; Haynes, Phillips, & Goldring, 2010; Whitty, Power, & Halpin, 1998).

In voucher programs specifically, participating families also seem to differ significantly from comparison groups, at least in some of the programs. In Milwaukee, for example, Black and Hispanic students tend to take advantage of the voucher at rates disproportionately greater than the student population in Milwaukee public schools (MPS). Moreover, in terms of economic and family status, the income of voucher students is substantially lower than their MPS peers; they are much more likely to be on income assistance; and they are much less likely to have two parents in the home (Witte & Thorn, 1996). Finally, the parents of voucher students are more educated than MPS parents and have higher educational expectations for their children.

Differences also exist in the Washington, DC scholarship program. According to Wolf, Eissa, and Gutmann (2006), voucher applicants are somewhat disadvantaged educationally and economically, and more likely to be African American, compared with non-applicants. Although applicants and non-applicants are similar in baseline reading and math performance, 16% of the applicants are students in special education compared with only 14% of the non-applicant sample. Applicants and non-applicants are similar regarding student gender, but applicants are more likely to participate in the federal school lunch program.

In New York City’s School Choice Scholarships Foundation program, applicants to the voucher program were more likely to be welfare recipients, yet more likely to have mothers who were employed (Howell, 2004). Regarding maternal education, applicants were more likely to have mothers who at least attended college if not completed a bachelor’s degree and less likely to have mothers who had not completed high school. Similarly, in San Antonio’s choice program, choosing families were better educated, had higher incomes, held higher educational expectations for their children, and were more likely to be employed than non-choosing families (Kemerer, Martinez, & Thomas, 1994; Martinez et al., 1993). The differences continued when looking at a voucher program in Charlotte, NC. Cowen (2010) reports that a student whose parents did not live together, whose mother was fully employed or had lower levels of education, and who was African American was less likely to make the private school choice.

In contrast to the aforementioned programs, Paul, Legan, and Metcalkf (2007) report that applicants to Cleveland’s voucher program are quite similar to the student population in the Cleveland school district, a finding that proves consistent regardless of the grade level being examined.

Parental Satisfaction

If results concerning differences in personal characteristics between choosing and non-choosing parents are mixed, this is not so for parental satisfaction. No matter how satisfaction is measured, choosing parents are consistently less satisfied with their catchment schools than non-choosers.

One measure of satisfaction is asking parents to rate schools using a traditional A to F grading scale. Findings from programs such as San Antonio and Milwaukee find that choosing parents routinely assign lower grades to their neighborhood schools as compared to non-choosers (Kemerer et al., 1994; Witte & Thorn, 1996). A second oft-used measure of satisfaction is a series of questions addressing various elements of the school, such as educational quality, discipline, programs, teachers, principals, and resources (Bosetti, 2004). As with grades, choosing parents often report lower levels of satisfaction, particularly related to educational quality and discipline (Witte & Thorn, 1996).

Such findings are not too surprising. Choosing to send a child to a school other than the neighborhood school can be viewed as an exercise of the “exit option” (Hirschman, 1970) resulting from dissatisfaction. What is less clear, however, are the specific sources of dissatisfaction (Hausman & Goldring, 2000). Although school quality and safety are frequent sources of dissatisfaction, some suggest a lack of ideological congruence or personal values may also play a part in satisfaction levels (Goldring & Shapira, 1993; Hausman & Goldring, 2000).

Reasons for Choosing

If the preceding addresses, in part, the question of who chooses, reasons for choosing addresses the why. Although parents may choose a voucher for any number of reasons, the most common priorities include academics, convenience, school characteristics, religious values, and safety, particularly academics and safety (Haynes et al., 2010; Kemerer et al., 1994). In fact, one of the most consistent findings in school choice literature is that academic quality is one of the highest priorities for choosing parents (Haynes et al., 2010; Kemerer et al., 1994; Martinez et al., 1993; Uchitelle & Naught, 1977; Wolf et al., 2006; Ysseldyke, Lange, & Algozzine, 1995). This is true for parents of different racial/ethnic backgrounds (Haynes et al., 2010), those with students with special needs (Ysseldyke et al., 1995), or other characteristics.

Although school safety is among the highest considerations for choosers, it is not equally so based on socio-economic status or race/ethnicity. Lee, Croninger, and Smith (1996) contend that safety is more of a concern for minority and low-income parents than it is for middle-class, White households—largely because the former, given the location of their homes and schools, have more reason to be concerned about the safety of their children.

After academic quality and safety, other reasons given for pursuing school choice varied in their emphases. Because many school-choice options do not provide transportation to and from the schools, parents often mention convenience as an important factor in the choice decision (Kleitz, Weiher, Tedin, & Matland, 2000). School characteristics—aside from academic factors—are also important to some parents when choosing a school for their children. For example, school size, school neighborhood, and the diversity of the school are important to some choosers. Prior

research indicates minority parents and lower-income parents were much less likely to report that school values and racial diversity were important considerations when choosing a school for their children. However, parents with a college education cited diversity and teaching values as important concerns for their child's education (Schneider, Marschall, Teske, & Roch, 1998; Schneider, Teske, & Marschall, 2000). In choice programs with private school options, those values also included religious values, as parents saw choice as a way to send their children to schools aligned with their families' religious beliefs (Bauch & Goldring, 1995).

It is important to note that some of the preceding research cited included studies of public choice programs only (i.e., charter or magnet schools). However, research on programs with private choice options show similar findings. In Milwaukee, for example, parents who applied to the program appeared to stress the academic quality of a "sending school" as a reason for choosing (Manna, 2002). This was followed by school discipline, general atmosphere of schools, school locations, finances, student performance, and special programs (Witte & Thorn, 1996). In the San Antonio program, religious training ranked as important to many of the participating programs (Kemerer et al., 1994), which was not entirely surprising, since the majority of students attended religious schools. In fact, only 1% of participating students in private schools attended nonreligious institutions.

As detailed below, these prevalent themes—characteristic differences between choosers and non-choosers, parental satisfaction, and reasons given for choosing—played a central role in our study of Douglas County's Scholarship Program. This facilitates a broad comparison of diverse samples of parents—those in urban areas of comparably limited means and those in a suburban school district who report middle and upper incomes—on the questions who chooses and why.

Methods

Research Questions

This research is guided by four primary questions.

1. What are the demographic profiles of parents and families who apply for choice scholarships?
2. Is there a difference in the types of parents who applied for the program and those who did not?
3. Why do parents apply for choice scholarships?
4. Is there a statistically significant difference in parental satisfaction between those who apply for and receive a scholarship to attend a school of choice and those who do not?

Study Context and Sample

The participants in this study include parents in the Douglas County School District. Douglas County is located between Colorado's two largest cities: Denver and Colorado Springs. According to 2010 census figures, the county population is 285,465, which represents an increase of more than 60% since the 2000 census. Demographically, the population in Douglas County tends to be more homogenous than the state as a whole. Census data indicate more than 90% of the county population is White (state=81.3%), greater than 54% hold a bachelor's degree

or higher (state=35%), and the median household income is greater than \$99,000 (state=\$56,000). Almost 3% of the county population lives below the poverty level, compared to more than 12% statewide.

Unlike some counties in Colorado where multiple school districts operate within one county, Douglas County is served by one school district. According to Colorado Department of Education data, DCSD is the third-largest school district in Colorado, serving 63,114 students, more than 23% of which are racial/ethnic minorities and more than 11% of which qualify for the free and reduced lunch program. Statewide, almost 44% of the student body is comprised of racial/ethnic minorities, and more than 41% qualify for the free and reduced lunch program.

Across the 70 schools operating in the district, parents can choose from traditional neighborhood schools, charter schools, magnet schools, alternative schools, and online programs. DCSD also offers parents the opportunity to find and choose a school within the district based on particular programmatic or philosophical priorities (see, for example, <https://www.dcsdk12.org/schools/index.htm>). Thus, the Choice Scholarship Program was an addition to a school district already rich in choice options (albeit public choice).

When the Choice Scholarship Program was adopted in 2011, up to 500 scholarships were offered and awarded. When the program was enjoined by the court, many scholarship families remained in a DCSD school for the 2011-2012 school year, but some elected to enroll in the private school they chose as part of the scholarship program. This research focuses primarily on family characteristics and perspectives respondents held about their children's schools the year prior to the truncated implementation of the scholarship program. Therefore, the relevant condition is whether a parent applied for and received a scholarship, not where their child attended school during the 2011-2012 school year (i.e., what would have been the first year of the program).

The sample includes two groups—"treatment" parents who applied for a choice scholarship ($n=171$ completes) and a "control" group of parents who did not apply for a scholarship ($n=2,469$ completes). The sample was created by sending an email to all district parents inviting them to participate in the survey (described below). One of the first questions in the survey acted as a filter, sending scholarship parents into one survey form and the nonscholarship parents into a slightly different form. Due to cost constraints, the nonscholarship group was originally capped at 1,000 completes and then expanded to 2,000 given robust response rates (more detail is included in Procedures below).

Survey

Consistent with prior studies on this topic (Bosetti & Pyrt, 2007; Hastings, Kane, & Staiger, 2005; Hausman & Goldring, 2000; Haynes et al., 2010; Witte & Thorn, 1996; Wolf et al., 2006; Wolf et al., 2010; Ysseldyke et al., 1995), data were collected through anonymous online surveys administered by a national polling company. Most of the 61 questions on the survey were culled from those used in evaluations of the Washington, DC Scholarship program (Wolf et al., 2010) and the Milwaukee school choice program (Wolf, 2011). Any changes from those instruments' questions were made to tailor the survey to DCSD and its program, but the alterations were minor.

The survey began with a few basic questions about the schools attended by the respondent's child (such as school type, grade of the student, how private school parents were paying tuition, etc.). This was followed by a block of questions about school options—if control group parents heard of the scholarship program, how parents had heard of the program (assuming they did), reasons for choosing or not choosing to apply, if parents would apply for the program next year if available, and the like. These two modules of questions differed somewhat based on treatment or control group, as some questions were relevant only for one group or another.

The remaining questions were entirely the same for both groups. Consistent with prior studies (Goldring & Shapira, 1993; Manna, 2002), the first module of these included a series of questions concerning parental satisfaction with their school “last year” (i.e., the year before what would have been the program's first year). This was followed by a group of questions addressing parental involvement (Goldring & Shapira, 1993; Witte & Thorn, 1996) and then another group asking about parental expectations and the importance of education. The final module of questions gathered demographic information about respondents. These included a panel of standard indicators about race/ethnicity, gender, education, employment, income, neighborhood, marital status, family, and religious preference.

Note that the survey did not ask for opinions about the scholarship program. The intent of the research was to examine who chooses and why, not to gather opinions about the program. Moreover, aside from a few questions on parental satisfaction, the question did not ask questions about parents' opinions about the Douglas County School District, as this was not the intent of the research.

Data Collection Procedures

As stated above, study participants were invited to participate in the online survey through an email sent to all district parents. To protect the privacy of parents, the district required that the email invitation be distributed through their email system rather than providing a list of emails to the polling company responsible for data collection. Also out of concern for the privacy of parents and ease of process, the district requested that rather than identifying a random sample of nonscholarship parents to be invited into the control group, all nonscholarship parents be invited to participate and the survey be closed when the control group sampling quota (mentioned above) was met. A \$5.00 electronic gift card was used as an incentive.

Survey invitations were first sent out to a small sub-sample of parents as a field test of the online instrument. This also enabled the survey company to track and estimate response rates upon full implementation. Data collection spanned December 5 to December 9. Response rates in the control group were robust (significantly more so than the field test intimated), and the original quota was quickly met, thereby closing the survey to the control group. The control group quota was then expanded, thereby re-opening the survey until the second quota was met. The survey remained open to treatment group parents until the end of data collection.

Analysis

Given the different modules of questions represented on the survey, data were analyzed in several different ways.

Parent Demographics and Involvement. These constructs were analyzed and reported below with descriptive statistics. Differences between treatment and control parents were analyzed and reported below using descriptive statistics and basic inferential tests.

Satisfaction. Consistent with the aforementioned DC and Milwaukee Scholarship evaluations, satisfaction was measured two different ways: (1) the percentage of parents who assigned their child's school a grade of A or B, and (2) average score on a 12-item school satisfaction index.

For the primary analysis, the latter measure of satisfaction was used. On the survey, parents were asked, "How satisfied are you with the following aspects of your child's school?" and rated a series of dimensions on a 4-point scale ranging from "very dissatisfied" to "very satisfied."

The responses to the satisfaction items were combined into a single parent satisfaction scale using item response theory (IRT). IRT is a procedure that draws upon the complete pattern of responses to a set of questions in order to develop a reliable gauge of the respondent's level of a "latent" or underlying trait, in this case satisfaction.

Differences in satisfaction between scholarship parents and non-scholarship parents were measured with the following general model:

$$\text{Satisfaction} = \beta_0 + \beta_1(\text{scholarship}) + X + e$$

where

scholarship = a grouping variable indicating whether a respondent was a scholarship parent or not

X = a vector of parent characteristics

Results for the other measure of parental satisfaction are reported below using descriptive statistics.

Why Parents Choose. Consistent with prior studies of this type (Hastings et al., 2005; Haynes et al., 2010), this construct was measured by asking treatment group respondents to identify the importance of a list of 14 items to applying for the scholarship. Parents were then asked to identify the most important item. For point of comparison, we also asked control group respondents to identify the importance of 15 factors in deciding not to apply for a scholarship and the most important from among the list. Responses to these questions were analyzed and reported below using descriptive statistics.

Additionally, consistent with prior analyses (Witte & Thorn, 1996), we examined the propensity to apply for the program using satisfaction, involvement, and demographic characteristics as predictors. This analysis was completed using probit regression.

Two final analytical notes; as mentioned above, the survey was field tested prior to wide release. As a result of the field test, a prompt was added to the beginning of the survey directing participants to answer all questions with one child in mind, in the event that they had multiple school-aged children at home. Because responses to some questions differed between respondents who did and did not see the prompt, we controlled for this in multivariate testing. Second, when the survey closed to control group parents (also noted above), some non-scholarship parents who were unable to enter the survey elected to identify themselves falsely as scholarship parents in order to view the survey questions. Some answered the survey questions, while others clicked through the questions without answering (none of the survey questions were mandatory). We were made aware of this prior to analysis and tested response patterns to discern if there was any significant bias or error introduced that needed to be controlled. Results indicated no significant differences requiring remediation.

Results

The presentation of results begins with characteristics of applicants compared to non-applicants, followed by levels of parental satisfaction, reasons for choosing (or not), and finally a brief description of the status of applicants given the program's enjoined status.

Characteristics of Appliers and Non-Appliers

We first consider the demographic make-up of applicants and non-applicants to the Choice Scholarship Program. As Table 1 indicates, members of both groups are primarily white, although applicants to the program are slightly more likely to be non-white. Applicants and non-applicants are also relatively well-educated. In both groups, less than 2% of parents report they failed to earn a high school diploma. Approximately 95% of applicants and 96% of non-applicants reported completing at least some college, although non-applicants were somewhat more likely to have earned at least a four year degree. Respondents reported similar educational attainment levels for the child's other parent.

The eligible population for the program is relatively wealthy compared to the nation and also compared to previously studied school choice programs. As Table 2 shows, approximately 53% of both applicants and non-applicants live in households with total incomes of \$100,000 or more. About 11% of non-applicants reported household incomes of \$50,000 or less, compared to fewer than 5% of applicants. Further, the vast majority of both applicants and non-applicants report that they currently work full time, as do the child's other parents. Both groups also report similar (and relatively high) rates of owning their own home and that they believe they live in a very safe neighborhood.

Table 1. Respondents' Race/Ethnicity and Level of Education (in percentages)

	Applicants	Non-Applicants
<i>Race/Ethnicity</i>		
American-Indian	4.07	0.81
Asian	4.07	3.35
Black	4.07	0.43
Hispanic	4.07	3.74
White	75.61	87.21
Decline to Answer	11.38	6.66
<i>Highest Education Completed</i>		
Eighth grade or below	0.81	0.10
Some high school	0.00	0.10
GED	0.81	0.34
High school graduate	4.07	2.87
Technical school	3.25	2.64
Some college	22.76	17.49
Four year college degree	36.59	43.89
Post graduate work	31.71	32.58
<i>Other Parent's Highest Education</i>		
Eighth grade or below	0.83	0.19
Some high school	2.48	0.63
GED	0.83	0.91
High school graduate	6.61	6.02
Technical school	4.13	4.28
Some college	23.97	19.68
Four year college degree	36.36	40.38
Post graduate work	23.14	27.57

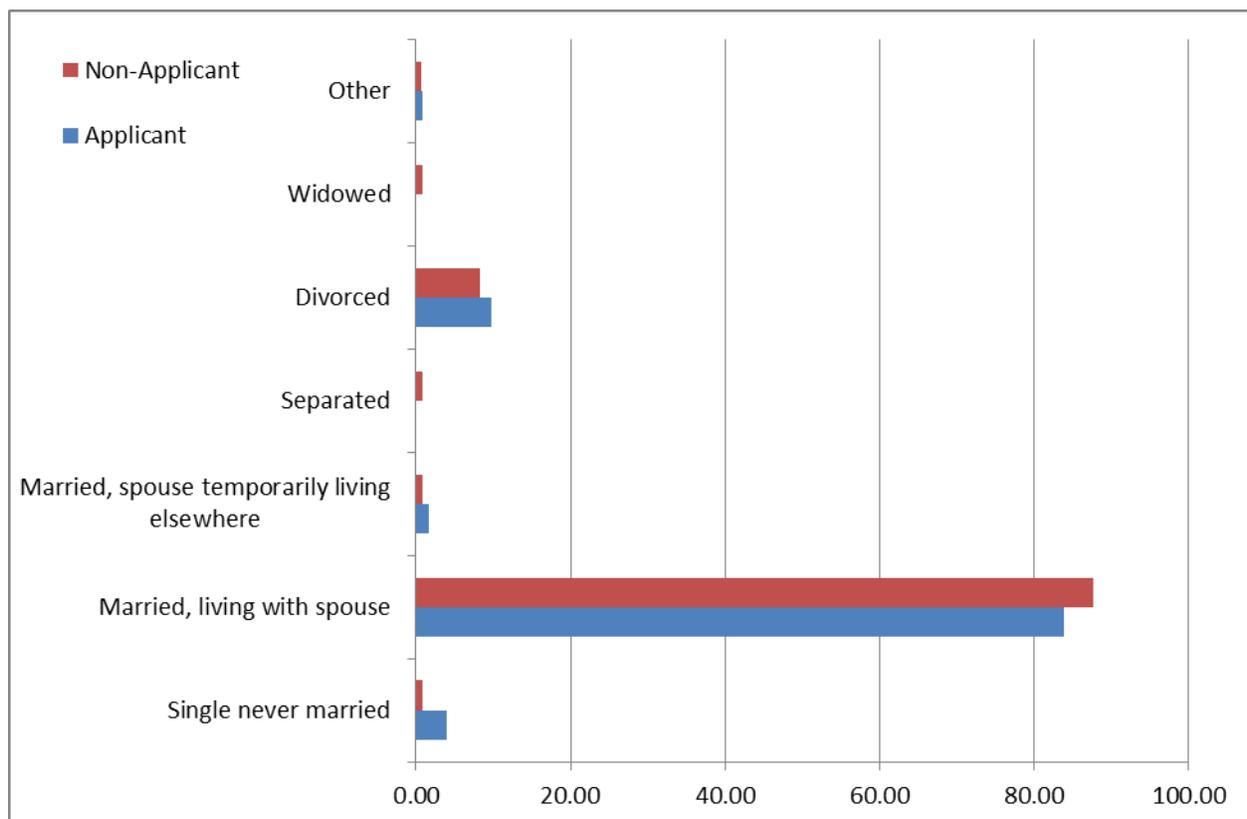
Table 2. Respondents' Income, Employment, and Housing

<i>Total household income</i>	Applicants	Non-Applicants
Less than \$5,000	0.10	
Between \$5,001 and \$7,500	0.10	0.83
Between \$7,501 and \$10,000	0.05	
Between \$10,001 and \$15,000	0.34	
Between \$15,001 and \$20,000	0.14	
Between \$20,001 and \$25,000	0.48	1.65
Between \$25,001 and \$35,000	1.01	3.31
Between \$35,001 and \$50,000	2.69	4.96
Between \$50,001 and \$65,000	4.42	2.48
Between \$65,001 and \$80,000	9.47	8.26
Between \$80,001 and \$100,000	15.10	12.40
\$100,001 or greater	52.84	52.89
Decline to answer	13.27	13.22

(Table 2 continued)		
<i>Percentage Responding "Yes"</i>		
Currently employed	85.48	78.04
Child's other parent currently employed	85.83	88.83
Currently work full-time	78.30	79.85
Own your home	85.25	89.80
Very safe neighborhood	83.47	83.86

Turning to marital status (see Figure 1), about 84% of applicants and 88% of non-applicants are currently married and living with their spouse. Less than 10% of both groups report that they are divorced. A substantially higher percentage of applicants, however, report that they are single and have never married. About 86% of both groups report that the child’s parent lives with them in the household.

Figure 1. Respondents’ Marital Status



Finally, the religious preferences of applicants and non-applicants appear to be quite similar to each other (see Table 3). Non-applicants appear to be slightly more likely to have a non-denominational Christian affiliation, and applicants are somewhat more likely to say that they have no religious preference.

Table 3. Respondents’ Religious Preference

	Applicants	Non-Applicants
7th Day Adventist	0.05	1.68
Apostolic/Pentecostal	0.24	
Catholic	19.60	17.65
Non-Denominational	30.21	36.13
Church of God in Christ	0.10	1.68
Islamic	0.29	
Jewish	1.86	
Lutheran (ELCA)	3.03	2.52
Lutheran (LCMS)	1.47	2.52
Lutheran (WELS)	0.10	
Methodist	4.69	5.04
Presbyterian	4.69	5.88
Baptist	1.61	3.36
Latter Day Saints	5.23	1.68
Episcopal	1.61	1.68
None	18.87	15.97
Other	6.35	4.20

Moving beyond personal characteristics, results presented in Table 4 show that applicants and non-applicants report very similar expectations about schooling for their children. The vast majority of both groups of parents expect that their children will at least attend and likely graduate from college. Parents from both groups similarly believe the main purpose of education is either to encourage lifelong learning or to prepare students for the workforce. Though not dramatically different, parents of program applicants are more likely to report that they believe school staff and teachers are the most responsible party for a student’s achievement.

Table 4. Parental Expectations of Child’s Educational Attainment, Educational Purpose, and Responsibility for Academic Achievement

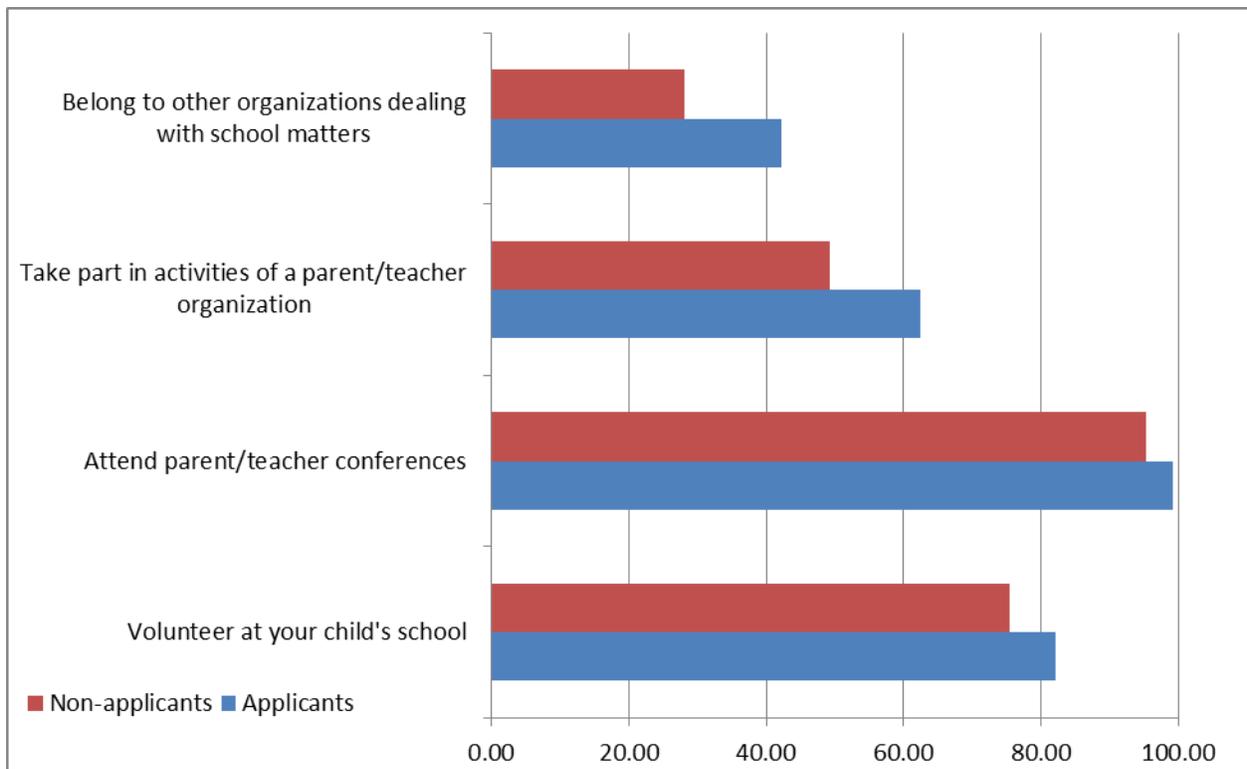
	Applicant	Non-Applicant
<i>How far do you expect your child to go in school?</i>		
Finish some high school		0.20
Graduate from high school	3.20	0.99
Go to vocational school after high school	1.60	1.18
Go to college	5.60	4.20
Graduate from college	45.60	54.58
Go to graduate school	42.40	37.55
Other	1.60	1.32
<i>What is the main purpose of education?</i>		
Prepare students for workforce	29.03	28.49
Create good citizens	13.71	10.72
Promote moral or religious values	1.61	0.43
Encourage lifelong learning	45.16	49.02
Other	10.48	11.34
<i>Who do you think is most responsible for academic achievement?</i>		
Parents	42.86	43.22
School staff/ teachers	44.44	36.04
Government		1.50
Community	0.79	2.91
Students	5.56	8.63
Other	6.35	7.70

In terms of parental involvement, parents were asked how often they communicated with or participated in activities in or related to their DCSD school. As Table 5 illustrates, frequency of contact with the school tended to be similar between applicants and non-applicants, but the former tended to communicate with their school more often for the purposes of providing information and student behavior. For both types of communications, applicant percentages in the greater frequency categories approximately doubled those of non-applicants.

Table 5. Frequency of Respondent Contact with the School during the School Year

		Your child's academic performance	Doing volunteer work for the school	Participating in fund raising	Providing information for school records	Your child's behavior
Never	Applicants	8.66	10.94	14.06	20.31	55.04
	Non-applicants	9.28	16.53	18.74	26.17	66.17
Once or twice	Applicants	30.71	27.34	38.28	52.34	27.13
	Non-applicants	28.62	27.65	35.28	60.67	23.33
3 or 4 times	Applicants	22.05	17.97	24.22	17.97	7.75
	Non-applicants	33.94	17.61	21.68	9.08	5.55
5 times or more	Applicants	38.58	43.75	23.44	9.38	10.08
	Non-applicants	28.16	38.21	24.30	4.07	4.95

Figure 2. Parental Involvement at School



Applicants also appeared to be more involved in activities at the school (see Figure 2), including volunteering, attending conferences, parent teacher organizations, and belonging to other school-related organizations. When involvement was extended to activities at home—such as helping with homework or reading together—differences between groups were trivial (see Table 6).

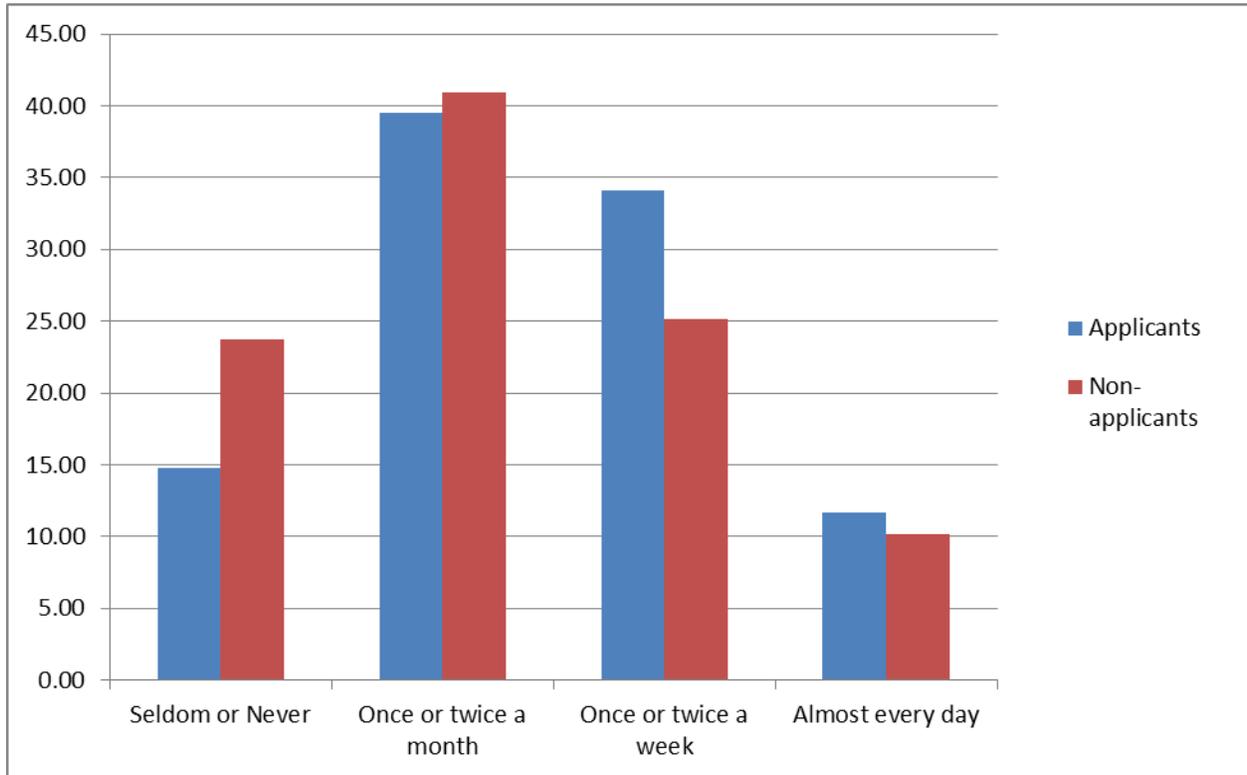
Table 6. Parental Involvement at Home

		Helped your child with homework	Read with or to your child	Worked on arithmetic or math	Worked on penmanship or writing	Watched educational programs on TV with your child
Never	Applicants	11.63	20.16	13.18	31.01	18.60
	Non-applicants	7.76	23.16	11.55	31.65	19.67
Once or twice	Applicants	23.26	18.60	23.26	32.56	41.86
	Non-applicants	28.05	19.06	27.05	29.58	46.02
3 or 4 times	Applicants	27.91	13.95	28.68	13.95	19.38
	Non-applicants	27.86	17.50	28.51	18.54	16.52
5 times or more	Applicants	37.21	47.29	34.88	22.48	20.16
	Non-applicants	36.33	40.28	32.89	20.24	17.79

Applicants reported communicating with other parents about school matters more often than non-applicants (see Figure 3). More than 45% of applicants reported talking with other parents about school matters anywhere from once or twice a week to almost every day. A little more than 35% of non-applicants said likewise. At the other end of the scale, almost 24% of non-applicants reported seldom or never communicating about school matters with other parents. Among scholarship applicants, the number was less than 15%.

Finally, the apparent greater involvement by applicant parents was somewhat tempered by the results to a questions that asked respondents to name the school's principal. Applicants were substantially less likely to answer correctly: 72 percent of applicant parents correctly identified their principal compared to 83 percent of non-applicant parents.

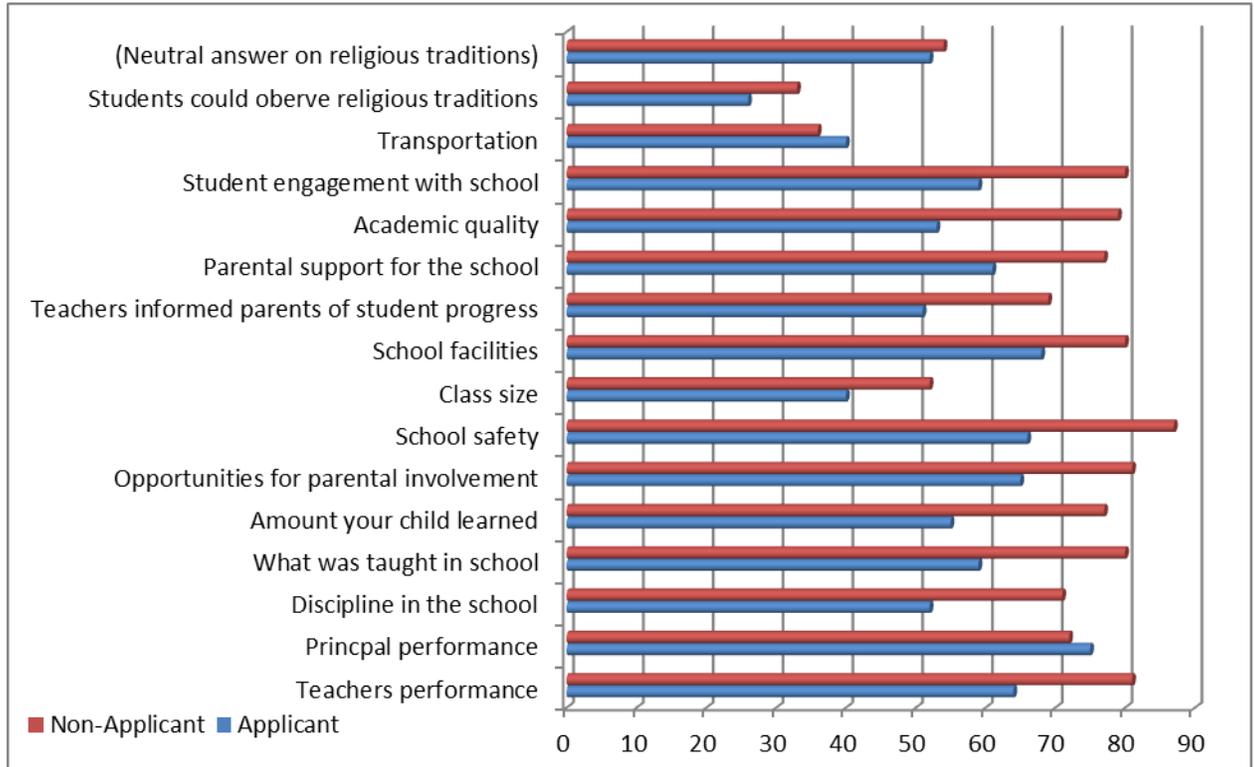
Figure 3. Frequency of Respondents' Talking with Other Parents about School-Related Matters



Parental Satisfaction

Although generally similar in characteristics, Figure 4 shows that parents had different levels of satisfaction with their child's public school during the previous year. Across most of the school aspects included on the survey, parents of program applicants appear to have been far less satisfied. For example, parents of applicants were far less likely to say they were satisfied or very satisfied with the performance of their child's previous teacher. Applicant parents were also less satisfied with the environment in the school as indicated by their responses about what was taught in the school, satisfaction with school safety, student engagement, academic quality, the amount that their child learned in the school, class size, school facilities, resources offered in school, and student discipline. Conversely, there appears to be only a slight difference in the perceptions of applicant and non-applicant parents with their child's ability to observe religious traditions in school; applicant parents were a little less likely to report that they were satisfied or very satisfied in this area. However, note that very similar percentages of parents in the two groups stated they were neutral about their child's ability to observe religious traditions in the school.

Figure 4. Parental Satisfaction—Satisfied or Very Satisfied with School Last Year



Differences in levels of satisfaction between applicants and non-applicants persisted even after controlling for various background characteristics. Using a combined satisfaction score as an outcome variable, applicant status as the independent variable, and a panel of covariates, regression results indicate applicants were significantly less satisfied with their school last year after controlling for the panel of covariates (see Table 7).

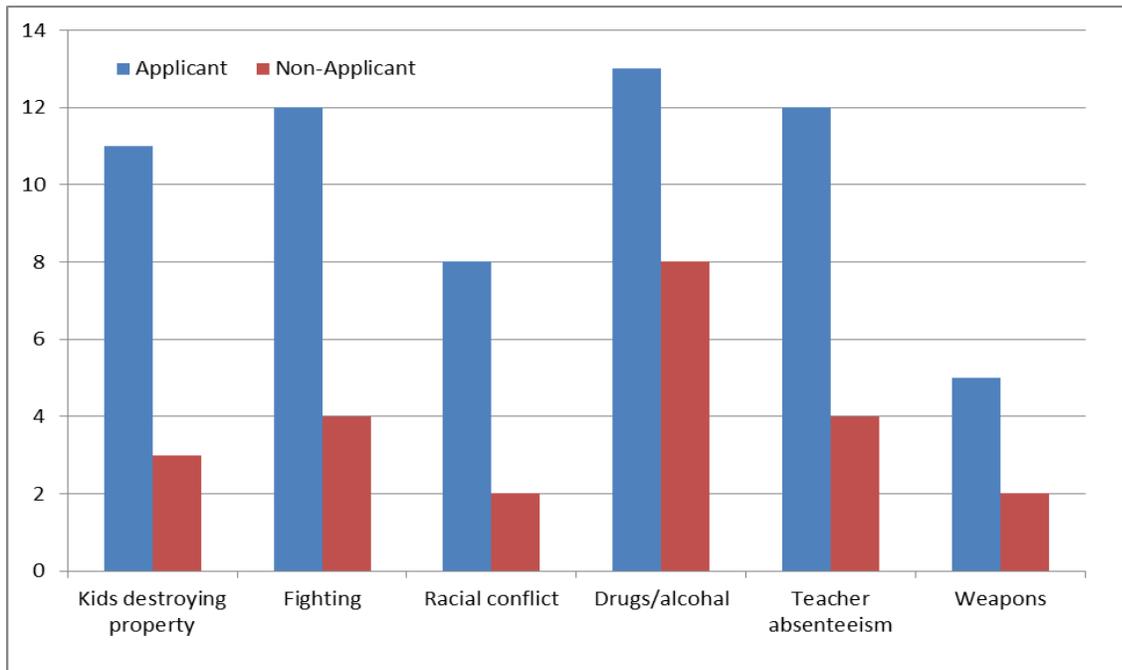
Applicants were also far more likely to report experiencing serious or very serious problems within the school in areas such as students destroying property, fighting, and drugs/alcohol (see Figure 6). Although the differences between the groups were substantial, note that even the greatest percentages (i.e., drugs/alcohol) never exceeded even 15%. Finally, consistent with their responses on individual questions, scholarship applicant parents gave somewhat lower grades to their child’s school last year. Forty percent of applicant parents gave their child’s school last year a C-grade or below, compared to only 17% of non-applicants.

Table 7. OLS Regression Results for Differences in Satisfaction

Variables	Coefficient (se)
Income: >\$100K+ compared to <\$100K	0.122 (0.088)
Married Living with Spouse compared to all other marital statuses	-0.197 (0.129)
Indian compared to White	0.020 (0.425)
Asian compared to White	-0.170 (0.233)
African-American compared to White	-0.473 (0.563)
Hispanic compared to White	0.235 (0.219)
Refuse to answer Race/Ethnicity compared to White	0.434 (0.170)**
Some College compared to less than Some College	0.306 (0.192)
College Graduate compared to less than Some College	0.084 (0.180)
Graduate School compared to less than Some College	-0.022 (0.185)
Employed compared to not employed	-0.003 (0.102)
Disabled Student compared to not disabled	-0.013 (0.298)
No Religious preference compared to any religious preference	-0.170 (0.108)
Parental Involvement	-0.419 (0.040)***
Applied for Charter School compared to never applied	0.488 (0.089)***
Prompt Change after compared to before	-0.140 (0.084)*
Applicant compared to non-applicant	0.828 (0.188)***

* $p=.05$, ** $p=.01$, *** $p=.001$

Figure 6. Percentage of Respondents Reporting Serious or Very Serious Problems in School



Reasons for Choosing

Table 8 considers why applicant parents applied to the program. Unlike participants in other voucher programs, very few DCSD applicants cited the desire to attend a safer school as the primary reason for choosing. Only about 6% of parents said that safety was their most important reason for entering the program, a stark contrast to the findings from urban voucher programs.

Instead, DCSD parents listed factors related to the educational quality of the school as the primary reason for applying to the program. About 44% of parents said that they applied for the program seeking better educational quality, by far the most frequently given answer. Other frequently given answers related to aspects surrounding school quality: about 9% of parents were seeking higher quality teachers, while about 15% of applicants listed smaller class sizes as their primary reason for applying to the program. Some parents were looking for schooling that was more supportive of their belief systems. About 7% of applicants reported that they were in search of a school that better aligned with their educational beliefs, and about the same percentage of parents said that they applied to the program to attend a school that offered religious instruction.

Table 8. Most Important Reason for Applying to the Scholarship Program

	Most Important Reason Applied	Very Important	Important	Somewhat Important	Not Important
Convenient location	0.81	14.81	22.22	22.96	40.00
Better educational quality	43.90	75.59	15.56	8.15	3.70
Other children in family already attend	0.81	12.21	11.45	14.50	61.93
Child needs special program	5.69	20.30	23.31	12.78	43.61
Students better disciplined	0.81	35.88	30.53	17.56	16.03
Attend safer school	5.69	39.69	24.43	14.50	21.37
Attend more diverse school	1.63	13.64	15.15	25.00	46.21
Higher quality teachers	8.94	62.22	20.74	8.15	8.89
Smaller class sizes	14.63	63.43	25.37	3.73	7.46
Higher quality facilities		33.33	34.07	14.07	18.52
High quality leadership	3.25	58.52	24.44	6.67	10.37
Extracurricular activities child wants		30.83	25.56	16.54	27.07
Attend school with religious instruction	6.50	31.11	13.33	17.78	37.78
Better aligned with educational beliefs	7.32	57.35	26.47	7.35	8.82

In addition to satisfaction as a motivation, it appears that applicants were already somewhat more interested in finding an educational alternative for their child than were non-applicants. About 30% of applicants said that at some point they had moved so that their children could attend a better school, compared to about 24% of non-applicants. Similarly, about 35% of applicants compared to 30% of non-applicants reported that they had previously applied to a charter school. Further, about a quarter of applicant parents and 6% of non-applicant parents reported that they

would plan to enroll their child in a private school next year even if the voucher program was not offered.

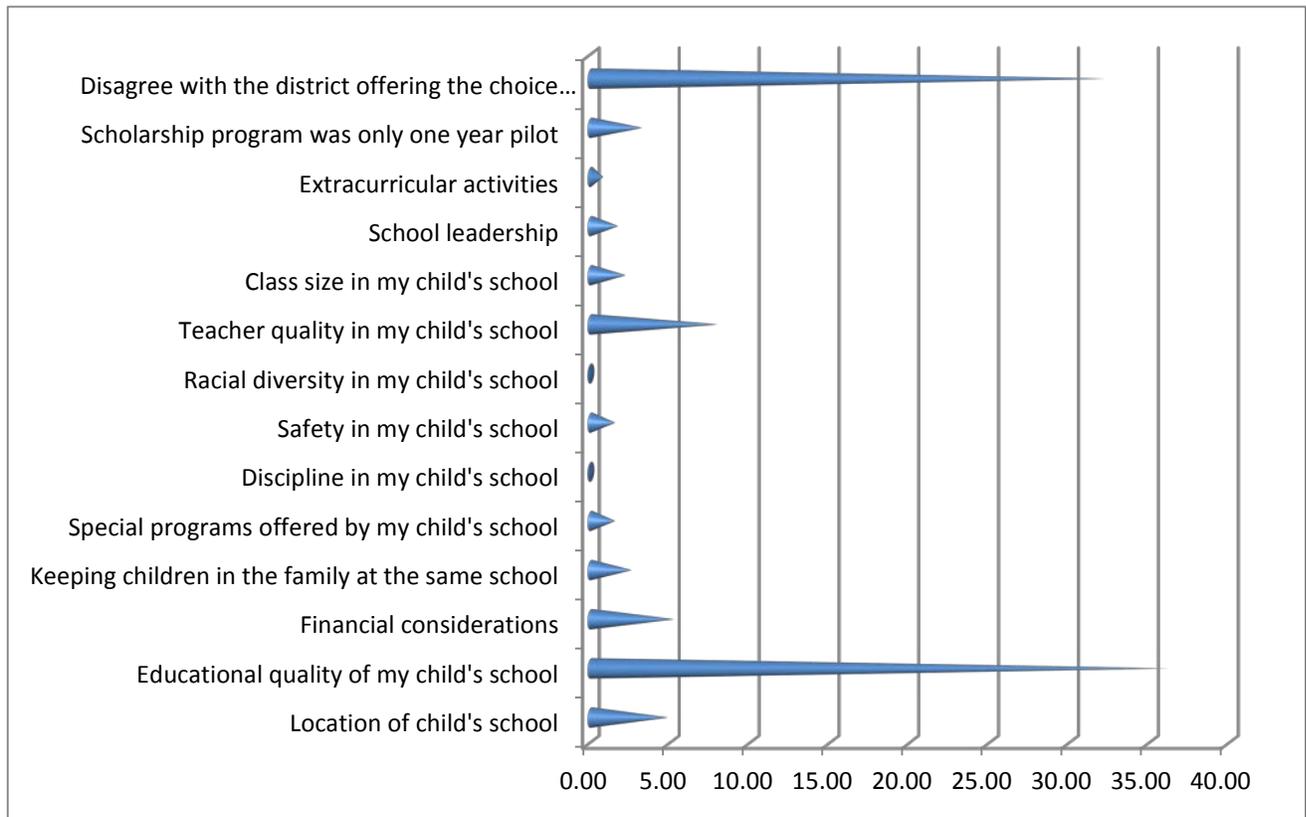
Perhaps as interesting as why applicants chose to apply is why non-applicants chose *not* to participate. For some, it may have been simple lack of awareness. Only 51% of non-applicants claimed to have heard of the scholarship program. Of those who had heard of the program (including scholarship applicants), the most frequently cited source was newspapers/magazines (56%), followed by television or radio (47%), and friends or relatives (41%). When disaggregated by applicants and non-applicants, these patterns are generally the same, although Table 9 indicates slight differences between groups in the source of program awareness.

Table 9. How Respondents Heard of the Choice Scholarship Program

	All	Applicants	Non-Applicants
Newspaper/Magazine	56.47	33.33	59.41
Television or Radio	46.54	24.00	49.41
Friends or Relatives	41.13	33.33	42.12
My Child's School Last Year	26.99	25.33	27.20
Internet	22.33	19.33	22.71
Other	13.38	23.33	12.12
Other Private Schools	4.21	6.67	3.90
Church	2.78	7.33	2.20
Community Center	2.11	4.00	1.86

When asked directly why they did not apply, some non-applicant responses were consistent with other questions concerning higher satisfaction rates with their school last year. As Figure 7 illustrates, more than a third of non-applicant respondents said that the main reason they chose not to apply was the educational quality of their school. In a related answer, another 8% of non-applicants cited teacher quality in their child's school as the reason that they did not apply. While academic quality reasons seemed to be the most important, it is notable that about a third of non-applicants said that they disagreed with the district offering the choice program at all and that it was the most important reason for not applying. That figure somewhat masks the disregard for the program felt by non-applicants: About 49% of non-applicants said that disagreement with the choice program was a very important reason that they did not apply, and another 7% said that it was an important reason. However, 38% of non-applicants said that disagreement with the policy was not important in their decision. Interestingly, about a quarter of non-applicants and nearly three quarters of applicants said they would apply for the scholarship program if it were offered next year.

Figure 7. Most Important Reason for Not Applying for a Scholarship



Statistical Analysis of Factors Related to Applying.

In addition to examining reasons for choosing using simple percentages, we also analyzed the predictive relationship of various aforementioned characteristics and the likelihood of choosing to apply. This enabled us to determine which variables, if any, were predictors of applying for a choice scholarship.

The results, reported in Table 10, do not show a consistent relationship between several demographic characteristics—race/ethnicity, income, prior education, marital status—and the likelihood that the person applied. However, one personal characteristic, employment status, shows that those who were not employed were more likely to apply. Likewise, parents with a child with disabilities, those who report greater involvement at school, and those who previously applied to a charter school were more likely to apply for a scholarship.

There also appears to be a statistically distinguishable relationship between the individual’s satisfaction with their prior school and applying for the program. In fact, this relationship remains even after controlling for background characteristics. Although we do find a statistically significant relationship between satisfaction and applying for the program, the magnitude of the result is mild: A one standard deviation increase in the satisfaction score—as a reminder, an

increasing score means greater dissatisfaction—is related to about a one percentage point increase in the likelihood that the respondent applied to the program.¹

Table 10. Probit Regression Results for Likelihood of Applying for a Scholarship

Variables	Coefficient (se)
Income: >\$100K+ compared to <\$100K	0.104 (0.104)
Married Living with Spouse compared to all other marital statuses	-0.015 (0.151)
Indian compared to White	0.887 (0.340)***
Asian compared to White	0.060 (0.265)
African-American compared to White	1.321 (0.403)***
Hispanic compared to White	0.156 (0.239)
Refuse to answer Race/Ethnicity compared to White	0.276 (0.172)
Some College compared to less than Some College	-0.083 (0.210)
College Graduate compared to less than Some College	-0.343 (0.201)*
Graduate School compared to less than Some College	-0.389 (0.207)*
Employed compared to not employed	0.327 (0.131)**
Disabled Student compared to not disabled	0.535 (0.262)**
No Religious preference compared to any religious preference	-0.001 (0.131)
Parental Involvement	0.212 (0.049)***
Applied for Charter School compared to never applied	0.228 (0.100)**
Prompt Change after compared to before	0.695 (0.106)***
Satisfaction Index Score	0.110 (0.024)***

* $p=.05$, ** $p=.01$, *** $p=.001$

Status of Program Applicants

On August 12, 2011, Judge Michael Martinez enjoined the scholarship program, thereby preventing its continued implementation. As a footnote to the above results, several survey questions enabled us to examine the current status of program applicants. Families who had been awarded a scholarship were forced to decide whether to continue their child’s enrollment in the private school they had chosen or to re-enroll in a public school. Almost 86% of survey respondents reported their child returned to a public school. Of those who remained in their chosen private school, 90% paid for the tuition out-of-pocket, while the remaining received a scholarship from the school. For many of these families, the extra expense was unanticipated. More than 42% of those who remained in private schools had not planned on enrolling their child in a private school separate and apart from the scholarship program.

Discussion and Conclusion

This study sought to answer the questions “who chooses and why” in the context of a school choice program in Douglas County, Colorado. It did so by examining the characteristics and perceptions of parents and comparing those between people who applied to the program and

¹ The analysis was conducted using Probit regression, which does not allow for direct interpretation of the coefficients. The magnitude described is the calculated marginal effect.

those who did not. Findings indicated applicants and non-applicants looked similar in many respects, with some statistically significant but small differences in race/ethnicity, education level, marital status, income, religious preferences, parental involvement, and being choice-minded prior to the program's advent. Specifically, program applicants tended more often to be non-white, single and never married, and relatively more affluent. A greater percentage of non-applicants tended to have earned a four-year degree and identified as non-denominational Christian for religious preference as compared to applicants. A comparably greater percentage of applicants self-identified as having no religious preference.

On several measures, both groups appeared similarly involved in their child's education. Differences of note included the frequency of communication with the school and involvement at the school, including volunteering, attending conferences, parent teacher organizations, and belonging to other school-related organizations. On these measures, applicants consistently reported being more involved than non-applicants.

Some of the greatest differences between groups appeared to be in levels of satisfaction. Across many indicators, applicant parents appear to have been far less satisfied. These indicators included the performance of their child's previous teacher, what was taught in the school, school safety, student engagement, academic quality, the amount that their child learned in the school, class size, school facilities, resources offered in school, and student discipline. Applicant parents more often reported serious or very serious problems in their school (fighting, drugs/alcohol, etc.) and also were more likely to give their school a C- or below on a traditional A to F grading scale. Differences between groups in levels of satisfaction were evident even after controlling for background characteristics of respondents.

Satisfaction also represented a significant predictor of applying for a scholarship and remained so after controlling for participant background variables, several of which were significant predictors themselves, such as prior charter school applicant, parental involvement, employment status, and whether the parent had a child with a disability.

In some ways, parents in Douglas County are like those in urban voucher programs. A prominent characteristic is satisfaction. No matter the setting, parents seeking or using vouchers express less satisfaction with their school as compared to non-voucher parents, and this compels them to pursue other options (Cornman, Stewart, & Wolf, 2007; Stewart, Wolf, & Cornman, 2005). In particular, parents note a desire to pursue options that provide greater curricular content, quality, and rigor. Whether in urban settings or suburban ones, choice-minded parents tend to want the same things for their children by way of educational quality. This is made particularly noteworthy by DCSD's recognition as being among the higher performing districts in Colorado. For example, using state assessment results from 2010-2011, DCSD was among the top 25 districts in reading, math, and writing, and among the top three districts serving greater than 10,000 students. Likewise, with its 0.9% dropout rate, DCSD was among the three districts of greater than 10,000 students with the lowest dropout rates in 2010-2011.

Despite such aforementioned parental similarities, however, Douglas County parents diverged from those in other voucher programs on several counts. First, prior research indicates urban parents use vouchers out of a concern for school safety (Cornman et al., 2007; Stewart et al.,

2005). In Washington, DC, this was particularly important for first-year voucher parents and those with older children (Stewart et al., 2005). Yet, school safety was not a strong motivating factor for Douglas County parents. Given the suburban and rural setting of the district, this is not entirely surprising.

A difference not captured by setting is the role religious values play in motivating parents to choose. In urban voucher programs, parents expressed a strong desire to place their children in a religious or values-based educational environment (Stewart et al., 2005). In fact, this was among the top reasons given for using a voucher. In Douglas County, however, seeking a school with religious instruction was identified as most important by a mere 6% of respondents, behind educational quality (43.9%), smaller class sizes (16.6%), and others.

At first consideration, this appears somewhat inconsistent with what the distribution of DCSD scholarship students within “partner” (i.e., private) schools would have been. Even though a small percentage of scholarship parents identified religious instruction as the most important factor for their choice, by the time the Denver District Court first heard arguments on a case concerning the scholarship program, approximately 93% of the confirmed private school enrollment by scholarship recipients was attending religious schools (*Larue v. Douglas Cnty. Sch. Dist. RE-1*, 2011). Yet, religious orientation is not the only thing religious schools offer. These results suggest parents seek out religious schools not necessarily or primarily for their faith-based orientation but for reasons of educational quality or learning environment. The fact that (a) 19% of the applicant sample in the study self-identified as having no religious preference; (b) only around 1% of respondents said the main purpose of education is promoting moral or religious values; and (c) parents’ religious preference proved not to be a significant variable in whether someone applied for a scholarship also suggest parents were drawn to schools for reasons other than religious values.

Additionally, the apparent inconsistency may be a function of the options available to families. More than 70% of private schools approved to participate in the Scholarship Program are religious (*Larue v. Douglas Cnty. Sch. Dist. RE-1*, 2011), and 71% of all private schools in Colorado are religious, according to data taken from the Private School Survey at the National Center for Education Statistics. Thus, since the majority of options available to parents are faith-based, it is not surprising that so many would enroll in religious schools.

Finally, results in this paper contribute new data to two other choice-related issues noted above, specifically how choice-minded, middle class parents may see schooling and what school districts may learn from the exit decision of parents. As Bosetti (2007) notes, middle class parents increasingly see schooling as a way to provide their children a social and economic competitive edge. Thus, one would expect that reasons provided for pursuing choice options, when given the option, would be aligned with such motivations. Our findings do not seem to support such a theory, however. When asked to identify the main purpose of education, most parents—both applicants and non-applicants—chose “encourage life-long learning.” The option corresponding to Bosetti’s theory—“prepare students for workforce”—was a distant second among parents and saw nearly identical response rates by applicants and non-applicants.

Specific to the second issue, Manna (2002) notes that both receiving and sending schools can learn something beneficial from knowing who chooses to leave and why. Indeed, the results in this report indicate schools are not mere “bystanders” in the choice process, where the choices made by parents are a function of personal characteristics or beliefs outside of the influence of schools. Instead, suburban, middle class parents—much like their urban peers—seek out choices based on perceived educational quality, something clearly within the purview of schools. For institutions operating within an educational marketplace—which the current trajectory of school choice indicates may be an increasing number of schools (Carpenter & Kafer, 2012)—this means programmatic and curricular offerings, extra-curriculars, or environmental amenities may provide some “curb appeal,” but establishing and maintaining high educational quality is job one.

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