



Myers-JDC-Brookdale Institute
The Engelberg Center for Children and Youth



The Ethiopian National Project

The Ethiopian National Project: An Evaluation Study of the SPACE Program – Scholastic Assistance, Youth Centers 2005-2007

EXECUTIVE SUMMARY

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Methodological consultant: Assaf Ben-Shoham

This study was initiated and funded by
The Ethiopian National Project.

The Ethiopian National Project is a partnership between the United Jewish Communities-Federations of North America (UJC), the Government of Israel, representatives of Ethiopian Jewish Community Organizations, the Jewish Agency for Israel, the American Jewish Joint Distribution Committee in Israel, and Keren Hayesod.

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I. Introduction

Ethiopian immigrants to Israel have had to deal with unique difficulties. Most of them came with little or no formal education and thus have only a limited acquaintance with the educational system and job market of modern Israeli society. The large gap between Ethiopian and Israeli culture presents challenges in all areas of life. This has also led to significant difficulties in learning Hebrew.

In addition, Ethiopian families are very large, and among them there is a much higher rate of one-parent families than in the general Israeli population. All of these factors have led to a very high rate of poverty among Ethiopian families and despite special government housing assistance, they reside for the most part in low-income and peripheral communities, which also limits their employment opportunities.

Given these factors, it is clear that extensive assistance is required by Ethiopian-Israelis to enable them to fully integrate into Israeli society. Since the first wave of immigration from Ethiopia in 1984, many efforts and initiatives have been undertaken by the government, local authorities and voluntary organizations to support the Ethiopian population in integrating into Israeli society. These efforts have made an important contribution. However, significant gaps still remain in many areas. Moreover, in recent years, there are indicators of negative trends that cause concern such as growing delinquency and family violence.

The situation of the youth in the Ethiopian-Israeli community requires special attention. In 2005 there were 27,000 Ethiopian-Israeli youth aged 10-19 in Israel, 12,000 of whom were born in Israel to immigrant parents, and 15,000 of whom were born in Ethiopia (Ben-Aryeh, and Kimchi, 2007). The importance of education and its significant impact on the future integration of Ethiopian-Israeli youth into Israeli society is well recognized. Israeli national data indicate that there are significant gaps in the educational outcomes of Ethiopian-Israeli youth relative to the general population (Ben-Aryeh and Kimchi, 2007; Wolde, 2006; Ben-Aryeh and Chernobelsky 2004). There is also concern that Ethiopian-Israeli teenagers often encounter difficulties in a wide range of other areas, such as after-school activity, social and family relations, emotional well-being and exposure to high-risk situations (Lipschitz et al., 1998; Mengesha, 2004; Mengesha, 2005; Wolde, 2006; Brookdale, 2001).

1. The Ethiopian National Project (ENP)

The Ethiopian National Project is a partnership between the United Jewish Communities-Federations of North America (UJC), the Government of Israel, representatives of Ethiopian Jewish Community Organizations, the Jewish Agency for Israel, the American Jewish Joint Distribution Committee in Israel and Keren Hayesod. This partnership is manifested in the representation of the partners in the governing bodies of the project and in the financial partnership.

The goal of the ENP is to enable Ethiopian-Israeli youth to achieve their full potential, as well as increase their opportunity for social mobility and future integration into the labor market. ENP is unique in its emphasis on inclusion of members of the Ethiopian-Israeli community in all aspects of its work, including implementation, oversight, strategic planning and decision-making.

ENP began by mapping the needs of the Ethiopian-Israeli community and the existing services (with assistance from the Myers-JDC-Brookdale Institute). Based on that information, a decision was made to focus on ages 13-18 through the SPACE program (School Performance And Community Empowerment) which was launched in 2004. The SPACE program includes a number of key components:

1. A school-based after-school program for youth that is based on a holistic approach to meeting the youth's needs and includes scholastic assistance and personal support.
2. Community youth centers and programs for substance abuse prevention and preparation for army service.
3. A community empowerment program that focuses on training community leadership at the local and national level.

The initiation of the program began in 2004 on a small scale and has steadily expanded.

In this report we summarize findings from two previous reports submitted to the ENP (Cohen-Navot et. al 2006, Cohen-Navot et. al 2007) and present, for the first time, data on the initial impact of the program on school achievements.

2. Description of the Study

Study Objectives

In 2005, at the request of the ENP, the Myers-JDC-Brookdale Institute began working with the ENP to provide research support for the development of the SPACE program. This included support for developing the ENP management information system in regards to student characteristics and achievements and the evaluation of key components of the SPACE program.

The goals of the evaluation are to provide information about program implementation and program impacts as a basis for further program development, and for decisions about future program dissemination. Until now, the evaluation has focused primarily on the scholastic assistance program and the youth centers. This report provides key findings about:

- ♦ The implementation of the scholastic assistance program during the first two years of full program implementation (2005-06 and 2006-07);
- ♦ Matriculation achievements in 2005-06 of the first significant group of high school graduates who have participated in the program;
- ♦ The youth centers after at least one year of full operation, as of the spring of 2006.

Study of the Scholastic Assistance Program

The study of the scholastic assistance program addresses the following key questions:

1. How is the program implemented?

2. What are the perceptions of the school principals and program staff regarding the program's contributions to participants, and to the schools in which it is being implemented?
3. What is the impact of the program on the matriculation achievements of the Ethiopian-Israeli students?

The data were gathered from various sources:

1. A questionnaire administered to the program coordinator responsible for program operation at each school in May 2006. Questionnaires were received regarding 79 of the 82 schools in which the program was implemented in 2006.
2. A questionnaire administered through a telephone survey to the school principals in schools in which 10 or more students participated in the program. The interviews were conducted during the winter of 2007. Ninety out of 104 principals responded.
3. In-depth personal and group interviews conducted with national program personnel and staff at the organizations contracted to provide the scholastic assistance, and with school principals, staff and students. Approximately 70 interviews were conducted over the course of the 2005-06 and 2006-07 school years.
4. Participant observation of national and local meetings about the program during 2005-06 and 2006-07 school years.
5. Ministry of Education national data regarding the achievements on the matriculation exams of students graduating in the years 2002 to 2006

Study of the Youth Centers

The study addressed the following key questions:

1. What are the characteristics and needs of the youth who attend the center?
2. What activities take place at the centers?
3. What are the perceptions of center directors about the difficulties involved in conducting the program and of the factors contributing to the centers' success?
4. How satisfied are the youth with the centers and what are their perceptions of key contributions?

Data collection included:

- ♦ A survey of the youth attending the youth centers. Questionnaires were distributed to everyone who came to the centers during an entire week. Altogether, 348 youth completed the questionnaires.¹
- ♦ In-depth interviews with the center directors and national coordinators.

Information was gathered at all seven centers that had already been functioning for a complete school year in May 2006, when the data were collected.

¹ Approximately 12% of the youth who came to the centers refused to complete the questionnaires. The refusal rates were similar at all the centers.

II. The Scholastic Assistance Program

The SPACE scholastic assistance program seeks to prevent students from dropping out of school, to reduce school disengagement, to improve students' scholastic performance and to reduce performance gaps between Ethiopian-Israelis and the other students. Specifically, the program seeks to:

1. Increase the numbers of students who, at the end of junior high, are placed in matriculation-oriented high-school tracks.
2. Enhance their participation in more advanced learning tracks in English and math
3. Achieve high quality matriculation certificates which will in turn expand the opportunities to pursue higher education
4. Provide support for emotional and social growth.

As noted, the needs of low-achieving students in general, and Ethiopian-Israeli students in particular, have been a source of concern in Israel and the last decade especially has witnessed the implementation of various efforts and programs by the Ministry of Education, the local authorities and many NGOs, in an effort to close achievement gaps. The SPACE scholastic assistance program represents a focused effort to strengthen the support provided to Ethiopian-Israeli students – by increasing the number of schools at which assistance is provided, by increasing the extent of coverage at each school, by enhancing the extent and quality of the assistance provided, and by ensuring a culturally-sensitive focus that provides special attention to the unique needs of the Ethiopian-Israeli students.

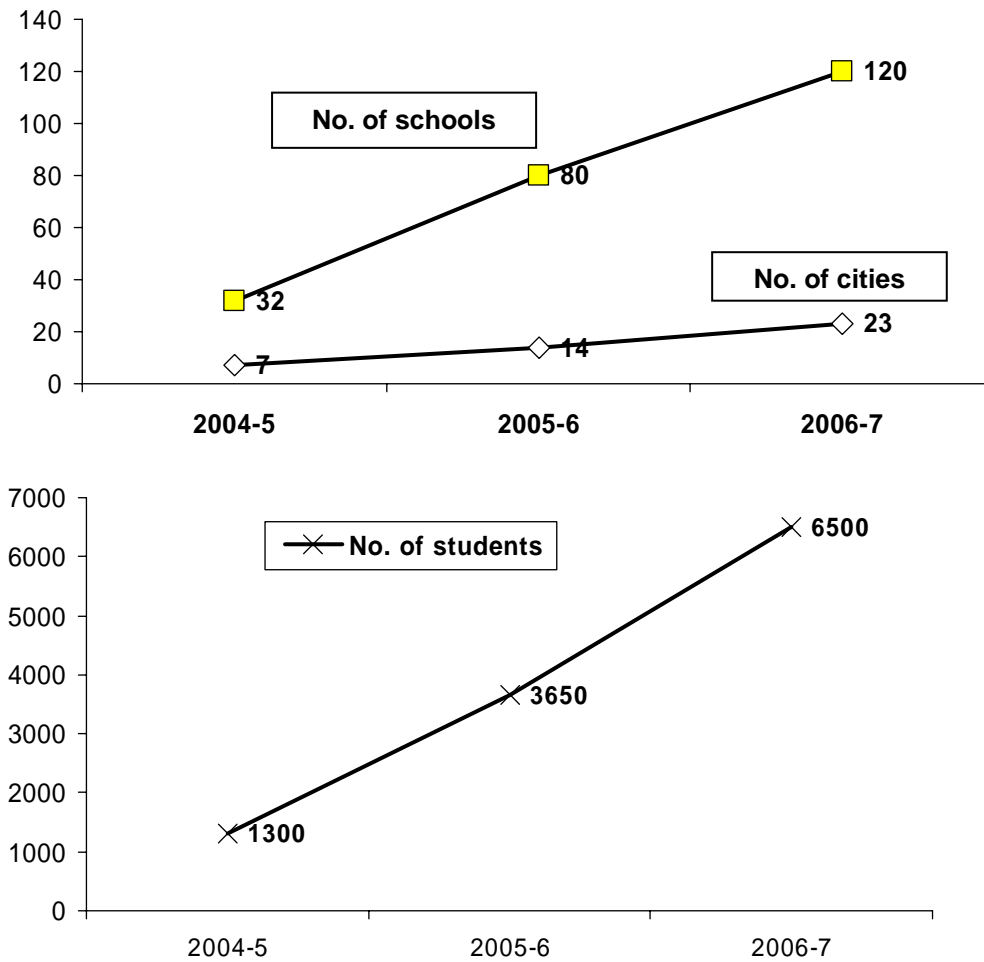
The program provides after-school assistance in grades 7 through 12 in junior high and senior high schools throughout Israel.

1. The Expansion of the Program

The program began during the latter half of the 2005 school-year. The Branco-Weiss Institute and the Israel Association of Community Centers were contracted to implement the program and in 2005, ORT and Maksam were also contracted.

The program grew very rapidly from 32 schools in 2005 to 80 schools in 2006, and 120 schools in 2007. The number of communities wherein the scholastic assistance program operates grew from seven in 2005 to 14 in 2006 to 23 in 2007. Of most significance is the increase in the number of participating students: beginning from 1,300 in 2005, it rose to 3,650 in 2006; and to 6,900 students in 2007 (see Figure 1).

Figure 1: The Expansion of the Program*



* The data on the number of participants in 2007 includes 600 participants in the special ENP-Atidim program for high-achieving students, and 300 students in a special program at vocational schools. The implementation of these programs is not reviewed in the present report.

2. The Target Population and Program Coverage

The target population of SPACE scholastic assistance consists of all Ethiopian-Israeli 7th - 12th graders in the schools where the program is implemented, who are not otherwise receiving the support that they require, and who are not in a Special Education class. This includes all students who were born in Ethiopia or whose parents were born in Ethiopia.

The principals of the schools in which the program was implemented were interviewed through a telephone survey in May, 2007. At that time they reported that at most of the schools with the program, most of the Ethiopian-Israeli students participate in the program: In 25% of the schools, all of the Ethiopian-Israeli students participate and in 35% of the schools, over 75% of the Ethiopian-Israeli students participate. Of all Ethiopian-Israelis in the schools in which SPACE scholastic assistance is implemented, 75% participate in the program.

Both the principals and the program coordinators were asked why some of the Ethiopian-Israeli students in their schools did not take part in SPACE scholastic assistance. It was reported that in about a fifth of the schools, there are students who do not need extra help and in a third of the schools, students do not participate because their needs are being met by another program. This is consistent with the ENP principle of not replacing existing programs, but rather of *supplementing* them. In addition, nearly half of the principals reported that they have students who do not want to participate in SPACE scholastic assistance – because of lack of motivation to improve the scholastic performance or the reluctance to participate in a separate program for Ethiopian-Israelis.

It is important to note that the extent of available resources is not an obstacle to coverage within the schools. Only a very few principals (3%) reported that there are students who do not participate due to insufficient program resources.

As noted, other efforts and programs to support low-achieving students have been implemented in Israeli schools. The principals were asked whether there had been other programs providing assistance to these students at their school prior to the introduction of the program. In 41% of the schools participating in the program in 2006, there was no prior program for Ethiopian-Israeli students. In others, the coverage of the students was only partial. This finding emphasizes the importance of SPACE scholastic assistance in expanding the assistance to Ethiopian-Israeli students.

We go on to discuss the implementation of the program and then to discuss the matriculation results.

3. Implementation of the Program

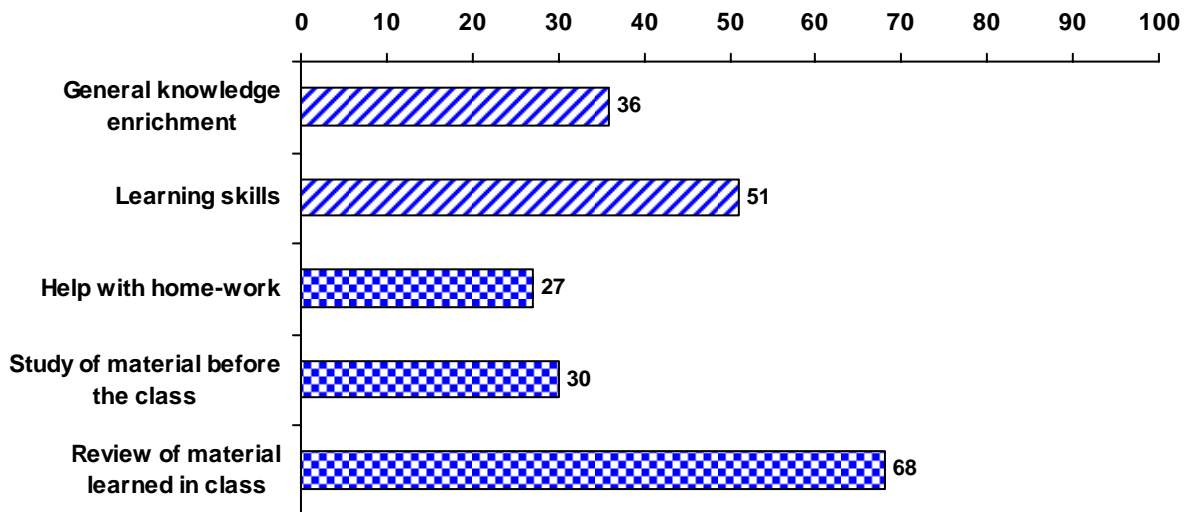
Inputs Provided to the Program Participants

Students in grades 7 through 12 receive program inputs: either at their own school, or at a another school where students from a number of schools meet in the afternoon. The main input is scholastic assistance. There are also activities that address the social and emotional needs of the youth, such as social and experiential activities, empowerment workshops, peer mentoring, and enrichment classes. Finally, there are efforts by the program coordinators to build relationships with the parents. In some communities, the program acts through other organizations to strengthen relationships with parents, such as by offering parent guidance workshops or parent liaisons in the schools.

The main focus of the SPACE scholastic assistance is to provide after-school instruction (an average of 4.1 hours per week for each student) in small groups (an average of five students) throughout the school year. The students receive meals on the days on which they remain at school for after-school instruction. In addition, high school students participate in day-long study groups (“marathons”) in preparation for their matriculation exams. Most students receive help in English and math, as this is the main focus of the program; about a third also receive help in Hebrew or other language-related subjects.

The program coordinators were asked about the main focus of the after-school sessions. Most of the activity supports ongoing classroom instruction: At most (68%) of the program sites, the assistance consists of reviewing material studied in class. At about a third (30%) of the sites students are taught new material before the rest of the class. At 27% of the sites, students receive help with homework.

Figure 2: Main Focus of the Scholastic Assistance Program*



* The percent of sites where the program coordinator reported that this is the focus "always" or "usually". Other rating levels included "occasionally", "usually not", and "never".

The instruction also focuses on strengthening learning skills. At half of the sites, SPACE scholastic assistance focused toward developing overall learning skills, and in a third, it worked on enhancing general knowledge and enrichment. Some of the teachers who provide the instruction are part of the regular staff at the school (30%). The others are especially recruited for the program: usually teachers at other schools, student teachers or students in other fields. The vast majority of the school principals (83%) would like the teachers who provide the instruction to receive more training in relevant areas, such as instructional methods for working with low-achieving students and with new immigrants, and in regards to Ethiopian culture.

Emotional and Social Support

As part of the holistic outlook of SPACE program, which aspires to relate to the overall needs of the student, the implementing organizations also provide emotional support and social activities for the program participants. The goal is to increase school engagement and overall well-being, thus promoting higher motivation and school performance. There are a variety of ways used to address these needs. Personal support is provided through the ongoing relationship with program staff. As noted, there are social and experiential activities, empowerment workshops, peer

mentoring, and enrichment classes. Most of the program coordinators also reported contact with the students' parents, with most discussions focusing on the scholastic performance of the students and satisfaction with the program. However, there is great variation in the extent of contact with parents among the four organizations implementing the program. In addition, in some communities other organizations provide guidance and support to parents

Satisfaction with the Scholastic Assistance Program and the Evaluation of its Contribution

The school principals were asked about their overall satisfaction with the program (see Figure 3 below). The data indicate that overall satisfaction on the part of the principals is high. Most of them (79%) are very satisfied that SPACE scholastic assistance has been implemented at their school, and most (77%) even noted that most or all of the participating students' needs are met. In addition, most (71%) reported that they perceived SPACE scholastic assistance as contributing to the students' progress to a great extent.

The school principals were also asked about their perception of the program's contribution in specific areas. Almost all of the principals reported that the program contributes to student self-confidence, motivation and performance. Moreover, over half reported a *strong* contribution in these areas: self-confidence - 64% of the principals, scholastic performance – 57%, motivation– 54%.

A lower percentage reported a contribution to parent involvement in the school: Only 25% of the principals reported that the program had greatly influenced the parent-school relationship, and 53% reported little or no contribution in this area.

As indicated, we also carried out in-depth qualitative interviews with a small number of students. The students stressed the contribution of the program to their success in school:

“The after-school instruction strengthened me. My grades improved.”

“The project gives me tools to succeed and improve in subjects I find hard.”

“In math and English I understand the subject matter better than I did at the beginning of the year.”

Figure 3: Satisfaction with the Scholastic Assistance Program and Assessment of the Extent to which Students' Needs are Addressed, and its Contribution to the Students, as Reported by School Principals (In Percentages)

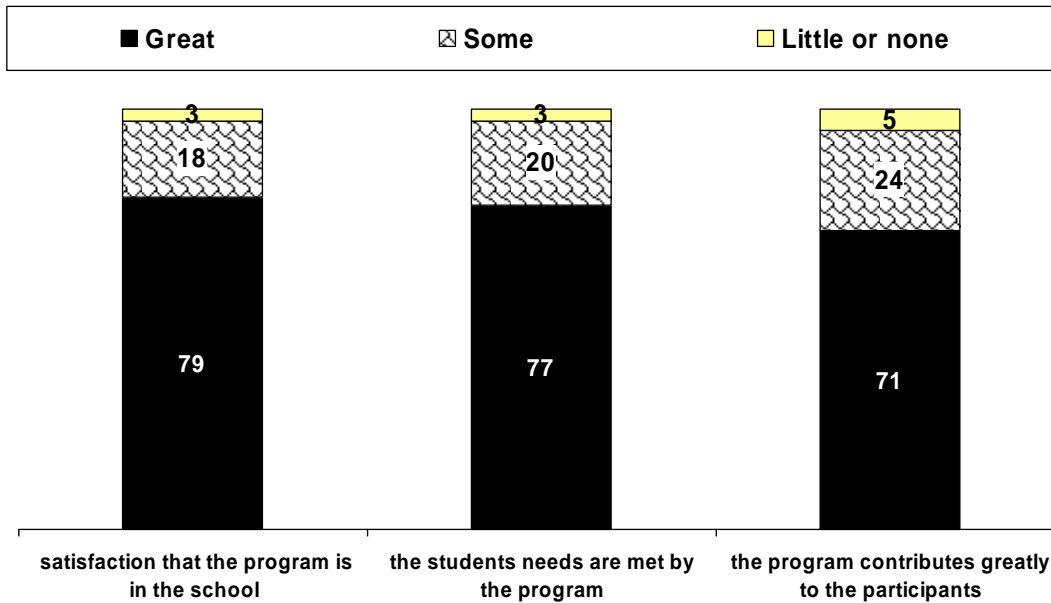
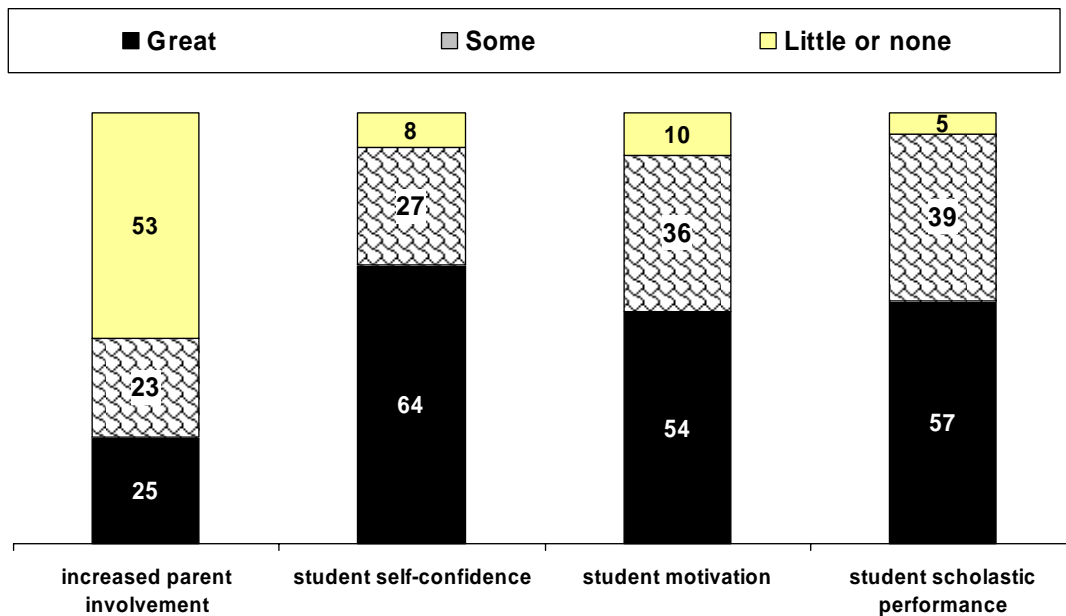


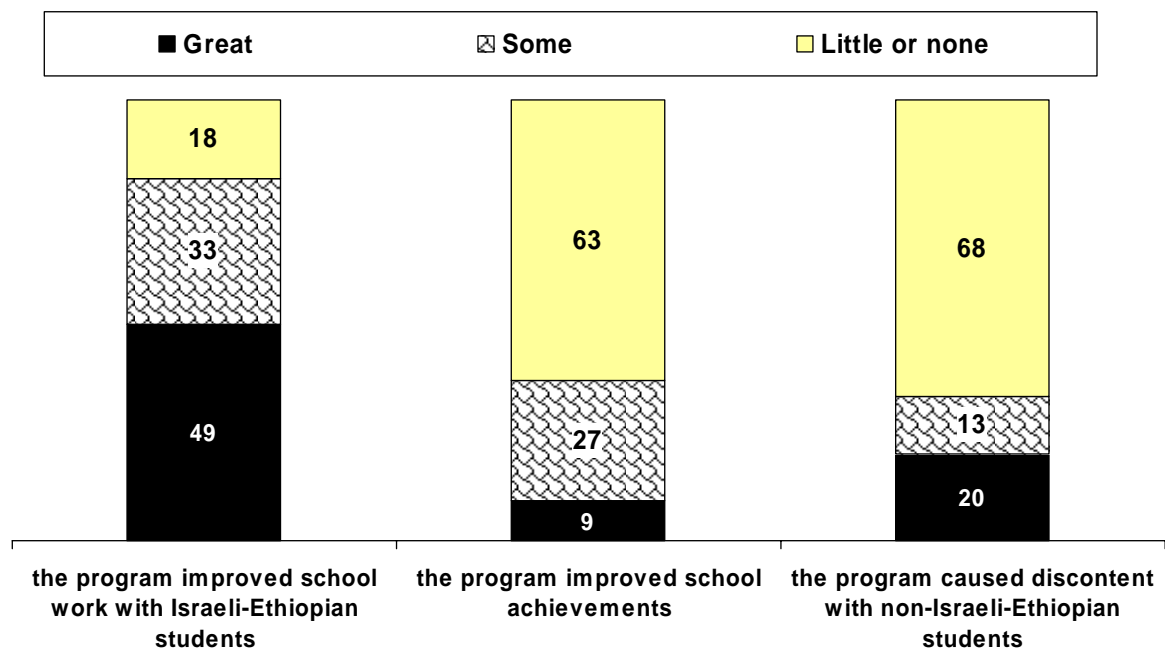
Figure 4: Principals' Assessments of the Impact of the Scholastic Assistance Program on the Students, by Type of Contribution (in percentages)



ENP views the scholastic assistance program as a way to collaborate with schools in order to better meet the needs of Ethiopian-Israeli students. According to the estimation of nearly half (49%) of the principals, the program did bring about considerable improvement in the work of the

teachers with Ethiopian-Israeli students. SPACE scholastic assistance provides an opportunity to focus inputs on Ethiopian-Israeli students. It is important to note, however, that 20% of the principles feel that the program causes discontent among some non Ethiopian-Israeli students that also need scholastic assistance and would like to participate in the program. At the same time, some of the principals (9%) said that they saw that the program had a great effect on improving the level of achievements in the school as a whole.

Figure 5: Principals’ Assessments of the Impact of the Scholastic Assistance Program on the Schools, by Type of Contribution (In Percentages)



Implementation Issues

The interviews with the program coordinators and school principals raised a number of issues that require further attention. These include:

- ***The need to raise the students' motivation and personal responsibility.*** It has been difficult to recruit some of the students to the program. In open interviews conducted with the program coordinators, it emerged that considerable effort and personal attention were required in order to get some of the students to attend:

“Things didn’t go without a hitch. We had to run after the students and persuade them...there were students who didn’t come. It wasn’t enough to have the instruction ;... we had to keep on announcing it, put out a flier, telephone them, coax them. It was a lot of running after students.”

Thus, the program must continue to explore ways to increase student motivation. Some of the frameworks have already begun to implement various strategies to this end, and it will be useful to examine the success of these measures.

- ***Improve the quality of the teachers.*** A high-quality level of teaching is critical for fully realizing the potential of the supplemental instruction. Approximately one third of the school principals and some of the program coordinators reported difficulty in recruiting highly skilled teachers. Some of them reported that the difficulty often stems from the low salaries offered.

The school principals also felt that the teachers lacked sufficient tools to address the needs of the students in some areas. Eighty-three percent of the principals noted that more training is needed – especially in regards to addressing the special needs of immigrant students, understanding Ethiopian culture, and familiarity with the subject matter of the matriculation exams. It is important to find ways to improve the recruitment of quality, skilled teaching staff and to upgrade the knowledge and skills of the teachers already involved in the program.

- ***Expand enrichment, social activities and work with parents.*** Some of the school principals pointed to the need to expand the enrichment and social activities offered to the students and to work with the parents in order to strengthen their involvement in their children's studies. As noted, currently, these services are being offered both by the organizations providing the scholastic assistance and by other organizations implementing special programs for families and through the neighborhood youth centers (see next chapter). It is important to examine the possibility of expanding these services, while addressing strategies for cooperation and division of responsibility among the different providers at each locality.

- ***Issues related to targeting the scholastic assistance exclusively to Ethiopian-Israeli students.*** One of the issues that arises when bringing SPACE scholastic assistance into the schools is that it is provided solely for Ethiopian-Israeli students. A fifth of the principles feel that the program causes uneasiness among those non Ethiopian-Israeli students that also need scholastic assistance and want to participate in the program. It is important to address these tensions, while at the same time keeping in mind that only a small minority of the principles viewed this as a source of concern.

- ***Administrative difficulties.*** Some of the school principals reported difficulties in organizing the instruction groups and dealing with scheduling constraints. The relatively high percentage of principals (47%) who related to this issue indicates the importance of continuing to look for creative solutions.

4. Preliminary Data on Matriculation Results

The main goal of the scholastic assistance program is to promote higher scholastic achievements. In Israel, secondary school students take a series of national examinations and receive matriculation certificates if they are successful. Eligibility for the matriculation certificate and its quality are considered key indicators of school success and are requirements for entry to higher education.

The analysis of matriculation rates is based on the national matriculation data of the Ministry of Education. These data clearly document the need to improve educational outcomes for Ethiopian-

Israeli students. They indicate the significant gaps in the matriculation achievements of Ethiopian-Israelis relative to the general Jewish population: in 2006, 35% of the Ethiopian-Israelis graduating from high school were eligible for matriculation certificates, as compared to 64% of all other students in the Jewish population (see Table A-1 in the Appendix). Twenty percent of the Ethiopian-Israeli students achieved matriculation certificates that met university entrance requirements – compared to 57% of the other students in the Jewish population.

The national data also point to a decline in eligibility for matriculation certificates among new immigrants in general, as well as among the Ethiopian-Israeli students. From 2004 to 2006 the rate of eligibility for matriculation certificates among Ethiopian-Israeli students decreased from 44% in 2004 to 36% in 2005 and to 35% in 2006 (See Table A-2 in the Appendix). The rates of success on the math and English exams also declined. However, despite this general decline, there was a rise in the percentage of Ethiopian-Israeli students who achieved university-level matriculation certificates from 16% in 2002 to 20% in 2006. These trends in matriculation indicators illustrate the challenge of the scholastic assistance program, in its attempts to raise achievements for Ethiopian-Israeli students.

Description of the Analysis

It is important to note, that in 2006 the program had been implemented in 80 schools, but many of them were junior high schools and only in 38 of the schools was the program implemented among 12th graders. Thus, the analysis relates to the matriculation achievements at the 38 schools in which the scholastic assistance program had been implemented among 12th graders in 2005-06. The students who graduated school in June 2006, were the first cohort of 12th graders who participated in the program for at least one full school year. (In 14 of the schools 12th graders participated in the program during the second half of the 2004-5 school year, so that at these schools, graduates had participated in the program for a year and a half. At the other 24 schools, the 12th graders taking the matriculation exams had participated in the program for only one year.)

Moreover, matriculation examinations are typically spread out over all three years of high school – we can assume that many of the tests were taken by these students **before** the program had even begun for them. Thus, the results that we are measuring reflect the impacts of only partial program exposure.

The impact of the scholastic assistance program on student matriculation achievements was assessed through Ministry of Education data sets. The Ministry of Education data sets include information about the socio-demographic characteristics of the students and characteristics of the schools. Since the program is implemented at the school level, and the target population is all Ethiopian-Israeli students at the school, we based the analysis on the achievements of all Ethiopian-Israeli students at each school, whether or not they directly benefited from the program. As indicated in the previous chapter, an average of 25% of the Ethiopian-Israeli students at these schools did not receive direct inputs from the program – mainly because they were participating in another program which meets their needs or because of lack of motivation.

The analysis was carried out on a special file prepared for the Institute by the Ministry of Education, that includes individual data on all Ethiopian and non-Ethiopian students in Israel, their families and the schools they attend, and thus enabled full data analysis as required by the evaluation. (Of course the data is totally anonymous, so as to respect confidentiality.)

The statistical analysis was based on "matching" each of the schools in which the scholastic assistance program was implemented to three other "similar" schools. These "similar" schools were chosen from among the 431 Israeli high schools in which there are Ethiopian-Israeli students and the SPACE scholastic assistance program had not been implemented in 2006. The assumption is that the trend among the matched schools represents *"what would have been the outcomes for the Ethiopian-Israeli students had the program not been implemented"*.

Data on the level of achievements of the Ethiopian-Israeli students at the schools at which the program was implemented show that at these schools, achievements tended to be higher than at other schools, even before the program began (See Table A-3). In order to control for these differences in the levels of the schools, the schools with the program were first "matched" on the basis of the level of matriculation achievements among the Ethiopian-Israeli students in 2004. We chose 2004 because this was the last year before the program began in any school.

Next, we matched the schools on the basis of additional student and school characteristics:

- ◆ The socio-demographic characteristics of the students at the school - such as the percent of students born outside Israel, the average level of mothers' education,
- ◆ The percent of Ethiopian-Israelis at the school,
- ◆ Characteristics of the schools - such as the size of the school
- ◆ The level of student achievements in 2004 among all students.

See the appendix for a full description of the analysis methodology and the variables. The matching was carried out using a special statistical package that maximizes the similarities between the schools. (see <http://www.stata-journal.com>).

Results of the Analysis

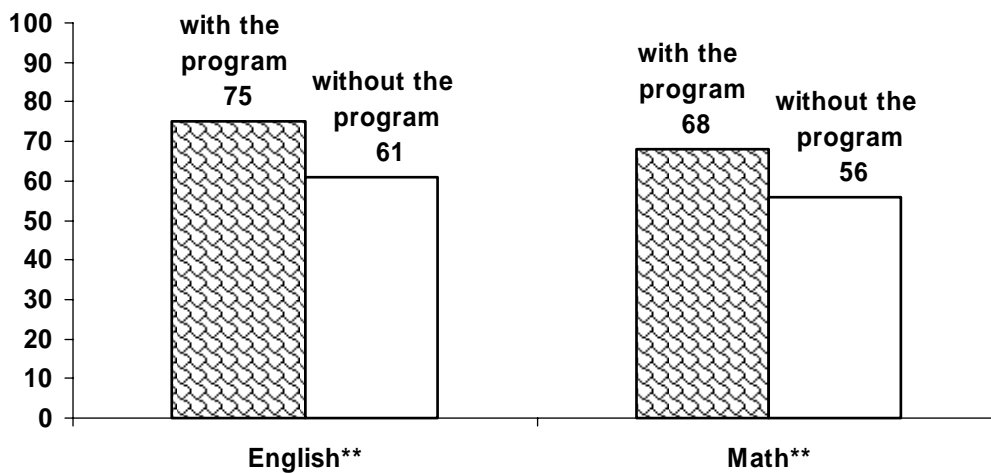
We conclude that, when controlling for these other factors, the achievement level of the Ethiopian-Israeli and non-Ethiopians at studying at a school where the SPACE scholastic assistance program had been implemented was related to higher students outcomes on the matriculation exams according to all of the measures reported: success in math and English, eligibility for a matriculation certificate and eligibility for a certificate which meets university entry requirements.

We proceed to describe these findings in greater detail:

Achievements in math: As noted, the scholastic assistance program has focused especially on assistance in the key subjects of math and English. Figure 6 presents the average percent of Ethiopian-Israeli students in 2006 whose math achievements met matriculation requirements – at

the schools in which the scholastic assistance program had been implemented and at the matched schools without the program. The data show that most of the Ethiopian-Israeli students at schools with the program passed the math exams (an average of 67.5% among the various schools), as compared to an average of 56% of the Ethiopian-Israeli students at similar schools without the program. On average 11.5% more of the students in the program met the matriculation requirements in math. This represents an increase of 20% in the success of the students at the program schools, compared to the schools without the program.

Figure 6: The Average Percent of Ethiopian–Israeli Students who Passed the Math and English Matriculation Exams[^]: in Schools with and without the Scholastic Assistance Program



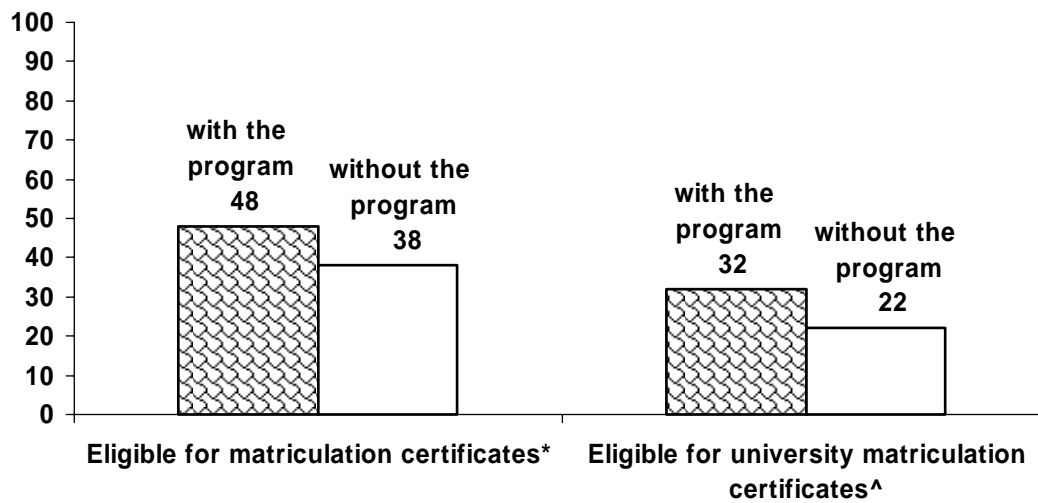
[^] Passing scores at level required for matriculation certificate (three test units).

**p < 0.01

Achievements in English: The data indicate that an average of 75% of the Ethiopian-Israeli students at program schools achieved matriculation level results in English, as compared to an average of 61% of the Ethiopian-Israeli students at the other matched schools (see Figure 7). Thus, the difference in the rates of success on the English exam are 14 percentage points (23% higher).

Eligibility for matriculation certificates: We analyzed the percent of Ethiopian-Israeli students who were eligible for a full matriculation certificate, which includes exams in approximately six different subjects, besides math and English. Among Ethiopian-Israeli students at schools with the scholastic assistance program, an average of 48% of the students were eligible in 2006, as compared with an average of 38% of the Ethiopian-Israeli students at similar schools without the program (see Figure 7). The difference of 10 percentage points in the eligibility rates represents an increase of 26% compared to the non-program schools.

Figure 7: The Average Percent of Ethiopian-Israelis Eligible for Basic Matriculation Certificates and for Matriculation Certificates that Meet University Entrance Requirements: in Schools with and without the Scholastic Assistance Program



* $p < 0.05$ ** $p < 0.01$

^ certificates with at least 21 units and 4 units of English

Eligibility for matriculation certificates which meet university entrance requirements: The final measure that we present relates to matriculation achievements which meet university entry requirements. The universities require more test units (21 rather than 20 for the basic certificate) and English at a level of at least 4 units (rather than 3 for the basic certificate).

The data demonstrate that an average of 32% of the Ethiopian-Israeli students at schools with the scholastic assistance program achieved university-level certificates as compared to an average of 23% of the students at the similar schools without the program. The 9 point gap represents an increase of 39% in the success rates at the schools with the program. The percentage increase is greater than for general eligibility, which reflects the fact that improving achievements in English is often the key for achieving the higher-level certificate.

In sum, the statistical analysis of national data sets demonstrates significant program impacts for the graduating cohort in 2006. The impacts are illustrated by the substantial differences between the success rates at the schools with the program and at similar "matched" schools without the program. This highlights the importance of the expansion of the program to include more Ethiopian-Israeli students. This is especially significant in light of the large gaps that still remain relative to the general Jewish population, and the decline in the achievements of the overall population of Ethiopian-Israeli youth in recent years.

In relating to the multi-year trends, we note that the achievements of the Ethiopian-Israeli students at the schools in which the scholastic assistance program was implemented also declined from 2004 to 2006 on most measures. The rates of success on the math exams also declined from 2004 to 2005, and then rose in 2006. English success rates remained constant from 2004 to 2005

and then rose slightly in 2006. At the schools without the scholastic assistance program, matriculation rates for Ethiopian-Israelis declined in 2005 and continued to decline in 2006.

Thus, the meaning of the higher achievements at the program schools, relative to the similar "matched" schools is mainly in preventing the further decline in basic eligibility rates, and in increasing achievements in math and English.

The fact that the rate of students who succeeded in math and English are higher than the rate of students who are eligible for the entire matriculation certificates points to the need to consider providing scholastic assistance in additional subjects.

The research program is continuing to monitor and analyze matriculation results for future program graduates. The 2007 cohort of graduates includes far more students from more and diverse schools. This data will be available for analysis from the Ministry of Education in the summer of 2008. Of special importance, is the fact that graduates in 2007 and later dates will have received program inputs for more school years, representing a far more significant part of their high school experience. This carries the prospect of witnessing greater program impacts on the performance of future cohorts.

III. Youth Centers

Outreach and Treatment Centers for Youth in Risk Situations are implemented by the Ethiopian National Project as part of the SPACE program. They aim to serve all the Ethiopian Israeli youth who reside in the neighborhood in which they are located, and particularly youth at risk. The centers add another dimension to the school-based efforts to provide services in all significant areas of the lives of Ethiopian Israeli youth.

Operating as after-school frameworks, the centers seek to provide a framework for leisure-time activities. Through their work with the youth, including out-reach efforts to attract all those in need, the centers attempt to identify and prevent risk behaviors, through value-oriented/educational activities, and to promote personal and social development. Additional goals include providing support and treatment, such as referrals to the community services with which the centers are in contact.

Several organizations were selected to operate the centers: Fidel (four centers), the Foundation for the Development of Hadera, the ALMAYA-Israel Association for Ethiopian Jews, and the Community Center of Gedera. Two of the centers receive funding from the Ethiopian National Project only. Five others are co-funded by the local authorities and other agencies.

1. Characteristics of the Youth Who Come to the Centers

The centers are intended for Ethiopian-Israeli youth and indeed, the vast majority (94%) of those who come are of Ethiopian origin (they or their parents were born in Ethiopia). The population is divided almost equally between those born in Ethiopia (46%) and those born in Israel (54%).

The age of those who come to the centers ranges from 12 to 18, and the majority (58%) are in the 15–18 age group. Both girls and boys attend but there is a higher percentages of boys (62%).

The youth come from families characterized by low socioeconomic status. Most have a large number of children – 90% of the families have four or more children, 58% have six or more. Importantly, in almost a third of the homes (30%), neither parent is working.

Only a minority of the youth (14%) have a paid job, but most of the others (87%) would like to have a job in order to earn some money. The vast majority (96%) of youth who visit the centers are enrolled in school and only 4% have dropped out. However, the percentage of those who drop out increases with age and 7% of 17-year-olds do not go to school and evidently will not complete twelve years of schooling.

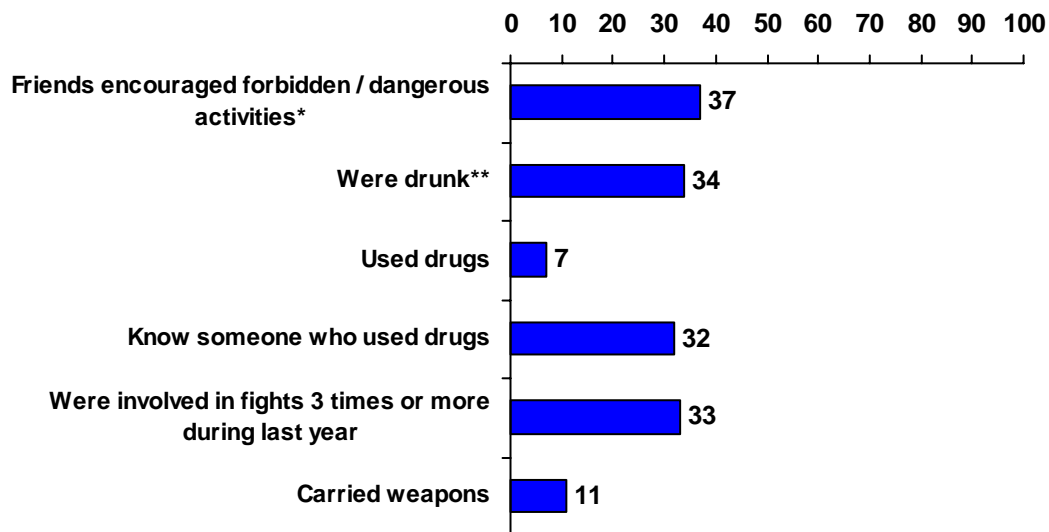
Table 1: Characteristics of the Youth Who Come to the Centers (In Percentage)

Number of youth interviewed	348
Characteristics (in percentages)	
Ethiopian origin (youth or mother)	94
Born in Ethiopia	46
Born in Israel	54
Girls	38
Boys	62
Ages 12-14	42
Ages 15-18	58
Families with 4 or more children	90
Families with 6 or more children	58
Neither parent employed	30

There are a number of indicators of serious difficulties reported by the youth regarding their situation at school. About a quarter of the students attending the centers (26%) report that they miss three or more days of school every month. One in ten students (10%) fails four or more subjects and half of them (50%) fail at least one. Twenty-eight percent of the youth at the center reported that they were very troubled by issues at school, and another 44% reported that they were troubled at least somewhat by these issues. The sense of failure from poor school adjustment and low achievements can contribute significantly to other risk behaviors.

It is clearly important to identify risk behaviors as early as possible. The youth were asked if they engaged in forbidden or dangerous activities, used alcohol or drugs or were involved in violent behavior (see Figure 8 below).

Figure 8: Risk Behavior as Reported by the Youth (In Percentages)



* Percent of youth who responded "Yes, sometimes" or "Yes, often"

** At least once

Thirty-seven percent of the youth have been encouraged by friends to take part in forbidden or dangerous activities. The use of forbidden substances is also widespread: about a third have been drunk (34%) at least once. A similar percentage (32%) know someone who has used drugs and some of them (7%) reported that they had used drugs themselves. The percentage of those involved in fights among the youth is 33%, and 11% reported that they carry a weapon (a stick, knife or gun) for self-defense. Most of those who carry weapons are boys aged 15 and older: among them, 16% reported that they carry weapons versus 7% among those aged 12 to 14.

Thus, the reports of the youth who use the centers show that most of them exhibit high-risk behavior or are exposed to a risk situation of some type. We built an index of reported risk situations which includes dropping out of school, a large number of failing grades at school (four or more), frequent absenteeism (four or more times a month), having used drugs, having been encouraged by friends to participate in forbidden or dangerous activities, involvement in fights (three or more), and carrying weapons. According to this measure, 37% of the youth who visit the centers reported at least two types of high-risk behaviors.

About two-thirds of the youth (67%) do not attend any other after-school youth service and a similar percentage (60%) have never previously participated in any other framework for youth. These data reflect the significant role that the youth centers play in creating new opportunities for the target population.

2. Activities at the Center

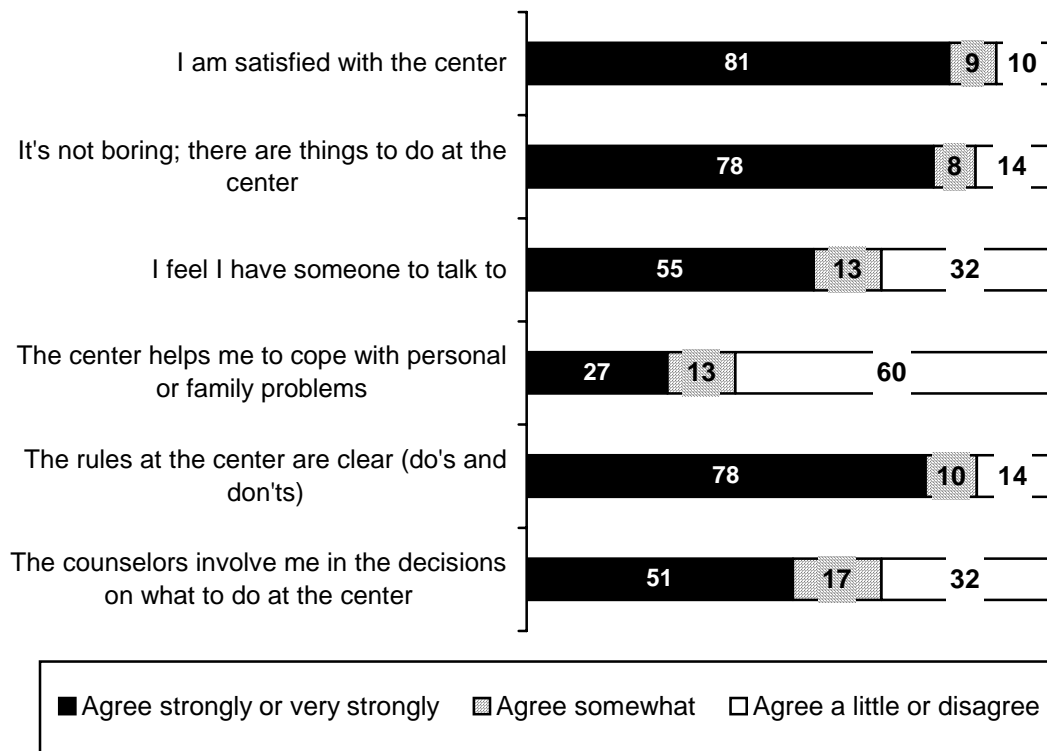
The findings reveal that the youth who visit the centers tend to come to the centers frequently: an average of 3.6 days per week. They also spend a lot of time there: an average of 3.28 hours each time.

The centers offer primarily:

- ◆ A normative setting for spending leisure time and after-school hours
- ◆ Enrichment activities, e.g., computer clubs, sports, arts and crafts, music, and games
- ◆ Personal development workshops, e.g., leadership workshops, preparation for IDF army services,
- ◆ Social activities
- ◆ Problem identification and referral to other sources as needed
- ◆ Selected assistance with schoolwork

The youth were asked to rate their satisfaction with the center's activities.

Figure 9: Satisfaction with the Centers Reported by the Youth (In Percentages)

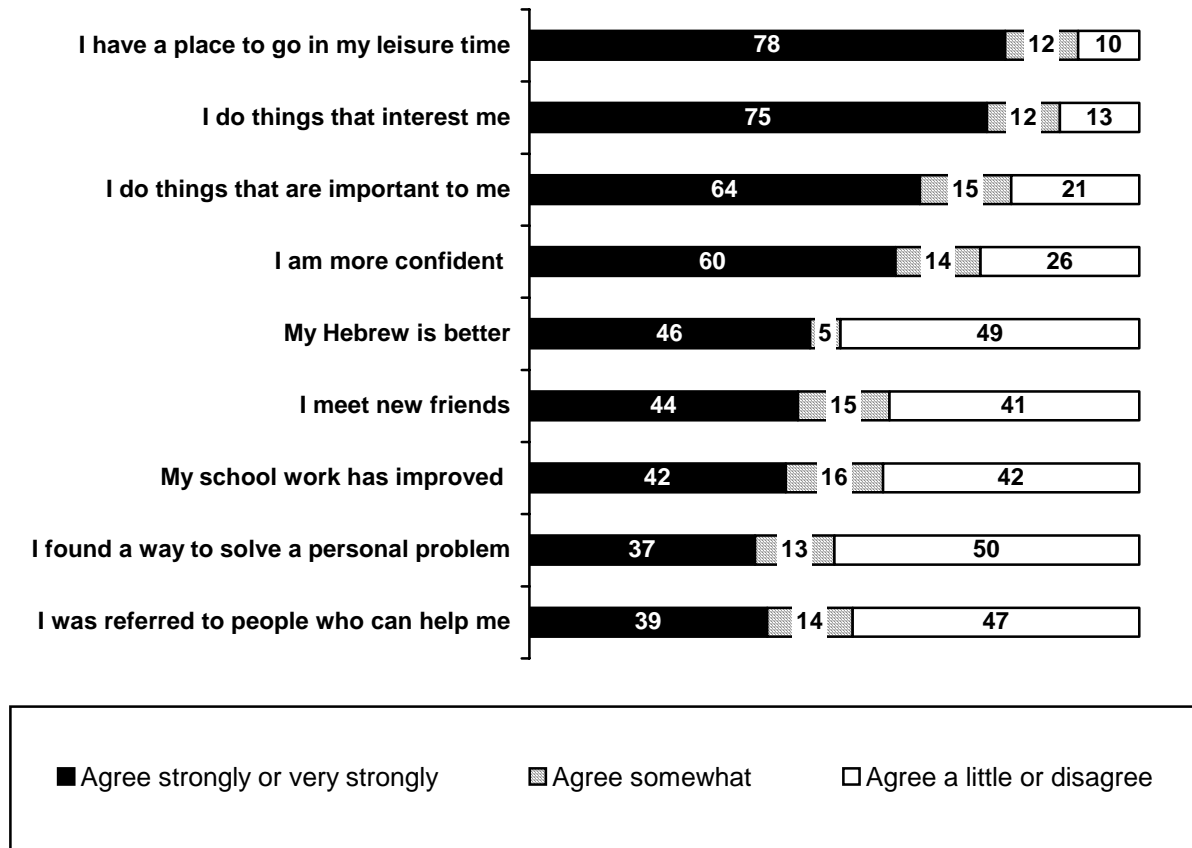


It is clear that most of the youth are very satisfied with activities at the center (81%). Seventy-eight percent said they find things to do there. A similar percentage agree strongly or very strongly that the rules are clear, and a large percentage feel that they not only participate in activities, but also have a say in what is being done at the center. The majority agree strongly that the center provides them with a source of personal support, as expressed in the question about

having someone to talk to. At the same time, a smaller percentage feel that the center helps them cope with personal or family problems.

In addition to the reports on satisfaction with the center's activities, the youth were also asked about their assessment of the center's contributions as presented in Figure 10.

Figure 10: The Youth's Assessment of the Centers' Contributions (In Percentages)



Seventy-eight percent agree strongly or very strongly that they have somewhere to go in their leisure time and a similar percentage agree that the center is a place where they can do things that interest them (75%). Sixty-four percent of those who participated in activities at the center feel strongly that they are doing things that are important to them personally and that their participation has affected various areas of their lives: many feel more self-confident, their Hebrew has improved, they have met new friends, or they feel that their schoolwork has improved. Around half report that they were referred by staff at the center to people who can help them and a similar percent report being helped with a personal problem. This is somewhat higher than what was reported in Figure 9 when they were asked to relate to the centers' contribution to resolving their personal or family problems more generally.

The interviews with the center directors shed light on key factors behind the centers' success. The center directors emphasized the importance that staff provide caring, ongoing relationships with the youth and serve as role-models for them. All of the centers collaborate with community

services when necessary, including the Service for Dropout Prevention and the Youth Advancement Service of the Ministry of Education, local Departments of Social Services, Youth Probation Service and the Service for Youth and Young People of the Ministry of Social Affairs, the schools, community centers, other youth clubs and the police. However, in the interviews, some of the center directors expressed a wish for greater cooperation and for the establishment of a municipal agency responsible for planning work with youth at the local level.

The center directors also raised other issues that need to be addressed. They would like to see improvement in three main areas: Expanding the range of activities offered and the number of days on which the centers are open (in those centers in which the number of days is limited), improving the physical conditions and facilities in which the centers are housed and the inclusion of more therapeutic staff at the centers. In the interviews with the youth, they also reported high satisfaction and numerous contributions of their participation at the centers. However a smaller number reported that there is someone to turn to among the centers' staff or that the center helps with personal problems. Not all of the youth may need this help but it does seem that this area needs to be strengthened.

Preliminary findings from the youth center surveys were presented to the ENP leadership in June 2006. Since that time, more youth centers have begun to operate and there are now 23 youth centers sponsored by the ENP. Much has been done to further upgrade the work of the centers and to ensure that they provide effective services for youth. A main issue has been to ensure that the centers meet the diverse needs of all the youth who use the service, including both those in normative or in high risk situations. Efforts have been made to make the package of activities at the centers more varied and programs and workshops for personal and social development have been introduced in collaboration with other organizations working with the ENP. The evaluation will continue to study this key service as it develops in many neighborhoods around the country.

IV. Summary

The Ethiopian National Project aims to advance Ethiopian-Israeli youth by providing programs to meet their scholastic, emotional, family and social needs. This study examined two main components of the SPACE (School Program and Community Empowerment) program which was initiated in 2005: the Scholastic Assistance Program and the Youth Centers.

The Scholastic Assistance Program has expanded significantly since its initiation. By 2007, it was being implemented in 23 communities at 119 junior and senior high schools, serving some 7,000 Ethiopian-Israeli students in grades 7 through 12. In the schools in which the scholastic assistance program has been implemented, most (75%) of the Ethiopian-Israeli students take part in the program.

The program provides after-school instruction in small groups throughout the school year. In addition, students receive concentrated assistance before the critical matriculation exams at the

end of high school. Each participant receives some 4 hours of instruction each week, mainly in math and in English.

The findings reflect high levels of satisfaction by school principals. They reported that, to a great extent, they were satisfied with the implementation of the program in their school, and with its contribution to the advancement of the students. These contributions were perceived as especially significant in bolstering the students' self-confidence, improving their scholastic achievements and enhancing their school motivation. Some of the principals also reported that the program considerably improved the school staff's work with Ethiopian-Israeli students.

We assessed the impact of the SPACE scholastic assistance program on the matriculation achievements of the first cohort of 12th grade graduates who had participated in the program. The analysis was conducted through multi-variate statistical analysis of the Ministry of Education national data. The analysis compared the matriculation grades of Ethiopian-Israeli students in schools where the program is implemented to the grades of Ethiopian-Israeli students at similar schools which are not participating in the program.

The findings indicate that the program has had a significant impact on the matriculation achievements of the Ethiopian-Israeli students at schools with SPACE scholastic assistance. The average percent of those achieving English and math grades at the level required for the matriculation certificate, and the percent eligible for basic matriculation certificates and for matriculation certificates at a level required for university entry are all significantly higher at the schools with the program than at other similar schools.

Study findings point to the need to further develop effective strategies to raise student motivation and to improve the quality of the instructions. The success of the instruction in improving math and English grades points to the importance of considering providing instruction in additional key subjects. Enrichment and social activities, as well as emotional support, may also be expanded in order to better meet the diverse needs of the students. Finally, the need to work with parents in order to promote their involvement and support for their children's learning is a key issue to be addressed.

The *Youth Centers* offer solutions to the needs of Ethiopian-Israelis aged 12 through 18 in the area of informal education, by providing after-school activities, enrichment and personal development workshops. The centers aim to provide meaningful after-school activities for all Ethiopian-Israeli youth, with special attention to the needs of youth in high-risk situations, through referrals to community treatment services.

Nearly all the visitors to these centers are Ethiopian-Israelis. Those who attend the centers tend to visit several times a week for a number of hours each time. For many (60%), this was the first time in their life that they had visited a youth center and most (67%) visit no other youth center or club. Only 4% of the youth who visit the centers have formally dropped out of school. However,

many of the youth are troubled by problems at school and in other areas, and 37% of them reported two or more high-risk behaviors.

The youth's perceptions of the centers are positive – most participants are very satisfied with the centers. The contributions most often reported are the provision of a framework for leisure and interesting and important activities and enhanced self-confidence. Many youth also see a considerable contribution in other areas, such as their social situation, their ability to solve problems, referrals for assistance at other community agencies, better competency in Hebrew and improved schoolwork.

The findings indicate a need to consider the expansion of the activities offered in the center, through new activities and an increase in the number of days per week that the center is open. It is also important to examine ways to enhance the youths' feelings that they can turn to center staff for support. Finally, some of the youth center directors noted the need to expand cooperation with other community services and to encourage more parental involvement.

SPACE is entering its fourth year and both the scholastic assistance and youth center programs have expanded substantially, and in accordance with the holistic approach of the ENP, provide important services to the youth in key areas: scholastic achievements, after-school activities, social and personal development and more. The ongoing evaluation will examine key issues and results as the program continues to address the challenge of effectively meeting the needs of the Ethiopian-Israeli youth.

Sources

Ben-Aryeh, A.; and Chernobelsky, D. (eds.) 2004. *Immigrant Children to Israel 2004*. National Council for the Child; The Ministry of Immigrant Absorption, Jerusalem.

Ben-Aryeh, A.; and Kimchi, M. (eds.) 2007. *Immigrant Children to Israel 2007*. National Council for the Child; The Ministry of Immigrant Absorption, Jerusalem.

Ben-Aryeh, A.; Tzionit, Y.; and Kimchi, M. (eds.) 2005. *Children in Israel: Statistical Yearbook 2005*. Jerusalem: National Council for the Child; Ashalim <http://www.ashalim.org.il/>; and the Inter-Ministerial Forum for Statistics on the Child.

Central Bureau of Statistics. 2006. *Immigrant Students in Schools 2003*. The Ministry of Education, Jerusalem.

Cohen-Navot, M.; and Baruj-Kovarsky, R. 2007. *Findings from the Evaluation of the SPACE Program: Implementation of the Scholastic Assistance Program*. Presented at the Annual Seminar of SPACE. June, 2007, Tel Aviv. Myers-JDC-Brookdale Institute, Jerusalem.

Cohen-Navot, M.; Levi, D.; and Baruj-Kovarsky, R. 2006. *Findings from the Evaluation of the SPACE Program: Implementation of the Youth Centers*. Presented to the Board of Governors, June, 2006. Myers-JDC-Brookdale Institute, Jerusalem (unpublished)

Cohen-Navot, M.; Levi, D.; and Gilad, S. (Forthcoming). *Non-profit Organization Activity in the Education of Disadvantaged Children and Youth in Israel: Future Directions for YRF*. Myers-JDC-Brookdale Institute, Jerusalem.

Ethiopian National Project. 2007. *Quarterly Report October - December 2006*. Ethiopian National Project, Jerusalem.

Ethiopian National Project. 2006. *Facing Challenges of Israel's Ethiopian Community By Means of Unique Partnerships*. Ethiopian National Project, Jerusalem.

Levine, T.; Shohami I.; and Sapulsky, D. 2003. *Scholastic Performance of Immigrant Students: Findings and Recommendations for Decision-makers*. Chief Scientist's Bureau, Division of Immigrant Student Absorption, the Ministry of Education, Jerusalem.

Lifschitz, C.; Noam, G.; and Haviv, J. 1998. *Absorption of Ethiopian Children and Teenagers: A Multi-Dimensional Look at the Children, Their Mothers, and School Personnel*. RR-332-98. Myers-JDC-Brookdale Institute, Jerusalem.

Mengesha, N. 2005. *Ethiopian National Project: Annual Summary January - September 2005*. Ethiopian National Project, Jerusalem.

Mengesha, N. 2005. *Ethiopian National Project: Quarterly Report October - December 2006*. Ethiopian National Project, Jerusalem.

Mengesha, N. 2004. *First Mapping Report: Education, Needs, and Programs of the Ethiopian Community*. Ethiopian National Project, Jerusalem.

Myers-JDC-Brookdale Institute. 2001. *Integration of Ethiopian Immigrants into Israel Society: Challenges, Programs And Policies, and Future Directions*. S-93-01. Jerusalem.

Wolda, A. 2006. *The Integration of Ethiopian Immigrants in Education and the Work: Summary of New Findings*. Myers-JDC-Brookdale Institute, Jerusalem (unpublished).

Appendix A: Tables

Table A-1: Matriculation Achievements of Ethiopian-Israelis Students and Other Students, Jewish Sector Only, 2002-2006 (In Percentages)

	2002	2003	2004	2005	2006
Ethiopian-Israeli Students					
N (number of students)	1582	1802	2024	2080	2107
Math: passing grade ¹	51	48	53	49	48
English: passing grade ¹	58	62	63	62	60
Eligibility for matriculation certificate	43	43	44	36	35
Eligibility for matriculation certificate which meets university entrance requirements ²	16	18	19	18	20
Other students					
N (number of students)	68608	68742	70993	69677	67803
Math: passing grade ¹	74	75	75	74	74
English: passing grade ¹	84	85	83	83	85
Eligibility for matriculation certificate	66	66	65	62	64
Eligibility for matriculation certificate which meets university entrance requirements ²	56	56	55	55	57

¹ At level of 3 units or more, as required for matriculation certificate

² Expanded number of total test units and test units for English

Note: The data presented here only includes students at schools in which at least some of the students take matriculation examinations.

Table A-2: Matriculation Achievements of Ethiopian-Israeli Students – in Schools Where the Scholastic Assistance Program was Implemented by 2006, and in Other Schools *, 2002-2006 (In Percentages)

	2002	2003	2004	2005	2006
Ethiopian-Israelis at Schools with Scholastic Assistance Program					
N (number of students)	235	322	373	379	440
Math: passing grade ¹	69	65	70	61	67
English: passing grade ¹	76	78	75	75	77
Eligibility for matriculation certificate	62	58	58	48	48
Eligibility for matriculation certificate which meets university entrance requirements ²	33	31	31	27	31
Ethiopian-Israelis at Other Schools					
N (number of students)	1347	1480	1651	1701	1667
Math: passing grade ¹	47	45	49	46	42
English: passing grade ¹	55	58	60	59	56
Eligibility for matriculation certificate	40	40	41	34	32
Eligibility for matriculation certificate which meets university entrance requirements ²	13	15	16	16	17

* At some of the "other " schools" the program was later implemented during 2006-07.

¹ At level of 3 units or more, as required for matriculation certificate

² Expanded number of total test units and test units for English

Table A-3: The Average Rates of Success in Matriculation Exams in Schools with the Scholastic Assistance Program and in Similar Schools without the Program, the Size of the Difference between the Rates in the Program Schools and in Similar Schools, and the Percent of the Increase

	Schools with scholastic assistance program	Similar schools without scholastic assistance program	Difference	Extent of the difference – relative to similar schools
Passing scores on math exams	67.5%	55.8%	11.7% ** (5.2)	21%
Passing scores on English exams	75.2%	61.0%	14.2% ** (4.9)	23%
Eligibility for matriculation certificate	48.2%	37.9%	10.3* (5.4)	27%
Eligibility for university-level matriculation certificate	32.0%	23.1%	8.9 (5.6)	39%

* p < 0.05

** p < 0.01

Appendix B: Description of the Statistical Analysis

The impact of SPACE on student matriculation achievements was assessed through multi-variate statistical analysis, which took into account possible impacts stemming from other characteristics of the students and the schools, in 2006 and previously. Since the program is implemented at the school-level, and its target population is all Ethiopian-Israeli students at the school, we chose to base the analysis on the achievements of the Ethiopian-Israelis at each school.

Using the "nearest neighbor" matching method, for each of the schools in which the scholastic assistance program had been implemented a counterfactual was constructed based on the outcomes of similar schools in which the scholastic assistance program was not implemented.

The Ministry of Education data sets enabled us to use the following variables in matching the schools:

- a. Characteristics of the schools
 - ◆ Supervision (general or religious)
 - ◆ Region in the country
 - ◆ Development-investment index ("tipuah" index)
 - ◆ Size—number of students (in 2006 and in 2004)
- b. Socio-demographic characteristics of all students at the school:
 - ◆ percent of students born outside Israel (2006)
 - ◆ average number of children in each student's family (2006)
 - ◆ average of mother's number of years of education (2006)
 - ◆ percent of girls (2006)
- c. Socio-demographic characteristics of the Ethiopian-Israeli students at the school:
 - ◆ percent of Ethiopians -Israelis at the school (in 2006 and 2004)
 - ◆ percent of Ethiopian-Israelis born outside Israel (2006)
 - ◆ average number of children in family, among Ethiopian-Israeli students (2006)
 - ◆ average of number of mother's years of education, among Ethiopian-Israeli students (2006)
 - ◆ percent of girls, among Ethiopian-Israeli students (2006)
- d. Student matriculation achievements
 - ◆ Percent of all students who achieved matriculation certificates (2004)
 - ◆ Percent of Ethiopian-Israelis who passed the math exam (2004)
 - ◆ Percent of Ethiopian-Israelis who passed the English exam (2004)
 - ◆ Percent of Ethiopian-Israeli students who achieved matriculation certificates (2004)

The inclusion of student and school characteristics from 2004 enables the matching procedure to relate to changes from 2004 to 2006. In order to especially "control" for differences in the level of educational outcomes among the schools, the matching include data on the matriculation outcomes of the Ethiopian-Israeli students and of all the students in the school in 2004 before the program was implemented.

In matching the schools, we first specified "exact matches" on the measures of Ethiopian-Israeli achievements regarding math achievements, English achievements and matriculation eligibility in 2004 in order to give them extra weight in the matching procedure.

Based on various subsets of these variables, for each school participating in the SPACE program, three comparable schools were chosen among schools that were not participating in the program. Counterfactual outcomes were constructed based on the outcomes of these three schools—"what would have been the outcomes in the school if the SPACE scholastic assistance program was not implemented in it?". The impact of the program was estimated as the average of the differences between the outcome in a treated school and its counterfactual outcome. It is important to note, that experiments were conducted with a range of different combinations of matching variables and they all demonstrated a significant impact on all four indicators of matriculation results.

Further details are available at:

<http://www.stata-journal.com/software/sj4-3/st0072/nnmatch.hlp>