

The effects of high school context and interpersonal factors on students' educational expectations: a multi-level model

NABIL KHATTAB

Department of Sociology, University of Bristol, BS8 1UQ Bristol, UK; Tel.: +44-117-331-7008; e-mail: nabil.khattab@bristol.ac.uk

Abstract. This study examines the effects of some aspects of the school normative, academic and institutional context together with individual and interpersonal factors, on educational expectations among Palestinian students in Israel. The data consist of a sub-sample of 1601 students in 40 high schools. Hierarchical linear modelling technique (Multilevel analysis) is used to investigate the effect of the school context and the interpersonal factors on students' educational expectations (SEE). The results of this study clearly demonstrate that both sets of variables are highly related to the outcome variable, providing new evidence that SEE, perhaps like other educational outcomes, are developed through interpersonal and contextual effects. While recent research indicates that the school institutional context mediates the effects of interpersonal factors (Buchmann & Dalton, 2002), this study suggests that among Palestinian students in Israel, interpersonal relations exert significant influences on SEE, regardless of, or despite, the school's institutional context.

1. Introduction

The purpose of this paper is to examine the effects of the school context and other interpersonal influences in the development of educational expectations (EE) among Palestinian-Arab high school students in Israel. Previous studies have tended to focus either on the influences of interpersonal factors or on contextual factors (Shavit & Williams, 1985; Marjoribanks, 1998), but rarely on both. Even when such studies exist, they tend to emphasise only a few aspects of the school context such as the institutional one (Buchmann & Dalton, 2002), ignoring other possible contextual influences. Moreover, while these studies show quite clearly how the contextual effects work for dominant groups, far less is known about this issue for minority students, especially from outside the USA.

We should bear in mind at this early stage that Palestinians in Israel comprise a national minority, and as such, the educational expectations of Palestinian students might be different from those of majority students, as it has been

suggested by a number of previous studies on educational expectations of minority students¹ (Mickelson, 1990; Hanson, 1994; Kao & Tienda, 1998). These studies have shown that minority students (mainly Black students in the US) are less likely to develop high educational expectations than white students. However, the findings of these studies have recently been challenged by a number of studies that addressed the issue of educational expectations amongst minority students and have shown that in some cases minority students (both migrants or children of migrants and indigenous students) tend in fact to develop high educational expectations (Goyette & Xie, 1999; Khattab, 2003a, b; Yair et al., forthcoming). For example, in a recent study I have shown that Palestinian students in Israel have very high educational aspirations, and that the process through which these educational aspirations is likely to be grounded in the social capital available for the student and his or her perceptions towards the importance of education in generating social and economic mobility (Khattab, 2003a, p. 297). Whether students from minority groups tend to develop high aspirations and expectations or low ones does not suggest that they are less or more likely to be influenced by similar factors and processes operating on majority students. There is no evidence to assume that factors such as the factors under study here (school context and interpersonal factors) are not affecting all students alike, regardless of their status as minority or majority. As very little is known regarding this question, this study seeks to shed some light on to what extent minority students are influenced by institutional and interpersonal processes by looking at the case of Palestinian students in Israel.

Studies on students' educational outcomes consistently reveal the significant role of interpersonal relationships in determining students' educational expectations (SEE) (Sewell & Shah, 1968; Schneider & Stevenson, 1999), whereas similar studies of the school context reveal small and inconsistent effects on students' educational outcomes (Nelson, 1972; Alexander & Eckland, 1975). The main argument of the latter studies was that contextual influences (mainly the ability and the social status contexts) are strongly correlated, but also counteract each other, and effectively cancel each other out. Furthermore, most of these studies fail to show either how the contextual variables operate on students' aspirations and expectations, or how other contextual variables do so.

Using data from a nationally representative sample of Palestinian students in Israel and a multi-level approach in analyzing these data, this article seeks to increase the understanding of the role of contextual and interpersonal relationships in determining SEE. This will be done, firstly, by examining a large number of

¹In this study the focus is not on the students being part of a national and ethnic minority but is on the more general issue of the effect of contextual and interpersonal factors on educational expectations. Thus, the issue of ethnic minorities and educational aspirations will only be briefly addressed. For a more detailed discussion see, for example, Khattab (2003a, b) and Yair, Khattab, and Benavot (forthcoming).

contextual variables, and deconstructing the social status context into its components. Secondly, this article will focus on the mechanisms whereby interpersonal relationships between students and their parents influence SEE, and finally, it will apply a two-level model which allows direct representation of the influence of the school factors and allows the effect of the context to vary across schools.

2. The context of the study

Israel's Palestinian minority constitutes approximately one fifth (19%) of the total population of the state of Israel (Central Bureau of Statistics (CBS), 1995; Table 2.18). Since the establishment of the state of Israel in 1948, Palestinian-Arabs as a whole have been Israel's most oppressed group, facing widespread systematic discrimination in every aspect of the social, political and economic sphere (Haidar, 1994). They are also viewed by the state as a fifth column and a security threat, resulting in a collective exemption from compulsory military service (given to the minority since the 1950s) with the exception of the Druze (Barzilai, 2001). This maintains Palestinian exclusion from the equal rewards and opportunities within society and has become one of the most effective discriminatory mechanisms against Palestinians in Israel (Kraus, Shavit, & Yaish, 1998).

Residentially, the Palestinians are highly segregated from the Jewish population, living mainly in segregated localities in three geocultural areas: Galilee, the Triangle and the Negev, with only 10% living in mixed cities like Haifa and Jaffa (Levin-Epstein & Semyonov, 1994; Mazawi, 1998). This residential segregation has resulted in educational segregation. Palestinian schools are separated from Jewish schools both spatially and administratively, the system being tightly controlled by the state. Additionally, due to religious and historical factors, as well as state policies, a second level of segregation within the Palestinian educational system has been developed. Largely, Muslim children attend Muslim schools, Druze students attend Druze schools, and the majority of Christians attend private Christian schools (Mazawi, 1996). However, in many schools, Muslim, Christian and Druze students study alongside each other, particularly in multi-religious localities in the Galilee. In Palestinian schools, the teaching language is Arabic, the teachers are Palestinians coming mainly from the same community or locality as the students, producing a very unique social and educational environment.

A comparison between the Jewish and Palestinian educational systems shows that the latter lacks a modern infrastructure, facilities and equipment and an equal allocation of resources (Eisikovits, 1997). Moreover, the Palestinian state-school system has a significantly lower holding power, resulting from high attrition among Palestinian students. While more than 85% of Jewish students complete 12 years of schooling, only about 50% of the comparable Palestinian student cohort does so (Mazawi, 1996).

Palestinian schools are academically oriented because vocational tracks are conspicuously absent (Shavit, 1990; Al-Haj, 1995). Less than a third of Palestinian pupils follow vocational streams, whereas more than 41% of Jewish pupils do so (Central Bureau of Statistics (CBS), 2003; Table 8.12). Although the absence of vocational tracks is one reason for the limited retention rate of Palestinian schools, paradoxically, this means that the proportion of Palestinians allocated to academic post-secondary education is greater than that of Jewish students of oriental background (Shavit, 1990).

3. Theoretical background

The EE of high school students have significantly increased over the last five decades. Today, most students are very aware of the importance of higher education in obtaining high-status jobs and improving their future economic benefits (Schneider & Stevenson, 1999). Previous studies have indicated that school and the family play a major role in shaping SEE (Nelson, 1972; Marjoribanks, 1998; Schneider & Stevenson, 1999; Buchmann & Dalton, 2002). In what follows, I will discuss the impact of the school context and the family setting on SEE.

3.1. THE SCHOOL CONTEXT AND STUDENTS' EDUCATIONAL EXPECTATIONS

Previous literature has predicted two major types of contextual effects of schools: normative and comparative. While the normative effect exerts a positive influence on SEE, the comparative effect tends to depress these expectations (Nelson, 1972; Alwin & Otto, 1977; Shavit & Williams, 1985). High-quality schools tend to attract students from well-established backgrounds and privileged groups, who traditionally are more likely to hold high expectations, partly due to their cultural and human capital. Other students in these schools are assumed to develop their expectations in line with the level of expectations held by the large body of high-status peers (Nelson, 1972). Therefore, their expectations will be as high as those of high-status students, and thus, it is reasonable to hypothesize that the aggregated school level of expectations will positively influence each student's expectations.

Concerning the comparative effect, it has been argued that students tend to compare their own academic performance with that of other peers in their school or classroom. In high-quality schools, students of a given level of ability face greater competition, thus tending to receive lower grades and holding lower expectations than they would in poorer-quality schools, where academic ability is lower, and competition is rare (Alexander & Eckland, 1975). This negative relationship between the ability context and SEE has been labelled by Davis (1966) as the 'frog pond' effect. Based on what has been mentioned above, I anticipate that the mean ability level of the school will exert a negative influence on SEE.

It is worth noting that high-quality schools are those of a high socio-economic status, where privileged students tend to concentrate. Hence, the socio-economic context of the school may represent both effects, the normative and the comparative, which cancel each other out (Nelson, 1972). Thus, if we examine the effect of the school's socio-economic context without controlling for the mean aspiration level and the mean ability level of students, it is likely that it will have no significant effect on expectations, due to the contradictory influence of the normative and the comparative effects. However, if we control for the aspiration level and the ability level of the school, the school's socio-economic status should exert positive influences on SEE due to other effects such as greater resources and better organization of the curriculum (Schneider & Stevenson, 1999). Therefore, unlike previous research, I argue that a proper model should reveal a positive influence from the school socio-economic context on SEE.

In addition to the comparative and the normative effects, the literature on SEE and achievement has revealed other contextual effects that may produce between-school variation. For example, several researchers have drawn attention to various institutionalized mechanisms, such as tracking, ability grouping and types of schools, which may generate between-school variation in students' expectations (Yuchtman-Yaar & Samuel, 1975; Shavit & Williams, 1985; Ayalon & Yuchtman-Yaar, 1989; Buchmann & Dalton, 2002). These studies suggest that membership in these institutional arrangements defines the opportunity structure available for students, and thus determines their future educational and occupational orientation. For instance, Yuchtman-Yaar and Samuel (1975) found that in sponsored-mobility systems, such as the Israeli system, youth's career aspirations are strongly determined by the credentialing process of the formal education system (p. 529). Israel students in vocational tracks realize their limited opportunities for matriculation or higher education, and hence develop low EE (Kerckhoff, 1976; Ayalon & Yuchtman-Yaar, 1989). As these institutional mechanisms define quite clearly the opportunity structure for students, it can be anticipated that students who have different institutional affiliations will develop different EE. In particular, students attending private schools, and those following academic tracks, will develop higher levels of EE compared with those attending public schools and vocational programs.

Additionally, Shavit (1985) and Yogev and Ilan (1987) in their studies of Israeli society, have highlighted the importance of residential and educational segregation in determining SEE. They found that Jewish students from oriental origins who attend segregated schools alongside a majority of oriental peers, tend to develop higher aspirations than students from oriental origins who study alongside a majority of western Jews. These studies indicated that segregation of the minority groups from the dominant group is likely to enhance the expectations of the minority students. Students from segregated ethnic groups, that often maintain separate

educational systems, are not required to compete academically with students from dominant groups, and are not exposed to the stereotypes held by the dominant group. Hence, they may develop more favorable self-images and high aspirations and expectations (Shavit & Williams, 1985; Yogev & Ilan, 1987; Shavit, 1990). Palestinians in Israel live in two types of localities: (1) Arab villages and towns (Palestinian enclave), and (2) mixed Jewish-Arab cities. Although in both, Palestinian students attend separate schools (for Palestinians only), those attending schools within the Palestinian enclave do not have direct and daily contacts with the Jewish population as do those attending schools in mixed cities. The former, it can be hypothesized, will develop higher expectations than those who attend schools outside the ethnic enclave.

Previous studies, depending on structural explanations, indicated that residential segregation is likely to exclude minorities from access to equal economic resources in society (Fieldhouse & Gould, 1998), resulting in low returns on education and other human capital investments, and thus, depressing SEE (Ayalon & Yuchtman-Yaar, 1989; Kao & Tienda, 1998). In other words, the lack of occupational opportunities, under conditions of segregation, seems to cancel out the positive effect of segregation on EE among minority students. For example, if students understand that, for various reasons, they will fail to convert their academic capital into economic benefits and social mobility, they may become sceptical about the importance of education as a main vehicle for social mobility, and thus lower their EE, regardless of being segregated from majority students. However, if minority students have more economic opportunities within their enclave than within the general labor market, it is likely that segregation from majority students will have a double impact on SEE, protecting minority students not only from academic competition, but also from job competition. This seems to be the condition under which Palestinian students live (as mentioned in the previous section), leading to the hypothesis that in the case of Palestinian students segregation and occupational opportunities will have a positive influence on SEE.

3.2. THE EFFECT OF THE FAMILY SETTING ON STUDENTS' EDUCATIONAL EXPECTATIONS

The literature on students' aspirations and expectations has illustrated that the family plays a significant role in shaping students' future plans and orientations (Schneider & Stevenson, 1999; Marjoribanks, 2002). Regardless of family socio-economic status (SES), most parents hold high EE for their children, expecting them to graduate from college or university and become successful adults (Schneider & Stevenson, 1999). However, not all parents can provide their children with the resources needed to translate these expectations into concrete future plans and outcomes, and much depends on the family's human and economic capital (Kerckhoff, 1976; Solorzano, 1992; Marjoribanks, 1998). Thus, it is reasonable to hypothesize that SES will

positively influence SEE. Parents with high SES support their children, not only by encouragement and modelling, but also by more class-based and network-oriented forms of support, such as paying for private education and university, discussing school and future plans with their children, and providing information about the educational system and the labor market (Schneider & Stevenson, 1999).

Recent studies indicate that such family resources are only available for children within families who have strong relationship ties (Marjoribanks, 1998; Schneider & Stevenson, 1999). Students from families rich in social capital are more likely to develop high future aspirations and ambitious educational plans, since their educational aspirations are influenced by parental norms, values and expectations (Schneider & Stevenson, 1999, p. 147). Parents' perceptions of the educational system and employment opportunities are channelled to the children. Therefore, students' expectations are likely to develop through strong family ties, in which parents actively convey their norms, values and perceptions to their children (Khat-tab, 2003a). Strong family member relationships are clearly essential in developing high EE among students, but, these ties, *per se*, are insufficient, and active parental involvement in the children's education (i.e. assistance with homework, discussing future plans etc.) is also important. For minority students in particular, social capital is very important as it may provide them with extra powers in facing social barriers and discrimination (Goyette & Xie, 1999).

In a different vein, a recent study on the influence of interpersonal factors on students' educational aspirations in 12 countries has demonstrated that parental influence is highly conditioned by the extent of institutional differentiation within the educational system (Buchmann & Dalton, 2002). The researchers found that the influence of parents and peers in countries with a relatively undifferentiated educational system is strong, whereas it is insignificant in countries with highly differentiated systems. Their findings are consistent with Yuchtman-Yaar and Samuel (1975) regarding the same issue in Israel. One may argue, drawing on these studies, that in highly institutional differentiated educational systems interpersonal factors would play a very limited role, if at all, in shaping students' future careers.

While the researchers explain the reasons why one should anticipate such results, they seem to ignore other possibilities. For example, for some societies, where education is highly valued and considered vital for the existence of these societies, it is not unreasonable to assume a significant influence of interpersonal factors on SEE, even though the educational systems in these societies are institutionally differentiated. For example, among Palestinians (both those who live in Israel and those who reside the West Bank and Gaza strip) education is also seen as a distinctive feature and vital factor of their survival and their struggle (Yair et al., forthcoming). As far as the study of Yuchtman-Yaar and Samuel is concerned, it is slightly irrelevant, not only to the present study but also to other similar studies because of a number of reasons. Firstly, the sample in their study consists of soldiers during their military duty in the Israeli Defence Forces, whereas in the present study the sample

includes High school students. Secondly, all of the respondents in their sample were aged 20–21 at the time of the study in 1971, while the students in the present study are aged 15 and 17, and thirdly, since their study has been carried out to the late 90s, when this study has been carried out, a number of significant transmissions have taken place regarding both the Jewish society and the Palestinian society in Israel. Drawing on the role of education in general, and the perception of its value in the eyes of Palestinians in particular, it is reasonable to argue that Palestinian parents exert strong influence on the EE of their children despite the existence of different types of secondary schools and the fact that some students are vocationally tracked.

4. The model

The outcome variable (SEE) is measured using the CASMIN scale (Brauns & Steinmann, 1999). The variable has four response categories ($m = 4$): less than matriculation ($2ab$), matriculation ($2c$), lower tertiary education ($3a$) and higher tertiary education ($3b$).

To examine the impact of the school context and other family and individual factors on SEE, I use a two-level model with data on students and schools. Because the outcome variable was measured using an ordinal scale, I use an ordinal two-level hierarchical linear model (HLM) and a logit link function. For an extensive treatment of the applications of the methodology, see for example, Bryk and Raudenbush (1992) and Raudenbush, Brian, and Cheong (1993). The model consists of three level-1 equations and one level-2 equation with error terms and random variation at the school level.

A person falls into category m and there are four possible categories ($m = 1, 2, 3, 4$). Because these are ordered, the response variable SEE assumes the value of m with probability

$$\phi_{mij} = \text{prob}(\text{SEE}_{ij} = m)$$

The probabilities can then be written as

$$\phi_{1ij} = \text{prob}(\text{SEE}_{ij} = 1) = \text{prob}(2ab)$$

$$\phi_{2ij} = \text{prob}(\text{SEE}_{ij} = 2) = \text{prob}(2c)$$

$$\phi_{3ij} = \text{prob}(\text{SEE}_{ij} = 3) = \text{prob}(3a)$$

$$\phi_{4ij} = \text{prob}(\text{SEE}_{ij} = 4) = \text{prob}(3b)$$

It is, however, convenient to work with cumulative probabilities rather than the probabilities themselves. If these cumulative probabilities are denoted as

$$\hat{\phi}m = \text{prob}(\text{SEE}_{ij} \leq m) = \phi_1 + \phi_2 + \phi_3 + \phi_4 = 1$$

We can then write

$$\begin{aligned} \text{prob}(R_{ij=1}|\beta_j) &= \tilde{\phi}_{ij(2ab)} = \phi_{ij(1)} \\ \text{prob}(R_{ij\leq 2}|\beta_j) &= \tilde{\phi}_{ij(2c)} = \phi_{ij(1)} + \phi_{ij(2)} \\ \text{prob}(R_{ij\leq 3}|\beta_j) &= \tilde{\phi}_{ij(3a)} = \phi_{ij(1)} + \phi_{ij(2)} + \phi_{ij(3)} \\ \text{prob}(R_{ij=4}|\beta_j) &= \tilde{\phi}_{ij(3b)} = \phi_{ij(1)} + \phi_{ij(2)} + \phi_{ij(3)} + \phi_{ij(4)=1} \end{aligned}$$

Associated with the cumulative probabilities are the cumulative logits, which can be written as

$$\eta_{mij} = \log \left(\frac{\text{prob}(\text{SEE}_{ij\leq m})}{\text{prob}(\text{SEE}_{ij> m})} \right) = \log \left(\frac{\phi_{mij}}{1 - \phi_{mij}} \right)$$

4.1. THE STUDENT-LEVEL EQUATIONS

The level-1 model consists of three equations ($m - 1$). Each category of the first three categories is represented by a separate equation. The fourth category is the reference group:

$$\begin{aligned} \eta_{ij(1)} &= \log \left[\frac{\phi_{ij(1)}}{1 - \phi_{ij(1)}} \right] = \beta_{0j} + \beta_{1j}(X_{11}) + \cdots + \beta_{pj}(X_{p1})_{ij(1)} \\ \eta_{ij(2)} &= \log \left[\frac{\phi_{ij(2)}}{1 - \phi_{ij(2)}} \right] = \beta_{0j} + \beta_{1j}(X_{11}) + \cdots + \beta_{pj}(X_{p1})_{ij(2)} + \delta_{(2)} \\ \eta_{ij(3)} &= \log \left[\frac{\phi_{ij(3)}}{1 - \phi_{ij(3)}} \right] = \beta_{0j} + \beta_{1j}(X_{11}) + \cdots + \beta_{pj}(X_{p1})_{ij(3)} + \delta_{(3)} \end{aligned}$$

where η_{ij} is the log-odds that student i in school j falls into the specific category 1–3 (category 4 is redundant). Note that in this model each category (from 1 to 3) is represented by a different equation. The $X_{11}, X_{21}, \dots, X_{p1}$ are the level-1 predictors. The β_p are the coefficients that measure the change in the respective log-odds given one-unit change in the predictors, holding all other variables constant. Here (δ) is a ‘threshold’ that separates categories $m - 1$ and m . There are potentially three thresholds when $m = 4$.

4.2. THE SCHOOL-LEVEL EQUATIONS

In what follows I define an equation to estimate the effect of the school context on SEE, with an error term representing the random variation around the grand mean of the outcome. In all within-school models, coefficients that represent the effects of the level-1 predictors are assumed not to vary across schools; only the intercept (i.e. the school means for the outcome) is assumed to vary from school to school

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(X_{12}) + \dots + \gamma_{0k}(X_{k2}) + u_{0j}$$

where β_{0j} is the intercept that has been set to vary randomly between schools. The γ_{0k} represents the effect of the school characteristics on SEE. The X_{12}, \dots, X_{k2} are the level-2 predictors.

5. Data and variables

The data consist of two levels: student level and school level, and come from a large nationally representative survey of Palestinian high school students in 42 public and private Palestinian schools in Israel. The survey was conducted during a 4-week period in April/May 1997 using a closed-item questionnaire, containing information on the students' family and religious backgrounds, parent–student relations, student values and life goals, attitudes towards school, and educational and occupational expectations. Although the original sample comprises girls and boys from the 9th and 11th grades, in this study I focus exclusively on boys, as their EE are different from those of girls. Additionally, there are some cultural factors that seem to influence girls' but not boys' expectations. Furthermore, the school dropout rate is higher among boys than girls, making the former highly selected, and therefore, academically different from the latter. In particular, it is worth mentioning here that the meaning of education among Palestinian girls is significantly different from the meaning of education for Palestinian boys (Khattab, 2002). For the former education is seen as a means of occupying a better position in the marriage market and as a future insurance policy if the marriage does not work out well. In addition to that, in a previous analysis it has been found that different variables influence girls and boys differentially (Khattab, 2002).

The 42 schools were selected using a proportional stratified sample, the strata representing a socio-economic profile based on a combination of three variables: (a) the total fertility rate of Arab women; (b) the proportion of Arab women aged 30–34 with at least 10–12 years of schooling; (c) the average per capita income in locality. The final sample consisted of 1601 students from 40 schools, 946 of whom were in the 9th grade, and 655 in the 11th grade. In terms of religion, 1076 students were Muslims, 282 Christians and 243 Druze (for more information about the methodology, the reader is referred to Khattab (2003)). The variables used in the analysis are presented in Table I.

6. Findings

Table II presents the distribution of SEE by religion and grade. It reveals three important findings. First, most of the students, regardless of their religion or grade,

Table I. Definition of variables

Variables	Description
<i>Dependent variable</i>	
Educational expectations	Measured using CASMIN scale. Students indicated the level of education they believed they would attain in the future. An eight-point scale was used, ranging from 1 (incomplete high school education) through 8 (Ph.D. degree). Answers were recoded into four-point scale: 1 = (2ab), 2 = (2c), 3 = (3a), 4 = (3b).
<i>Independent variables</i>	
Student level	
Grade	A dummy variable (9th = 0, 11th = 1).
Educational achievement	Measured by the average grades a student received in four required subjects: Arabic, Hebrew, English and Mathematics.
Religion	Two dummy variables with Druze as the base group.
Father's SES	An index of father's education and occupation.
Parental expectations	An index indicating the student's educational level expected by parents.
Parental involvement in student's education	An index of three items indicating how often parents tend to discuss relevant educational issues with the student.
Students' perception	An index indicating to what extent students believe that they will obtain a high socio-economic status.
School level	
Aptitude context	Aggregate school-level measure of aptitude based on the students' achievement.
Normative context	Percentage of students who hold academic expectations at the school level.
School SES	The mean level of the father SES of students who attend that school.
Local occupational opportunities	Percentage of mothers within the locality's labor market.
Dropout rate	Continuous variable indicating the rate of those aged 18–24 in 1995 who dropped out before completing the 11th grade.
Private school	A dummy variable indicating the type of school (private = 1, public = 0).
Vocational education	Percentage of students in vocational tracks.
Religious composition of locality	Measured by the percentage of Christians within the locality.
Arab village, city	Dummy variables indicating the locality's status. Mixed (Arab-Jewish) localities are the reference group.

Table II. Distribution of students' educational expectations by religion and gender (in %)

	Muslims	Christians	Druze
<i>9th grade</i>			
(2ab) Secondary school without matriculation	10	4	3
(2c) Matriculation	14	13	19
(3a) Post-secondary – not academic	28	34	23
(3b) Academic education	47	49	55
<i>N</i>	(642)	(194)	(130)
<i>11th grade</i>			
(2ab) Secondary school without matriculation	9	9	6
(2c) Matriculation	14	15	20
(3a) Post-secondary – not academic	35	36	29
(3b) Academic education	43	39	45
<i>N</i>	(447)	(137)	(97)
<i>Log linear models</i>			
[Expectations] [Religion] [Grade]	$G^2 = 31.85$	df = 17	$p = 0.016$
[Expectations * Religion] [Grade]	$G^2 = 14.60$	df = 11	$p = 0.201$

hold relatively high EE. Approximately half of the 9th grade students and slightly less than half of the 11th grade students expect to obtain an academic education (high tertiary). Additionally, approximately a quarter of the Muslim and the Druze students, and a third of the Christian students in the 9th grade, expect to obtain post-secondary (low tertiary) education (28, 23 and 34% respectively). Second, a significant difference exists between the three groups in their EE. Druze boys, in both grades, are more likely to hold academic expectations than Christians and Muslims, and while 9th grade Christian students hold higher EE than Muslims in the 11th grade, the reverse is true. This can be partially explained by the high dropout rate among Muslim students, which contributes to the production of a highly selective group in the 11th grade. These differences are clearly manifest as far as the lowest education (less than matriculation) at the 9th grade is concerned. While 10% of the Muslim students do not even expect to matriculate, this applies to only 4% of Christians and 3% of Druze students.

The third finding refers to the differences between the grades. Interestingly, 11th grade students, from all groups, tend to hold lower EE than 9th grade students. The expectations involving low and high tertiary (3a and 3b), demonstrate that while there are fewer 11th grade students expecting to obtain an academic degree compared to 9th grade students, there is simultaneously a higher percentage of 11th grade students who expect to obtain low tertiary.

Table III. Unstandardized coefficients for the ordinal multi-level model of educational expectations against the independent variables

Independent variables	Model 1	Model 2	Model 3
Intercept	−0.29*	−0.36*	−0.76*
<i>Level-2</i>			
Aptitude context			−0.06*
Normative context			0.01*
School SES			0.01**
Local occupational opportunities			0.01*
Dropout rate			−0.01**
Private school			0.21
Vocational education			−0.01*
Religious composition of locality			0.04
Arab village			0.34*
Arab city			0.33**
<i>Level-1</i>			
Background			
Grade	0.02	−0.22	−0.20
Educational achievement	0.09*	0.07*	0.07*
Muslims	0.06	−0.01	−0.26
Christians	−0.04	−0.11	−0.51*
Father's SES	0.23*	0.21*	0.15*
Social capital			
Parental expectations		0.56*	0.54*
Parental involvement in student's education		0.26*	0.26*
Students' perception		0.19*	0.16*
$\delta(2)$	1.86*	2.12**	2.15*
$\delta(3)$	3.24*	3.68*	3.72*
Explained level-2 variance	48%	34%	17%

* $p < 0.01$; ** $p < 0.05$.

Given the high dropout rate among Palestinian students, especially among Muslims, 11th grade students may be assumed to show higher expectations than the 9th grade students in consequence of a selection effect. However, it seems that more than one force operates on students when they are approaching the end of high school. The selection process resulting from a high dropout is one that may enhance SEE. Another is the fact that, when nearing high school completion, students know, relative to other students, and to their achievement, what the chances of being matriculated and obtaining higher education are. From the results in Table II, it seems that the latter force is stronger than the former.

Finally, the last two rows of Table II present the goodness-of-fit for two log linear models of the distribution of EE by religion and grade. While the upper row of these two rows shows the ‘no association’ model not to fit the data well, the model that includes one association between EE and religion with the main effect of grade does do this. This means that SEE are related to religion, rather than to grade.

Table III presents the log-odds coefficients from the multi-level analysis of EE. The first model in this table estimates the effects of five background variables: grade, academic achievement, Muslims, Christians and socio-economic status. This model reveals a significant positive effect of academic achievement and SES, while the other three variables are not significant. Academic achievement and SES increase the log-odds of expectations from a low level of education such as (2*ab*) to a higher level such as (2*c*) or (3*a*) or (3*b*). The positive effects of academic achievement and SES are consistent with the findings reported by recent studies concerning students’ educational aspirations (see for example, Marjoribanks, 2002; Buchmann & Dalton, 2002). In Model 2, parental expectations, parental involvement and students’ perceptions were added to the analysis. These results clearly indicate that all three variables are positively associated with SEE. Higher levels of these variables increase the log-odds of reporting higher levels of EE than lower levels. Furthermore, it seems that these variables mediate only slightly, some of the effects of achievement and SES.

The combined effects of Models 1 and 2 suggest that individual and interpersonal influences at the student level play an important role in determining SEE. These variables explain about 82% of the between-schools variance.

Model 3 reports the effects of the school variables. As expected, while the aptitude context of the school decreases the log-odds of higher EE relative to lower levels, the normative context of the school increases the log-odds of expectations from lower levels to higher levels. Both effects are consistent with the comparative and normative effects hypothesized earlier. The SES level of the school is positively associated with SEE, suggesting that when controlling for the aptitude and normative school contexts, SES should exert a significant positive effect on students’ expectations. This result supports my prediction concerning the influence of the school SES context. It is likely that schools with high SES can provide their students with more resources (human and material) and can organize their curriculum more efficiently than schools with low SES. As previous studies have reported, better resources and a well-organized curriculum, with other factors held constant, help schools to develop high EE among students (i.e. Schneider & Stevenson, 1999).

In contrast, the dropout rate and percentage of students in vocational tracks significantly negatively influence SEE. Higher levels of these variables decrease the log-odds of expectations from higher levels such as low and high tertiary education towards (2*ab*) or (2*c*). It is noteworthy that both variables relate to each other. The availability of vocational education reduces the dropout rate. Initial analysis

of the data has shown that the relationship between them is significantly negative (analysis output can be provided upon request). Moreover, vocational tracks within the Palestinian educational system in Israel are extremely under-developed, both qualitatively and quantitatively. Wherever they exist, they attract the least-achieved students, whose expectations are initially low and those who would have otherwise dropped out. Concerning the effect of the dropout rate, one may expect that, under certain conditions, this would enhance SEE rather than restrict them, by creating a sense of selectivity among the students who remain at school. In this study, this hypothesis has not been confirmed. However, significant dropout rates are more likely to be found in schools and areas where educational achievement is low, resources are limited or absent and where education is not highly valued as a means of social mobility. It may also be that dropout rate captures some other aspects of school or the area in which the school is located that negatively influence SEE but are not measured here. Thus, we may significantly benefit from addressing this issue in future studies.

Occupational opportunities and the spatial characteristics of the school have a positive influence on the log-odds of expectations. An increase in the levels of occupational opportunities and being in a school which is located within the ethnic enclave, increase the log-odds of reporting higher expectations. Occupational opportunities and segregation (ethnic enclave) are highly associated in the case of Palestinians in Israel (Lewin-Epstein & Semyonov, 1994). Those living inside the ethnic enclave, have more access to occupational opportunities than those living outside the enclave. Hence, the former tend to positively assess their future returns to education, which helps them to develop higher levels of EE. Conversely, students who live where occupational opportunities are limited, and where they may encounter job discrimination and competition from members of the dominant group, are less likely to develop high expectations.

The two remaining variables at the school level, private school and the ethnic/religious composition, are not significant, suggesting that when other level-2 variables are held constant, these factors have no independent influence on SEE. It is likely that their effect is mediated by other level-2 factors such as the SES and the ability context of the school.

The inclusion of the school-level variables in Model 3 does not greatly alter the effects of the student-level variables, with the exception of Christians. Being Christian versus Druze depresses SEE. Two possible explanations exist for this finding. Firstly, because Druze men, unlike Christians and Muslims, serve in the Israeli army, they expect higher returns from education and better access to educational and occupational opportunities. Hence, they tend to develop higher EE than other students. Although the coefficient for Muslims is also negative, it is not, however, significant. Secondly, Christian students are more likely to have higher academic achievement and higher SES, and tend to be concentrated in private, and the high-quality public schools, which produce a very competitive environment,

precipitating lower EE. It is likely that the individual and contextual effects for Christians cancel each other out, and only after separating and controlling for them can we see the effect of being Christian on SEE.

In summary, the results concerning the effects of interpersonal and school factors are largely consistent with the hypotheses presented earlier. I found a large and relatively constant influence of the individual and the interpersonal variables, even after controlling for the school context. The latter is also strongly related to SEE. It seems that the school influence on EE goes beyond the comparative and normative effects that have been reported by previous studies. However, the results regarding the institutional context are not consistent. While the vocational tracks have a significant effect, the school type (private school) does not influence students' expectations.

7. Discussion

Multi-level analysis was used to examine the effects of some aspects of the school normative, academic and institutional context together with individual and interpersonal factors on SEE. The results clearly demonstrate that both sets of variables are highly related to the outcome variable, providing new evidence that SEE, perhaps like other educational outcomes, are developed through interpersonal and contextual effects.

A recent study comparing the influences of the school institutional context and interpersonal factors on students' aspirations across 12 different countries, indicated that the extent of institutional differentiation within the school determines the role of interpersonal factors in shaping students' aspirations (Buchmann & Dalton, 2002). The researchers concluded that in open and undifferentiated school systems, interpersonal factors (parental and peer attitudes about academic performance) exert strong influences on students' educational aspirations. However, they did not find the same influence where the educational system was highly differentiated (Buchmann & Dalton, 2002, p. 112). The results reported in this paper do support their conclusion, suggesting that interpersonal factors play a key role in determining SEE. However, interpersonal factors are significantly influential despite the institutional arrangements (type of school and tracks) existing within the Palestinian educational system. The latter seems to have a weak influence on SEE (e.g. the influence of type of school is insignificant).

One way to understand why the effect of interpersonal factors has not been mediated by institutional arrangements is to focus on the institutional arrangements themselves. It is quite possible that the presence of private schools and some vocational tracks does not reflect institutional differentiation to the extent that it reflects socio-economic differences between students. For example, the results suggest that wherever vocational tracks are available, SEE tend to decrease. As mentioned earlier, vocational tracks in the Palestinian educational system are under-developed,

quantitatively and qualitatively. Although the few which are available in some areas may increase the retention power of certain schools, they may also serve as the least worse alternative to dropping out, attracting the lowest achievers whose educational and occupational opportunities are very limited. These students tend to develop relatively low expectations, since SEE are highly associated with the type and quality of resources available (Ayalon & Yuchtman-Yaar, 1989). The percentage of students in vocational tracks may also affect students' expectations through determining the normative context of the school. This is particularly true in schools where the percentage of students in vocational tracks reaches high levels, because these students have lower expectations than those in academic programs and are likely to develop their expectations in line with those of the former group of students.

The effect of private schools on SEE, unexpectedly, was not significant. Private schools amongst Palestinians in Israel are highly valued and very selective too. Students with poor achievement are less likely to attend these schools contributing to the schools' homogeneous population being highly achieved and from high socio-economic status. The general assumption and belief amongst many Palestinian parents is that if your son or daughter attends private school he or she will receive a better education and will have more chances than others in obtaining academic education. Thus, one may anticipate private schools to have a positive influence on SEE. The results in this study do not lend support to this anticipation. It is likely that Palestinian private schools in Israel are a proxy for socio-economic background and academic achievement, rather than a reflection of any particular institutional influence. That is, when the socio-economic background and the academic achievement (at the student and the school level) are well-controlled, the effect of private school becomes negligible. Should private school have any net institutional influence, it would have stood out after controlling for the socio-economic and for the academic contexts. Another reason for the lack of influence of private schools on SEE may be their very competitive atmosphere that may cancel out the positive institutional effect.

Another way to understand the strong influence of interpersonal factors, regardless of any institutional differentiation, is to consider the minority's system of beliefs, values and action strategies within the existing social structure as it copes with economic and social inequality (Fernandez, Ronnelle, & Marsha, 1989; Ogbu & Simons, 1998), and to explore the mechanisms whereby these values are transferred to the next generation. Schneider and Stevenson (1999) have illustrated that the relationship ties between parents and their children serve as a channel to convey parental values, norms, knowledge and expectations to children. They argue that these norms and values influence SEE by shaping the students' own perceptions concerning relevant issues such as education and job opportunities. Thus, students' perceptions may serve as an important mechanism in developing their future expectations. Indeed, the results show that students' perceptions (subjective probability of socio-economic success) are highly associated with their future EE. These results

also support Ogbu's arguments about how perceptions of success within the educational system and the job market help to determine minority students' optimism and willingness to conform to the cultural standards imposed by schools (Gibson & Bhachu, 1991; Ogbu, 1991).

These results, alongside those of previous studies, call for a reconsideration of the association between parents as significant others and students' aspirations among minorities. The influence of parents on students' aspirations and expectations is not straightforward. It becomes significant and influential only if it leads students to develop their own perceptions and values regarding relevant issues such as the importance of education in reaching the more advantaged positions in the class structure and opportunities within the labor market. It may be that among some minorities, where education and success within the labor market are highly valued, interpersonal relations exert significant influence on SEE, regardless of, or despite, the school institutional context. However, this way of considering the effect of parents as significant others needs more research before any conclusions can be drawn.

Regarding the competitive atmosphere, the results suggest that highly competitive schools tend to moderate SEE. Schools with a high mean of ability tend to depress SEE, supporting the 'frog pond' effect found in previous studies (Davis, 1966; Nelson, 1972; Alexander & Eckland, 1975; Shavit & Williams, 1985). The effects of the normative context were the opposite, indicating that students attending schools where the general expectation level is high are more likely to develop higher expectations than other students.

While the comparative and normative effects are consistent with previous research findings, the school socio-economic context is not demonstrating a clear positive effect on SEE. Previous studies have reported negligible effects and argued that 'school status has no net effect on aspirations because of its complex and contradictory influence' (Nelson, 1972, p. 147). However, it seems that when the 'contradictory' influences are well-controlled, school status positively affects students' expectations. School status is also an indicator of the material and human resources available for students. In schools of high status, students are more likely to have access to resources than students in low status schools. The former are more likely to organize the curriculum more efficiently than the latter. Undoubtedly, those factors exert a positive influence on students' schooling experience, future expectations and plans (Schneider & Stevenson, 1999).

Moreover, the present analysis indicates that the resources and occupational opportunities available for students, within their environment, play a central role in shaping positive and high expectations. Students living and studying in localities where occupational opportunities are relatively unlimited, and those who live inside the Palestinian enclave, are more likely than others to develop high expectations. If students know that they will fail to translate their educational aspirations into educational and occupational attainments, it would be reasonable for them to lower

their expectations, adopting more realistic ones in line with the 'real' conditions (Kao & Tienda, 1998; Marjoribanks, 2002). Previous studies on the Palestinian minority in Israel indicate that Palestinian workers in the Arab ethnic enclave enjoy advantages in the conversion of educational resources into occupational outcomes. Conversely, those working in mixed or Jewish communities suffer the detrimental consequences of occupational discrimination (Lewin-Epstein & Semyonov, 1994). It is very likely that students, through parental messages and information, are aware of the advantages and disadvantages of living inside or outside the ethnic enclave. Thus, those who live and study inside the enclave realize that their opportunities are better than those who live in mixed, or Jewish localities. The latter also realize that they need to compete with members of the dominant group (in the labor market), and their likelihood of facing job discrimination is high.

It is worth noting that the majority of Palestinian students study inside the enclave. Moreover, Palestinian schools are staffed almost exclusively by Palestinian teachers, and Arabic rather than Hebrew is used. Under these conditions, SEE can be reinforced, which can explain their high EE.

This present investigation may provide more understanding of the dynamics of contextual effects on educational outcomes such as students' educational expectations. It also may help to understand the nature of association between different contextual factors, *per se*, and between them and other interpersonal and individual factors. Nonetheless, an important question remains regarding the relationship between the effect of the interpersonal factors and the effect of institutional arrangements within the Palestinian educational system. We cannot be sure that the strong effects of interpersonal factors, in this specific context, is due to the weak influence of the institutional context or to the fact that education is highly-valued by Palestinian parents, or even to both. To answer this question, more research is needed. We may benefit greatly from comparative research between Palestinian students and Jewish students whose educational system is a relatively highly differentiated system. We also may increase our understanding by conducting comparative research involving Palestinian students who live in Israel, and Palestinian students who live in the West Bank and Gaza Strip, whose educational system is more differentiated than the Palestinian educational system in Israel, and where education is even much more appreciated.

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Biographical note

Nabil Khattab has previously held a Marie Curie Postdoctoral Fellowship in the Cathie Marsh Centre for Census and Survey Research at the University of Manchester. Currently he is a lecturer in the department of sociology at the University of Bristol. His main areas of interest are: sociology of education, ethnicity, labour market and social inequality.