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Family Formation and Career Development Future Plans of Students from Marginalized Localities in Central Mexico

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Abstract

In this exploratory study, a survey was carried out with 902 junior high-school students in localities with medium to high degree of marginalization in two states of central Mexico. This article describes the family, reproductive, and educational aspirations and expectations of this sample of students from disadvantaged areas, and explores mechanisms contributing to forming future plans. Two main plans are outlined in this sample: one oriented towards prioritizing family formation and an elevated risk of dropping out of school, and another oriented towards postponing unions and child-raising to look for educational/career development. Several factors appear to influence the development of educational/career ideals among men, however, the mechanisms driving the formation of future plans in women are less clear. The findings add to a limited body of knowledge measuring both educational

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and reproductive aspirations of students in low-resource settings in Latin America.

Keywords
life plans, goals, educational aspirations, family formation, adolescents, public schools, Mexico, adolescent pregnancy

Today, there is a long history of research addressing the future plans of adolescents (Massey, Gebhardt, & Garnefski, 2008; McWhirter & McWhirter, 2008; Nurmi, 1991). It is agreed that future plans are linked to career development, educational attainment, and adolescents' sexual behaviors (Ashby & Schoon, 2010; Beal & Crockett, 2010; Berzin, 2010; Sipsma, Ickovics, Lin, & Kershaw, 2013).

While planning the future involves visualizing different aspects of one's life, such as family characteristics, health, and material possessions (Lindstrom-Johnson, Blum, & Cheng, 2014), most research focuses on measuring single dimensions of the plans (Sipsma, Ickovics, Lin, & Kershaw, 2012; Sipsma et al., 2013). Educational and family plans are therefore addressed as separated constructs rather than interrelated domains, with an emphasis on education and less attention paid to reproductive and family goals (Beal, Crockett, & Peugh, 2016; Chang, Chen, Greenberger, Dooley, & Heckhausen, 2006; Massey et al., 2008; Schoon, Martin, & Ross, 2007). This can result in narrowly defined preventive efforts (Sipsma et al., 2012), important in the context of adolescent pregnancy given the close correlation between lack of career aspirations, low attachment to school, and early fatherhood or motherhood (Harden, Brunton, Fletcher, & Oakley, 2009; Macutkiewicz & MacBeth, 2017; Peterson & Bonell, 2018). The emphasis on the educational domain is also a constraint for research with young women because for many of them, the mother or wife roles aren't compatible with a career (Fuwa, 2014; Schoon et al., 2007), meaning that both family and professional dimensions need to be pondered when deciding about the future.

An additional gap is that research studies that do focus on the reproductive plans represent mostly youth in high-income countries where less barriers exist to achieve their reproductive goals (Hayford, 2009). An exploration is needed of the life goals of adolescents from restricted contexts where they are more likely to enter parenthood at an early age than to have access to an occupational career (Medina & Ortiz, 2018). In Latin America (LA), adolescent pregnancy is a serious concern but very few studies about future planning have been conducted (Dutra-Thomé, Koller, McWhirter, & McWhirter,

2015; Marcelino, Catão, & Lima, 2009; McWhirter & McWhirter, 2008; Medina & Ortiz, 2018). In Mexico alone, in 2016 there were 61 births for every 1,000 girls (15–19 years old) compared to 16 in high-income countries (The World Bank, 2018). Most important, 70% of young mothers who are not studying had abandoned school before their first pregnancy, suggesting that education was not their priority or possibility (Stern & Menkes, 2008; Villalobos-Hernández et al., 2015). This study explores future planning among adolescents in low-resource settings in Mexico.

The Current Study

Different concepts and theoretical underpinnings exist defining the construct of future planning, such as personal projects, future orientation, future expectations, and goal pursuit, among others (Heckhausen, Wrosch, & Schulz, 2010; Massey et al., 2008; Nurmi, 1991; Salmela-Aro, Aunola, & Nurmi, 2007). We use "future plans" to highlight that we don't adhere to a one theory. We draw insights from several of these perspectives, mostly from literature on future orientation and future expectations, and from life-span developmental approaches.

In the literature, future orientation or future planning is generally represented by three important aspects: expectations, aspirations, and planning (Lindstrom-Johnson et al., 2014). Aspirations measure what adolescents desire will happen in the future; expectations describe what they expect will happen (Ashby & Schoon, 2010; Dutra-Thomé et al., 2015; Sipsma et al., 2012); and planning involves visualizing a course of action to achieve those aspirations (Lindstrom-Johnson et al., 2014). In this study, we adopt a multidimensional measure of future plans (Sipsma et al., 2012, 2013) to describe aspects that adolescents prioritize for their future, including educational, family, and material possessions, and combining measures of aspirations, expectations, and value attached.

Many factors are known to influence life plans. For example, it is suggested that girls prioritize family formation and traditional roles while boys are oriented towards career development (Lindstrom-Johnson et al., 2014; Nurmi, 1991; Sipsma et al., 2012). Also, people's self-assessment of their own capabilities can determine their aspirations (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). The Future Orientation Framework (Lindstrom-Johnson et al., 2014) agrees with these influences, but frames the development of plans within the context of personal life history and sociocultural determinants. In this sense, aspirations interact with individual, family, cultural, geographic, or socioeconomic aspects, together with available material and social resources, that favor or limit opportunities for development (Berzin, 2010; Elsaesser,

Heath, Kim, & Bouris, 2018; Hill, Ramirez, & Dumka, 2003; Massey et al., 2008; Mello, 2008; Salmela-Aro et al., 2007). For youth in precarious socioeconomic contexts, becoming a father or mother is sometimes the only possible pathway given that opportunities for development, education, and work are restricted (Jiménez-González, Granados-Cosme, & Rosales-Flores, 2017; Macutkiewicz & MacBeth, 2017; Medina & Ortiz, 2018; Näslund-Hadley & Binstock, 2010). Also, their ideas about the future can reflect a search for social inclusion or an improved lifestyle (Marcelino et al., 2009). We use this multilevel reasoning to explore individual, family, school, and socioeconomic factors contributing to the formation of plans. The objectives of this study are: (1) to describe family, reproductive, educational, and professional future plans of junior high-school students from marginalized localities in central Mexico; and (2) to explore mechanisms contributing to the formation of plans prioritizing family formation or career development.

Methods

This is a cross-sectional exploratory study with self-administered questionnaires on a nonprobabilistic sample of third grade students from public junior high-schools in Mexico (2014). Junior high-schools in Mexico typically cover education in youths 12–14 years old and are either general, technical, telesecondary, community secondary, or workers' secondary. The study was approved by the Ethics and Research Committees of the National Institute of Public Health of Mexico.

Population and Sample

We identified municipalities with the lowest levels of the Human Development Index in Morelos and Puebla (United Nations Development Programme [UNDP], 2009), two neighboring states in central Mexico. We then identified localities with medium, high, or very high degree of marginalization within these municipalities. The degree of marginalization is a summary measure of socioeconomic deprivation used by the Mexican National Population Council (Consejo Nacional de Población, 2011). We focused on those localities where at least one general or technical junior high-school existed, as these types of schools enroll larger numbers of students. In the 2013–2014 school cycle, telesecondaries enrolled an average of 74 students per school compared to almost 400 in general or technical secondaries (Instituto Nacional para la Evaluación de la Educación [INEE], 2015). Accessibility and geographical proximity between the localities were prioritized.

School principals from 12 schools were contacted and invited to the study, and one rejected the invitation. The final sample consisted of 11 schools in four rural (<2,500 inhabitants) and seven urban localities. Four are localities classified with a medium degree of marginalization and seven with high degree. Each school notified the parents of all third grade students about the study and it was agreed that if authorization was not given, their sons/daughters wouldn't take part in the survey. Prior to the delivery of questionnaires, an informed consent letter was read to the adolescents, explaining the objective of the survey and the activities being requested from them, emphasizing voluntary and anonymous participation. The response rate was 100% of all students in the classrooms.

Measurements: Six Variables Were Created and Included to Measure the Construct of Future Plans

First, we asked how important adolescents believe the following scenarios are with respect to their future: (a) loving/being loved; (b) achieving a high educational level; (c) having their desired job; (d) having money to get what is wanted; (e) having an active sex life; (f) forming a family; and (g) having children. Response options were: (0) not important or scarcely important; and (1) very important. They were also asked about desired ages to: (a) get married/live with a partner; (b) have their first child; and (c) have a steady job. Academic expectations were evaluated with the question: "Which educational level do you believe you will reach?" and aspirations for forming a family with: "In the future, what would you like to do?": (1) get married/live with a partner and have children; (2) get married/live with a partner without children; (3) stay single with children; and (4) stay single without children. They were also asked about the desired number of children. As described in the statistical analysis section, we built a multidimensional measure of future plans with these variables.

Under a multilevel approach (Lindstrom-Johnson et al., 2014), we tested the following independent variables in a multivariate model based on individual, family, school, and social aspects that influence future planning according to the literature.

Self-Efficacy. Different measures of self-efficacy were included. Self-efficacy to plan a family was measured using the question "Do you believe you can plan. . .?": (a) when to get married; (b) when to have children; and (c) how many children to have. Similarly, self-efficacy to plan education/profession was assessed using two items: "Do you believe you can plan. . .?": (a) when to complete your studies; and (b) when to start working. Self-efficacy was

also measured with respect to safe sexual practices through a 6-item scale that evaluated how capable they felt to: (a) correctly use a condom; (b) insist on the use of a condom to a partner; (c) refuse intercourse if their partner is not using a condom; (d) go to the store and buy condoms; (e) interrupt a sexual relation in order to put on a condom; and (f) talking with their partner about ways to prevent pregnancy or sexually transmitted infections.

Support from Their Father/Mother. Two scales were included to measure support and/or accompaniment from parents. Students were asked "How frequently does your mother perform the following activities or actions?": (a) brings me/picks me up at school; (b) attends parent meetings or appointments at school; (c) does sports/exercise with me; (d) explains or helps me with my homework; (e) takes me or comes with me to buy clothes; (f) goes with me on an outing; (g) asks me how I am doing; (h) asks about my grades; and (i) talks with me or answers questions about sexuality. Response options were: (1) never; (2) almost never; and (3) frequently. The same items and answers were included for the father.

Gender Equity in School. Exposure to messages at school about gender equity was explored through the question: "Have your teachers ever talked to you in class about equality between men and women in decision-making?" with response options: (1) never or I don't remember; (2) sometimes; and (3) many times.

Sociodemographic Variables. As a proxy for socioeconomic level (SEL), we asked about possession of goods and services at their home, mother's/father's educational level and occupation, transportation used to go to school, student's history of paid job, and scholarship. Additional sociodemographic questions asked referred to the students' individual and academic behavior such as last year's school grade, history of school drop-out, and onset of sexual relations (Table 1).

Statistical Analysis

The data was managed in Stata v.12. Descriptive statistics for the variables of interest were first obtained. The measure of future plans was then built using principal component analysis (PCA) combining all the individual variables of future planning and stratifying by sex. We used the polychoricpca command in Stata which is based on polychoric correlation rather than the traditional Pearson correlation. This alternative allows for the inclusion of categorical and ordinal variables in the PCA (Kolenikov & Angeles, 2004).

Table 1. Sociodemographic Characteristics: Junior High-School Students in Central Mexico, 2013.

Variables		Women (n = 454)	Men (n = 448)	Total (n = 902)
Mean age in years (*SD*)		14.3 (0.78)	14.4 (0.63)	14.3 (0.71)
Mean school grade ≥80*		353 (77.9%)	245 (55.9%)	598 (67.2%)
History of school dropout		7 (1.6%)	21 (4.8%)	28 (3.1%)
Has had sexual intercourse		18 (3.9%)	42 (9.4%)	60 (6.7%)
Highest educational level achieved by mother**	*Basic level degree*	364 (80.2%)	331 (74.2%)	695 (77.2%)
	High-school degree	34 (7.5%)	52 (11.7%)	86 (9.6%)
	University/Bachelor degree	29 (6.4%)	24 (5.4%)	53 (5.9%)
	Doesn't know	27 (6%)	39 (8.7%)	66 (7.3%)
Highest educational level achieved by father**	*Basic level degree*	314 (69.2%)	287 (64.4%)	601 (66.8%)
	High-school degree	48 (10.6%)	49 (11%)	97 (10.8%)
	University/Bachelor degree	33 (7.3%)	34 (7.6%)	67 (7.4%9
	Doesn't know	59 (13%)	76 (17.1%)	135 (15%)
Mother's main occupation**	*Housewife*	314 (69.3%)	300 (67.1%)	614 (68.2%)
	Worker	126 (27.8%)	125 (28%)	251 (27.9%)
	Does not have mother	6 (1.3%)	11 (2.5%)	17 (1.9%)
	Doesn't know	7 (1.6%)	11 (2.5%)	18 (2%)
Father's main occupation**	*Worker*	407 (89.6%)	391 (87.9%)	798 (88.8%)
	Does not have father	19 (4.2%)	17 (3.8%)	36 (4%)
	Doesn't	28 (6.2%)	37 (8.3%)	65 (7.2%)
Possession of goods and services at home**	*One car*	166 (36.9%)	195 (43.6%)	361 (40.2%)
	Two or more cars	56 (12.4%)	76 (17%)	132 (14.7%)
	DVD	312 (69.3%)	363 (81.2%)	675 (75.2%)
	Pay TV	98 (21.8%)	132 (29.5%)	230 (25.6%)
	Computer	169 (37.6%)	196 (43.8%)	365 (40.7%)
	Internet	126 (28%)	129 (28.9%)	255 (28.4%)
Transportation used to get to school**	*Walking*	294 (64.9%)	238 (53.1%)	532 (59.1%)
	Public transport	133 (29.4%)	164 (36.6%)	297 (33%)
	Other	26 (5.7%)	46 (10.3%)	72 (8%)
Has had a paid job ever**		114 (25.3%)	268 (60.6%)	382 (42.8%)
Received a scholarship in the last three months**		353 (77.7%)	327 (73%)	680 (75.4%)

*0–100 scale according to the educational system. SD = standard deviation; **Variables used to build a socioeconomic level (SEL) index.

Different *Ks* components representing different dimensions of the future plans were expected. Considering the loadings that each item in the PCA had for each *K*, an index (continuous variable) was generated for the first three retained *Ks*. Each of these *K* indexes were divided into terciles, and dichotomous variables were generated to group adolescents classified in the

3rd tercile versus adolescents in terciles 1 and 2. We took this approach to identify the groups showing a clear prioritization of a particular type of plan, that is, students showing the higher scores in each of the *K* indexes.

Summary variables were created for the independent factors measured in scales. PCAs were carried out with the scales of support/accompaniment from parents and with the proxy variables for SEL following a similar process to that used to build the future plans indexes. Only one component was retained from these analyses and the obtained indexes were also divided in terciles. Summary variables were also created for each type of self-efficacy measure (family planning, education/profession, and safe sexual practices), and considered self-efficacy to be present when the student replied "yes" to all the items conforming each of these measures. These measures showed good internal consistency according to Cronbach's alpha test: mother and parent support $\alpha = 0.85$ and 0.89, respectively; self-efficacy to plan a family $\alpha = 0.81$; and self-efficacy for safer sexual practices $\alpha = 0.83$ (α not calculated for self-efficacy to plan education/profession as this was composed of two items only). Finally, logistic regression models stratified by gender were fitted to explore factors associated with the plans identified, comparing adolescents highly oriented to *K* project (3rd tercile) versus the rest (1st/2nd terciles). The models were adjusted by the independent variables previously described, in addition to type of locality (urban/rural) and state.

Results

Information from 902 third grade students was compiled, mostly from urban schools (76.8%) at localities with high degree of marginalization (63.2%). The average age is 14.3 years old (SD$\pm$0.71); 50.3% are women and 49.7% men. Almost half of the students (42.3%) report having had some form of paid job in the past while 3% have dropped out of school. Forty percent states that there is at least one computer at home, but only 28.3% have internet. Seventy-seven percent have a mother with less than or equal to junior high-school degree, and 66.6% in the case of the father. Half of the students show self-efficacy to plan a family and 74.9% for school/profession. Less than 7% have already started sexual relations. Table 1 shows sociodemographic characteristics disaggregated by gender.

Plans for the Future

Most believe that it is very important for their future to get the desired job, money, and a high educational level (>80%), while 70% expects to complete university studies or beyond. Forming a family and having children is

very important for half of them. In general, 20–25 years old is the age at which they desire to cohabitate with a partner and have a steady job, and having children between ages 25 and 30 years. Aspirations of getting married or having a child before their 20s and after 30s are expressed by few.

The three main components retained from the PCA (*K1, K2*, and *K3*) account for 60% of the variance in the future plans. We focus on *K1* and *K2* because of a limited interpretability of *K3*. Considering items loadings as shown in Table 2, *K1* points to a plan attaching greater importance to the formation of a family at an earlier age, while *K2* describes a plan oriented towards career/professional development and postponing the formation of a family. However, we found 36% of students combining high scores for both *K1* and *K2*. Implications of this will be discussed. Next, some relevant aspects of the profile of adolescents presenting the higher scores in each of these plans are mentioned briefly.

Among women, 97.5% of those with higher scores in the family plan state that it is very important for their future to form a family, compared to 73.6% in the group with a career development plan. In the case of men, this is reported by 96.3% and 83.3%, respectively. Differences between the two groups are evident in the desired ages to passage through life events. The majority of women with a family plan (80.3%) aspire to get married or cohabitate with a partner by the age 20–25 years. The same is reported by 44.9% of those with higher scores in the career development plan, with an additional 40.1% aspiring to cohabitate by the age 25–30 years. Among men, 77.5% of the family-oriented group aspires to cohabitate by the age 20–25 years compared to 45% in the career-oriented group. Women and men with a family plan aspire mainly to have their first child between 20 and 25 years of age, while students in the career development plan desire this to happen between age 25 and 30 years. Almost half of women in the family oriented group aspire to have a steady job before turning 20, while most career-oriented women aspire for a steady job between 20 and 25 years (65.3%). Half of men with a family plan desire a steady job before their 20s, compared to roughly 60% of those with a career plan desiring a job by the age of 20–25 years. Even though all the groups report high academic expectations, 33.6% of women and 42% of men with family-oriented plans expect to complete only junior-high school or high-school studies, compared to less than 1% of women and 5.8% of men prioritizing career plans. Virtually all students with a family-oriented plan aspire for a traditional family structure involving a partner and children; however, this is reported only by 80.8% of women and 85.8% of men in the career-oriented group (Table 2).

Table 2. Principal Component Analysis (PCA) Measuring Future Plans: PCA Item Loadings and Descriptive Analysis. Junior High-School Students in Central Mexico, 2013.[a]

	Women (n = 454)						Men (n = 448)					
	K1 = Family oriented			*K2 = Career oriented*			*K1 = Family oriented*			*K2 = Career oriented*		
Variables included in the PCA	PCA loadings to K1	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K2	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K1	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K2	3rd tercile (%)	1st/2nd tercile (%)
For the future, it's very important to												
*Love/be loved**	**0.15**	89.34	50.16	**0.09**	82.63	47.76	**0.21**	90.30	40.46	**0.12**	81.67	51.14
*Achieve a high educational level**	**–0.01**	91.80	97.76	**0.04**	100.00	93.66	**–0.01**	80.61	85.88	**0.11**	100.00	77.52
*Have the desired job**	**0.00**	92.62	92.65	**0.06**	100.00	88.06	**0.00**	90.30	85.50	**0.10**	99.17	82.74
*Have money to get what is wanted**	**0.02**	94.26	82.11	**0.09**	98.80	77.24	**0.03**	91.52	80.15	**0.10**	97.50	79.48
*Have an active sex life**	**0.28**	56.56	17.89	**0.22**	45.51	18.28	**0.24**	64.85	22.14	**0.26**	63.33	28.99
*Form a family**	**0.26**	97.54	39.30	**0.16**	73.65	44.40	**0.23**	96.36	41.60	**0.10**	83.33	54.72
*Have children**	**0.34**	93.44	24.60	**0.17**	61.68	32.84	**0.29**	92.12	27.48	**0.11**	72.50	44.63
Desired age to get married / live with a partner												
Before age 20	**0.65**	14.75	3.19	**–0.47**	0.60	10.07	**0.67**	12.12	2.29	**–0.52**	0.00	8.47
Between ages 20 and 25	**0.16**	80.33	48.24	**–0.11**	44.91	64.93	**0.16**	77.58	47.71	**–0.12**	45.00	64.82
Between ages 25 and 30	**–0.22**	4.92	37.38	**0.16**	40.12	20.90	**–0.24**	10.30	39.31	**0.19**	43.33	22.15
After age 30	**–0.42**	0.00	4.47	**0.30**	6.59	1.12	**–0.44**	0.00	5.34	**0.34**	4.17	2.93
Don't want to live with a partner	**–0.60**	0.00	6.71	**0.43**	7.78	2.99	**–0.62**	0.00	5.34	**0.49**	7.50	1.63
Desired age to have their first child												
Before age 20	**0.93**	4.92	0.32	**–0.40**	0.00	2.61	**0.75**	6.06	2.29	**–0.61**	0.00	5.21
Between ages 20 and 25	**0.35**	72.95	23.32	**–0.15**	21.56	47.01	**0.28**	63.64	24.81	**–0.23**	20.83	47.23
Between ages 25 and 30	**–0.10**	21.31	57.83	**0.04**	56.89	41.79	**–0.12**	29.70	53.82	**0.09**	55.00	40.39
After age 30	**–0.39**	0.82	7.03	**0.17**	10.18	2.24	**64.44**	0.61	10.31	**0.31**	12.50	4.23
Don't want children	**–0.61**	0.00	11.50	**0.26**	11.38	6.34	**–0.60**	0.00	8.78	**0.49**	11.67	2.93

(continued)

Table 2. (continued)

Variables included in the PCA	Women (n = 454)						Men (n = 448)					
	K1 = Family oriented			*K2 = Career oriented*			*K1 = Family oriented*			*K2 = Career oriented*		
	PCA loadings to K1	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K2	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K1	3rd tercile (%)	1st/2nd tercile (%)	PCA loadings to K2	3rd tercile (%)	1st/2nd tercile (%)
Desired age to have a steady job												
Before age 20	**0.14**	45.08	23.00	**–0.29**	13.77	38.81	**0.13**	52.12	30.53	**–0.17**	17.50	47.23
Between ages 20 and 25	**–0.02**	46.72	61.66	**0.04**	65.27	52.61	**–0.03**	39.39	50.38	**0.04**	59.17	41.04
Between ages 25 and 30	**–0.14**	8.20	13.42	**0.29**	18.56	7.84	**–0.15**	7.88	16.03	**0.20**	19.17	10.42
After age 30	**–0.19**	0.00	1.60	**0.39**	1.80	0.75	**–0.20**	0.61	1.15	**0.26**	2.50	0.33
Don't want a steady job	**–0.24**	0.00	0.32	**0.50**	0.60	0.00	**–0.26**	0.00	1.91	**0.34**	1.67	0.98
Highest educational level they expect to complete												
Junior high school	**0.20**	13.11	5.43	**–0.74**	0.00	12.31	**0.05**	13.94	7.63	**–0.54**	0.83	13.68
High school	**0.12**	20.49	11.18	**–0.43**	0.60	22.01	**0.02**	28.48	27.48	**–0.23**	5.00	36.81
College/University	**0.06**	14.75	22.36	**–0.21**	12.57	25.00	**0.00**	27.88	27.10	**–0.01**	35.00	24.43
Postgraduate education	**–0.07**	51.64	61.02	**0.25**	86.83	40.67	**–0.03**	29.70	37.79	**0.30**	59.17	25.08
Aspirations regarding family formation												
To live with a partner and have children	**0.14**	100.00	78.91	**0.00**	80.84	87.31	**0.11**	98.79	82.82	**–0.04**	85.83	90.23
To live with a partner without children	**–0.43**	0.00	10.54	**0.01**	9.58	6.34	**–0.44**	0.00	10.31	**0.19**	7.50	5.86
To stay single with children	**–0.52**	0.00	3.19	**0.01**	2.99	1.87	**–0.52**	1.21	1.15	**0.22**	0.83	1.30
To stay single and no children	**–0.73**	0.00	7.35	**0.02**	6.59	4.48	**–0.70**	0.00	5.73	**0.29**	5.83	2.61
Number of children they would like to have												
None	**–0.65**	0.00	7.03	**0.05**	7.78	3.36	**–0.63**	0.00	8.40	**0.29**	9.17	3.58
1	**–0.41**	1.64	14.70	**0.03**	11.38	10.82	**–0.43**	1.82	9.16	**0.20**	5.00	6.84
2	**–0.03**	60.66	65.81	**0.00**	60.48	66.79	**–0.13**	35.76	57.63	**0.06**	53.33	47.56
3 or more	**0.32**	37.71	12.46	**–0.02**	20.36	19.03	**0.17**	62.42	24.81	**–0.08**	32.50	42.01

[a]: K = Component retained from the PCA; Item loadings in bold for descriptive purposes. *Dichotomous variable; only values = 1 presented in the table.

Factors Associated with Future Plans Prioritizing Family or Career Development

Among women, greater exposure to gender equity messages at school (OR = 0.32; CI 95%: 0.10–0.97) and higher SEL (OR = 0.50; CI 95%: 0.29–0.88) reduce the odds of having a family-oriented plan. On the contrary, self-efficacy for planning a family increases the odds (OR = 2.34; CI 95%: 1.45–3.78). Among men, those achieving higher grades have less odds of planning a family-centered future (OR = 0.44; CI 95%: 0.27–0.71) while having had initiated sexual relations increases the odds for this plan (OR = 3.65; CI 95%: 1.64–8.13) (Table 3).

In terms of a plan involving career or professional development, higher school grades (OR = 2.22; CI 95%: 1.17–4.22) and higher SEL (OR = 1.80; CI 95%: 1.05–3.08) are associated with increased odds of choosing this plan among women. Among men, higher school grades (OR = 2.28; CI 95%: 1.38–3.76), self-efficacy for planning a family (OR = 2.47; CI 95%: 1.49–4.10), greater support from their father (OR = 2.40; CI 95%: 1.39–4.13), greater exposure to gender equity messages at school (OR = 2.62; CI 95%: 1.06–6.46), and higher SEL (OR = 1.97; CI 95%: 1.07–3.63) are associated with having this type of plan (Table 3).

Discussion

This study describes the family, reproductive, and professional future plans of male and female students from junior public schools in localities with medium to high degree of marginalization in Mexico. It also identifies mechanisms influencing the formation of future plans focused on family or professional development, as a way of exploring potential drivers of adolescent pregnancy in LA.

Using a multidimensional measure, two main future plans are outlined among students in this sample: one oriented towards prioritizing family formation and another oriented towards postponing unions and child-raising to look for educational/career development. Students oriented towards family formation aspire to cohabitate with a partner and have children at younger ages than those in the group oriented towards career development, and also aspire to traditional family structures. A concern is that a subgroup with an elevated risk of dropping out of school shortly can be identified within these students, since 33% of women and 42% of men with a family plan expect to study only until high school or less, while half of them expect to have a steady job before their 20s. On the other hand, forming a family is an important aspect for a lesser proportion of adolescents oriented towards career development, all of which expect to complete at least university studies.

Table 3. Logistic Regression: Mechanisms Contributing to the Formation of Plans for the Future: Junior High-School Students in Central Mexico, 2013.[a]

		Women (n = 391)		Men (n = 371)	
Variables		Family oriented (K1)	Career oriented (K2)	Family oriented (K1)	Career oriented (K2)
Age		1.27	1.17	0.99	1.23
		(0.86–1.88)	(0.80–1.73)	(0.68–1.46)	(0.82–1.83)
Average school grade≥80[b]	*No*	1.00	1.00	1.00	1.00
	Yes	1.05	2.22**	0.44***	2.28***
		(0.59–1.86)	(1.17–4.22)	(0.27–0.71)	(1.38–3.76)
History of school dropout	*No*	1.00	1.00	1.00	1.00
	Yes	0.92	1.46	0.26*	0.63
		(0.14–6.02)	(0.22–9.60)	(0.06–1.04)	(0.17–2.30)
Has had sexual intercourse	*No*	1.00	1.00	1.00	1.00
	Yes	1.74	0.74	3.65***	0.62
		(0.61–4.93)	(0.22–2.47)	(1.64–8.13)	(0.26–1.45)
Self-efficacy for planning a family	*No*	1.00	1.00	1.00	1.00
	Yes	2.34***	1.50*	1.55*	2.47***
		(1.45–3.78)	(0.94–2.40)	(0.95–2.53)	(1.49–4.10)
Professional/educational self-efficacy	*No*	1.00	1.00	1.00	1.00
	Yes	1.00	1.28	0.73	0.91
		(0.58–1.70)	(0.75–2.19)	(0.42–1.26)	(0.52–1.61)
Self-efficacy for safer sex behavior	*No*	1.00	1.00	1.00	1.00
	Yes	1.12	1.01	1.00	1.42
		(0.71–1.78)	(0.64–1.60)	(0.60–1.67)	(0.84–2.40)
Mother support	*1st/2nd tercile*	1.00	1.00	1.00	1.00
	3rd tercile	1.04	1.48	1.25	0.74
		(0.63–1.71)	(0.90–2.44)	(0.71–2.21)	(0.41–1.34)
Father support	*1st/2nd tercile*	1.00	1.00	1.00	1.00
	3rd tercile	1.26	0.75	1.5	2.40***
		(0.75–2.11)	(0.44–1.28)	(0.89–2.52)	(1.39–4.13)
Teachers in their school have talked about gender equity	*Never*	1.00	1.00	1.00	1.00
	Sometimes	0.4	1.36	2.07	1.08
		(0.13–1.25)	(0.38–4.80)	(0.84–5.07)	(0.44–2.68)
	Many times	0.32**	1.44	1.6	2.62**
		(0.10–0.97)	(0.42–4.96)	(0.65–3.92)	(1.06–6.46)
SEL[c]	*1st tercile*	1.00	1.00	1.00	1.00
	2nd tercile	0.81	1.25	0.93	1.82*
		(0.48–1.35)	(0.73–2.15)	(0.51–1.69)	(0.96–3.43)
	3rd tercile	0.50**	1.80**	0.81	1.97**
		(0.29–0.88)	(1.05–3.08)	(0.45–1.43)	(1.07–3.63)
Urban locality (≥ 2,500 inhabitants)	*No*	1.00	1.00	1.00	1.00
	Yes	1.14	1.3	0.82	0.91
		(0.63–2.09)	(0.70–2.42)	(0.47–1.41)	(0.50-1.64)
State	*Morelos*	1.00	1.00	1.00	1.00
	Puebla	1.06	0.53**	0.74	0.39***
		(0.65–1.72)	(0.32–0.87)	(0.43–1.25)	(0.22–0.68)

[a]: Dependant variables are dichotomous and represent adolescents classified into the 3rd tercile of the K index versus the rest of adolescents; differences in sample size due to missing information; [b]: 80 or more in a 0–100 scale according to the educational system; [c]: SEL = Socioeconomic level; ***$p < .01$, **$p < .05$, *$p < .1$.

Family-centered plans were expected within a society with traditional values such as the Mexican one (García, 2014; Jiménez- González et al., 2017). While overall few students desire a pregnancy before their 20s, finding a group that today prioritizes family formation for their future confirms that maternity and paternity are central elements in the configuration of their identity (Näslund-Hadley & Binstock, 2010). A risk is implied either because continuing with their education is not their priority, or because expressing family formation goals early in life increases the risk of early parenthood (Atienzo, Campero, Herrera, & Lozada, 2015; Rocca, Doherty, Padian, Hubbard, & Minnis, 2010; Salmela-Aro et al., 2007).

According to our measure of future plans, the same set of variables and similar correlation patterns explain the goals of men and women. This suggests that men and women make similar assessments with respect to aspects of family, studies, and possessions that are important for their future. However, even though future plans are defined in a similar way, social and cultural factors still weigh differently on them when promoting choices regarding their future, as shown by the results of the multivariate analysis. Feeling capable of deciding when to form a family links to prioritizing a family project in women, while the same belief is linked to aspiring to a professional project in men. This means that in a setting where traditional gender roles and timing of key family events are reproduced (Jiménez-González et al., 2017), adolescents' self-assessment regarding their own competencies acts as a determinant of their future plans (Bandura et al., 2001), but as suggested by the Future Orientation Framework, this assessment is embedded in a context that reinforces preestablished roles, that in the case of women are centered in the family while in men are centered in work.

No association was found between feeling capable of planning when to stop studying or start working and either plan. This can show a recognition that under unforeseen circumstances, students may have to abandon school and start working, perhaps to contribute economically to their homes or to gain an independence that otherwise can't be achieved (García, 2014; Mora & de Oliveira, 2014). For instance, almost half of the students in our sample have had some form of paid job in the past and more than 60% have a father or mother that attained a similar or lower educational level than them. This reflects potential economic needs and less opportunities for well-paid jobs within the family given the limited accumulation of skills. Considering their socioeconomic reality, planning work-related events may be meaningless.

We found that men who already have initiated sexual activity have more chances of choosing a family-centered plan for their future. Rather than a causal effect where sexual behavior influence the future plans, the reversed may be the case; that is, this association can be reflecting that family-centered

plans motivates sexual intercourse. In support of this hypothesis, previous research in Mexico has shown that plans to delay the formation of a family protects men from engaging in sexual intercourse, with an unclear influence on women (Atienzo et al., 2015).

We observe that in line with what is advocated by comprehensive sex education, the school becomes a key scenario to promote social equity (de Castro et al., 2018), since greater exposure to gender equity messages at school protects against aspirations centered on family formation in women and promotes a professional plan in men. Relating to this, better school grades are associated with career aspirations in both men and women, as it has been previously suggested in the literature (Berzin, 2010). School grades are an indicator of students' performance that can motivate perceived academic efficacy, promoting in turn academic expectations (Bandura et al., 2001). It is also possible that the mechanism explaining the influence of grades on the future plans is the satisfaction (or dissatisfaction) with the school context. For example, disliking of school has been suggested as a mechanism predisposing students to teenage pregnancy (Bonell et al., 2005; Harden et al., 2009).

Parents are perceived as one of the most important agents of children socialization. In line with this, men who express greater father support are more likely to prioritize a career development plan, although no relation is identified with family formation ideals. This relation was also expected since students living in poverty, who have little support from their parents, experience earlier entrance into parenthood (Mora & de Oliveira, 2014; Schoon et al., 2007). No associations were found in the case of women. In this study, parents' support was built as a measure of general parents' general involvement in different daily activities with their adolescent children. Perhaps, rather than general companionship, it is the transmission of aspirations and expectations for their children that has a greater influence in shaping future plans (Atienzo et al., 2015; Bandura et al., 2001; Keijer, Liefbroer, & Nagel, 2018), which may explain the lack of more consistent associations. Either way, this finding suggests that gendered socialization practices take place among these families.

Our study also confirms once more the role of economic constraints in shaping the future plans of students (Chang et al., 2006; Schoon et al., 2007). The lesser socioeconomic resources are available the more a traditional plan is prioritized in women, while having more resources increases the chances of aspiring to professional development both in men and women. For many girls in resource-limited settings, having more education is not expected to translate into an improved life because of a lack of career opportunities available (Näslund-Hadley & Binstock, 2010). The future goals are therefore

oriented towards known and suitable paths of life, such as family-centered plans (Jiménez-González et al., 2017). Prioritization of family formation is also suggested in the literature as a mechanism driven by a desire to overcome a difficult childhood, experiences of poverty, violence, and other situations of structural vulnerability (García, 2014; Harden et al., 2009; Macutkiewicz & MacBeth, 2017; Marcelino et al., 2009; Mora & de Oliveira, 2014).

Taken together, these differential influences on the formation of future plans are an expression of a context that promotes inequalities in the trajectories of men and women. Evidently, several factors to be taken into consideration to promote a plan centered in educational/professional development can be identified in the case of men, namely self-efficacy, school performance, equity messages at school, and parents' support. However, it is less clear among women what mechanisms are driving the formation of plans centered in profession, making hard to translate our findings into actionable messages. There is therefore a need to continue exploring how these plans are formed in order to design focused strategies facilitating the healthy development of men and women.

Other findings can be highlighted. The majority of the participants share a perception that achieving a high educational level is very important for their future. This doesn't seem to be different from other studies in Mexico, since 74% of students in junior-high school expects to study up to university or further (INEE, 2015). However, the reality shows that educational gaps increase during high-school. In the 2013–2014 school cycle, only 62% of 15-17-year-old youths were enrolled in high-school education as expected considering their age (INEE, 2015). In general, measures of educational aspirations tend to be high, with little difference in the aspirations of students from different backgrounds (Chang, 2009; Salmela-Aro et al., 2007). These high educational expectations are thus normalized in the sense that they describe a socially expected behavior, which is reaching a high academic level (Elsaesser et al., 2018).

Unlike most of the available evidence about future planning, we considered adolescents' assessments across different life domains such as education and family, and combined different measures of aspirations, expectations, plans, and value attached to aspects of their lives (Dutra-Thomé et al., 2015; Lindstrom-Johnson et al., 2014; McWhirter & McWhirter, 2008; Sipsma et al., 2012, 2013). We considered the future plans as an assessment of several aspects of one's life where some have more priority than others. Our approach allows to corroborate the close link between variables from the family/reproductive area and the educational/professional sphere, validating the multidimensional nature of future planning. For example, in terms of measures of age at which

students expect to live with a partner and have children, earlier ages contribute positively towards a family-centered plan while later ages contribute positively to the career/professional one. Thus, in this future visualization exercise, education or career aspirations are weighed along with life roles such as becoming a parent/mother and material possessions desired (Schoon et al., 2007).

However, adolescence can also be a stage marked by indecision, doubts, or undefined future plans (Atienzo et al., 2015). The dreams won't always align with the perceived possibilities. Therefore, it is important to be flexible in our measurements of life plans, since we are dealing with intentions toward events that might not take place for many years (Hayford, 2009) and that will align as youth get older, with a tendency to set more congruent expectations across domains such as employment and reproductive goals (Beal et al., 2016; Salmela-Aro et al., 2007). Also, many students will develop alternative aspirations that don't necessarily involve forming a family early in life or building a professional career. Not thinking or deciding about the future can also be an outcome in students from poor contexts, where the future is even more uncertain and unforeseeable (Mora & de Oliveira, 2014).

One limitation of this study is our focus on students showing higher scores in each of the future plan's indexes. We took this approach since we recognize that there might be adolescents who still haven't thought or are undecided about their future, therefore it was important to focus on those showing a clear prioritization of a particular type of plan. In this sense, it is not the purpose of this study to analyze the variation in the values of the built indexes. We also acknowledge that there is a group of students showing high scores on both future plans outlined. This means that for an important proportion, a traditional pattern centered on family coexists with concerns about education and career development (Atienzo et al., 2015). While this can be an indicator of a lack of specificity of our central variable, it is also a reminder of the importance of maintaining flexibility when measuring future plans.

Another limitation is that causality can't be claimed given the cross-sectional nature of the study. Likewise, the reduced sample size affects the possibility of making other relevant comparisons, such as between students with antecedents of dropping out of school or by socioeconomic status. The findings aren't representative of all students in public junior-high schools in Mexico. We also acknowledge that we are leaving out the most vulnerable adolescents, namely those who already dropped out from school and those enrolled in distance-learning systems such as telesecondary, which is the most common form of education available in highly marginalized and indigenous communities. We decided not to include students from this system given important socioeconomic differences compared to students in our sample (INEE, 2015). Future research addressing the views and plans of students

in distance-learning schools is warranted. New research could also shed light about students' perceptions of opportunities available for them, and how they prioritize across different goals (Chang et al., 2006). Existing theoretical models should be tested in LA (Berzin, 2010; Hill et al., 2003).

To conclude, the educational expectation of these students is high, but in a context of structural vulnerability. Adequate opportunities need to be offered under the structure of public policies so that adolescents don't interrupt their studies even if they prioritize a future centered on a family. Among youths from disadvantages areas, however, the urgent need is to build hopes considering their socioeconomic reality (Näslund-Hadley & Binstock, 2010), and to help them find alternative ways of social integration other than the early formation of a family or early entrance to the labor market (Mora & de Oliveira, 2014). Students must perceive that staying in school will improve substantially their possibilities in life. Interventions should target social disadvantages to promote the fulfillment of young men and women, and delay unions and parenthood (Harden et al., 2009), while schools and teachers should direct improved efforts to promote educational goals and self-efficacy, together with satisfaction and motives for remaining under a gender-equity perspective.

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