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You should know me better: Parents' temperament-insensitivity has negative motivational effects on Bedouin and Jewish adolescents

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Abstract

Objective: We studied a recently conceptualized aspect of autonomy-support and suppression, not examined so far: Sensitivity to temperament dispositions. Based on self-determination theory, we hypothesized that, across cultures, disposition-frustrating decisions would have similar negative effects on adolescents' intrinsic motivation to participate in decision-related activities, and these negative effects would not be mitigated in collectivist-hierarchical cultures, when parents make the decision.

Method: In Study 1 ($n = 570$, mean age = 15.2 years), Bedouin and Jewish adolescents were presented with work modes frustrating or supporting their shyness and sociability dispositions. For example, in one frustrating work mode condition, shy participants expected to work with strangers. Then, participants indicated their intrinsic motivation to participate in the activities. Study 2 ($n = 278$ Bedouins and Jews, mean age = 14.9 years) was an experiment using self-report and projective measures, examining the effects of temperament-supporting versus frustrating work modes, ostensibly chosen by parents, on adolescents' intrinsic motivation to participate in relevant activities.

Results: Both studies showed that, across cultures, frustrating work modes had negative effects on participants' intrinsic motivation. These effects were not moderated by cultural background.

Conclusions: Results suggest that belonging to a collectivist Bedouin culture endorsing deference and obedience to parental authority does not mitigate the negative motivational effect of parents' temperament-insensitivity, and this type of autonomy-support is important across cultures.

KEYWORDS
child-temperament, cultural differences, intrinsic motivation, parental autonomy support, shyness, sociability

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The order of the first two authors is random.

1 | INTRODUCTION

Actions spurred by intrinsic motivation are considered highly desirable because they contribute to well-being, optimal development, and high levels of performance (Ryan & Deci, 2017). A large body of research anchored mainly in self-determination theory (SDT; Ryan & Deci, 2017) has shown that socializing practices termed autonomy-supportive promote intrinsic motivation. A parenting practice can be considered autonomy-supportive if it enhances youngsters' sense of full volition with regard to parentally valued behaviors (e.g., Soenens et al., 2007). Research on autonomy support has focused on such practices as taking children's perspective, offering choice, minimizing control, providing rationale, and allowing criticism (Assor, Kaplan, & Roth, 2002; Grolnick, Deci, & Ryan, 1997; Jang, Reeve, Ryan, & Kim, 2009; Sher-Censor, Assor, & Oppenheim, 2015).

However, one important aspect of autonomy support, which to the best of our knowledge, has never been examined empirically in terms of its impact on intrinsic motivation, is *sensitivity to youngsters' temperament-related dispositions*. Following Assor, Keren, Katz, and Kanat-Maymon (2006) and Deci, Assor, Keren, and Roth (2007), we conceptualized the construct of sensitivity to children's temperament as referring to socializing agents' tendency to act in ways that show serious consideration for children's temperament dispositions. Substantial research has demonstrated that temperament dispositions have powerful effects; prompting and directing individuals to seek, create, choose, and evoke environments, social interactions, and activities that match those dispositions (e.g., Zentner & Shiner, 2012).

Therefore, it appears reasonable to assume that parents' sensitivity to their children's temperament dispositions is experienced by children as autonomy-supportive because it allows them to act in ways that fit their inherent dispositions, and promotes their sense of volition and choice regarding these actions. Inasmuch as autonomy-supportive contexts promote intrinsic motivation (e.g., Deci & Ryan, 2012), it is reasonable to hypothesize that parents' sensitivity to children's temperament dispositions is likely to enhance their intrinsic motivation to participate in such contexts and tasks. In contrast, parents' insensitivity to adolescents' temperament dispositions (i.e., selecting contexts or work modes that go against adolescents' dispositions, without discussion, without recognizing adolescents' possible frustration, and without giving a convincing rationale), is likely to be experienced by children as undermining their sense of autonomy and their intrinsic motivation to engage in decision-related activities. To prevent possible misinterpretations, it is important to note that the term "insensitivity to temperament dispositions" does not imply that the parent is generally insensitive to the child's needs. For example, parents may be rather sensitive to their child's needs to receive relatedness- and competence-supporting messages and responses, indicating how much they love their child and believe in her/his competence and potential. Yet, the same parents may not consider their child's temperament dispositions when they select various contexts and activities for their child.

While SDT's basic premises (Ryan & Deci, 2017) suggest that parental temperament-insensitivity is likely to undermine sense of autonomy and intrinsic motivation in most children, it is important to consider factors that may moderate these negative effects. Thus, in line with recent conceptualizations and research anchored in SDT (e.g., Marbell-Pierre, Grolnick, Stewart, & Raftery-Helmer, 2017; Soenens, Vansteenkiste, & Van Petegem, 2015) and research on autonomy in adolescence (e.g., Qin, Pomeratnz, & Wang, 2009), stressing the potential effects of cultural contexts, it seems important to start examining whether the negative effects of parental insensitivity to children's temperament dispositions are moderated, perhaps even canceled, by some cultural backgrounds. Research examining this issue is important because, if the negative effects of temperament-insensitivity will emerge across widely different cultures, this may suggest that temperament-sensitivity is a fundamental aspect of autonomy support. In addition, findings showing lack of cultural moderation of the negative effects of parents' temperament-insensitivity can alert parents that belonging to a certain culture does not immunize their children against the negative effects of parents' temperament-insensitivity.

Iyengar and Lepper (1999), and then by Rudy et al. (2015), examined the importance of cultural context as a moderator of the effects of choices made by parent versus self-choices made by offspring on offspring's intrinsic motivation. Both studies showed that for youngsters from a Chinese or Indian background, intrinsic motivation to participate in an activity was stronger when this activity was chosen by parents rather than self-chosen, whereas the reverse was true for youngsters from a European American background.

While these studies demonstrate the importance of cultural context as a moderator of the effects of parental choice versus self-choice, they did not examine culture as a potential moderator of the effects of temperament-sensitive (i.e., disposition-supporting) versus temperament-insensitive (i.e., disposition-frustrating) choices made by parents (or other agents). Given the paucity of research on this issue, the main objective of the present study was to examine adolescents' motivational reactions to disposition-supporting versus disposition-frustrating parental choices in two widely different cultures: Bedouins and Secular Jews in Israel.

1.1 | Comparing effects of sensitivity to offspring's temperament across cultures

Bedouins and secular Jews differ in three attributes that may act as potential moderators of the negative effects of parental

temperament-insensitivity. The first is *a collectivist orientation in which members of an in-group* are inclined to *accommodate and accept the preferences of other in-group members* (e.g., parents) even when these preferences are opposed to their own initial preferences, because of their *collectivist orientation*, and the interdependent self-construal that often accompanies this orientation (e.g., Iyengar & DeVoe, 2003; Lay et al., 1998; Markus & Kitayama, 2003; Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1995). Thus, adolescents who are inclined to accommodate and accept parents' preferences as part of their own interdependent or collective self may react less negatively also when parents make decisions that go against their dispositions. The Israeli Bedouins are characterized by a stronger collectivist orientation compared to Israeli Jews (e.g., Cohen, 2006, 2007; Oyserman, 1993; Schwartz, 2009; Weinstock, 2011). Furthermore, as part of their collectivist orientation, the Bedouins in Israel emphasize the importance of group goals above personal goals, and view their belongingness to the family as a central part of their self-definition and identity (e.g., Al-Krenawi, 1998; Al-Krenawi & Graham, 2000; Dwairy & Achoui, 2010; Katz & Assor, 2002). The strong collectivist orientation and the view of one's family as a central part of one's self-definition may contribute to the inclination of Bedouin adolescents to experience parents' decisions as a part of their expanded sense of self, also when these decisions go against their initial preferences. As a result, such unilateral parental decisions may have less negative motivational effects in Bedouin than in Jewish adolescents.

The second attribute is the *relative prevalence (normative status)* and *acceptability* of *a child-rearing approach expecting full child obedienc*e when parents' and children's preferences are opposed to each other. Research on Arab and Bedouin societies indicates that this child-rearing approach is adopted by many Arab and Bedouin parents (e.g., Achoui, 2003; Barakat, 1993; Dahir, 1987; Dwairy, 1997, 2004a; Dwairy & Achoui, 2006, 2010). For example, Dwairy et al. (2006) found that Palestinians living in Israel (including Bedouins) perceived their parents as showing higher levels of authoritarian control relative to Arabs living in other locations in the middle east (except for Yaman). Furthermore, Dwairy and Achoui (2010) found that Bedouin Israelis described their parents as higher on control relative to most other countries examined (including both Arab and Western countries). Relatedly, recent research on Arabic children's stories published recently in Israel indicates that a most prevalent theme of these stories is parents' behavior and decisions that demand full obedience, with little or no attention to children's dispositions and preferences (Abu-Baker & Yichia, 2015).

Importantly, research has shown that among many Arab children and youth, parents' demands and expectations for absolute obedience were not associated with adolescents' reports of experiencing strong negative emotional reactions or difficulties (Dwairy, 2004b; Dwairy & Achoui, 2010).

Furthermore, studies by Dwairy (1997) and Hatab and Makki (1978) showed that such demands from parents and teachers were often described by youth as acceptable and non-disturbing. As unilateral parental decisions in conflict situations appear to be more normative and acceptable in Bedouin families relative to Jewish families, it is possible that unilateral parental decisions that go against the adolescents' dispositions are experienced as less aggravating and less-demotivating by the Bedouin adolescents because they can be attributed to a common cultural practice.

A third culture-related attribute, which may also explain the acceptability of unilateral parental decisions going against the child's preferences, is a belief in the *better long-term foresight and wisdom of parents* relative to children (Rudy et al., 2015). This belief may cause adolescents in cultures characterized by deference and respect for parents to react less negatively to unilateral parental decisions that go against their temperament dispositions, because they believe that even though the parental choice may be frustrating in the short run, it will help the adolescent in the long run. Evidence supporting this possibility in the Bedouin culture comes from a qualitative study conducted by Katz and Assor (2003). These authors found that many Bedouin youth reported that their parents knowingly made important decisions that were opposed to their preferences, without listening and considering the youth point of view. Yet, respondents often said that their parents knew what is best for them, and that their unilateral decisions were motivated by caring. This view of parents appears similar to Kagitcibasi (2007) observations that in many non-Western cultures, parents can be perceived as both very directive and yet truly caring and worth listening to.

Overall, then, it appears that the Bedouin context is characterized by attributes that may possibly moderate and reduce the negative effects of some autonomy-suppressive parental decisions (compared to autonomy-supporting decisions). However, as temperament dispositions tend to be powerful and enduring inclinations that drive and shape behaviors, we hypothesized that, across cultures, disposition-frustrating decisions will have similar negative effects on adolescents' intrinsic motivation to participate in decision-related activities. Thus, we did not expect that the negative effects of disposition frustrating decisions (relative to supporting ones) will be mitigated in collectivist-hierarchical cultures, when parents make the decision.

1.2 | The temperament dispositions studied: Shyness and sociability

In this study, we focused on shyness and sociability. These dispositions are especially relevant in adolescence, a period when youth become increasingly involved in interactions with peers (e.g., Collins & Laursen, 2004). *Shyness* is often defined as the

tendency to exhibit behavioral inhibition, experience uncomfortable feelings when meeting strangers, and minimize public attention to the self (e.g., Asendorpf & Meier, 1993; Crozier, 2005). *Sociability* is defined as the preference to be with many other people and communicate with them, rather than being alone (e.g., Cheek & Buss, 1981). Shyness and sociability are two distinct dispositions (e.g., Cheek & Buss, 1981; Mounts, Valentiner, Anderson, & Boswell, 2006), which appear to have both genetic and environmental sources (e.g., Benish-Weisman, Steinberg, & Knafo, 2009). Research has shown that constructs similar to the dispositions of shyness and sociability have been identified in different cultures (e.g., Ahadi, Rothbart, & Ye, 1993; Asendorpf & Meier, 1993).

1.3 | The present research

To examine the motivational impact of insensitivity to adolescents' temperament across cultures, we conducted two studies that presented 14- to 16-year-olds with work modes that either frustrated or supported their temperament dispositions.

In Study 1, Bedouin and Jewish adolescents with varying levels of the sociability or shyness dispositions were asked to indicate their intrinsic motivation to participate in work modes designed to frustrate or support their dispositions. Study 1 made no mention of parents' or other authority figures' preferences for specific work modes. Therefore, there was no reason to expect cultural moderation, and we expected that both Jewish and Bedouin adolescents would feel weaker intrinsic motivation to pursue disposition-frustrating work modes than to pursue disposition-supporting ones. Whereas Study 1 was a questionnaire study which elicited no conflict between participants' temperament and parental preferences, Study 2 was an experiment involving either a contrast or a synergy between participants' dispositions and their parents' (alleged) work mode preferences. In addition, Study 2, unlike Study 1, also employed projective outcome measures. Given the grounding of our research in SDT, we hypothesized that, across cultures, temperament-frustrating work modes (compared to temperament-supporting work modes) will similarly undermine adolescents' intrinsic motivation, irrespective of whether parents are perceived as responsible for the selection of the work-mode.

2 | STUDY 1

This first study consisted of two parts. In the first part, Bedouin and Jewish adolescents completed questionnaires assessing shyness and sociability. In the second part, participants completed a questionnaire asking them to indicate their intrinsic motivation to participate in work modes designed to

either support or frustrate the shyness or the sociability dispositions (four work modes). We expected that adolescents from both cultures would perceive items assumed to reflect the two dispositions in a similar way. More importantly, we predicted that, for both shyness and sociability dispositions and in both cultures, adolescents would report less intrinsic motivation to participate in temperament-frustrating work modes than in temperament-supporting ones.

2.1 | Method

2.1.1 | Participants

Participants were 570 middle-school students (Grades 9–10, mean age = 15.2 years) from southern Israel: 270 Israeli Jewish students (126 males, 144 females) from three non-religious Jewish schools and 300 Israeli Bedouin students (137 males, 163 females) from two Bedouin schools. Participants were included only if they were born in Israel, and had a mother tongue of Hebrew (Jews) or Arabic (Bedouins). Studies of participants from randomly chosen classes in the same schools included in the present research, and from classes in adjacent schools with a similar SES profile (Katz & Assor, 2002; Yitshaki, Maree, & Assor, 2016), showed that Bedouin adolescents had significantly higher scores than Jewish adolescents on a scale assessing a deferent and obedient orientation to parents, based on Lay et al. (1998).

2.1.2 | Procedure

The study was approved by the university ethics committee, and parental and adolescents' consent was obtained prior to participation. Participants completed two questionnaires in their mother tongue, administered in each classroom by trained college students, whose nationality, mother tongue, and dress code coincided with the relevant school. The first questionnaire included shyness and sociability items, presented in random order. The second questionnaire manipulated support versus frustration of participants' shyness and sociability dispositions via four work mode descriptions presented in a counterbalanced sequence, asking participants to report on their intrinsic motivation to participate in each of the four work modes.

2.1.3 | Measures

Shyness and sociability scales
Shyness was assessed using a scale drawn from Cheek and Buss (1981) and from the revised adolescence temperament questionnaire (EATQ-R, Capaldi & Rothbart, 1992). An illustrative item is: "When I need to meet strangers—I

am shyer then most people." Sociability was assessed using a scale drawn from Cheek and Buss (1981). An illustrative item is: "I always like to be in the company of people." Both scales employed a 7-point scale ranging from 1 (*total disagreement*) to 7 (*full agreement*). The items are shown in Table 1. Cronbach's alphas in the Jewish sample were .85 for both scales, and in the Bedouin sample, Cronbach's alphas were .79 and .75 for sociability and shyness, respectively. The original English items were translated into Hebrew by one translator and then back into English by another translator. Then, the Hebrew items were translated into Arabic by one translator and then back into Hebrew by another translator. Exploratory factor analyses using maximum likelihood extraction with varimax rotation produced the expected two factors. As shown in Table 1, the factors mapped perfectly onto the two temperament dispositions except for one sociability item (see item 7 on Table 1), which was subsequently dropped. The final 14-item questionnaire contained 6 items for sociability and 8 items for shyness, with satisfactory Cronbach's alphas (see Table 1).

Questionnaire manipulating temperament-support versus temperament-frustration via work mode descriptions

The questionnaire contained (a) an opening section, (b) a presentation of each of the four work modes (each on a separate page), and (c) a measure of participants' motivation to participate in each of the four work modes. The instrument was written in Hebrew, translated into Arabic, and then translated back into Hebrew by another translator.

Opening section. Ben-Gurion University is considering offering students in this school district an afterschool enrichment program including several classes. As part of this process, we are exploring students' preferences regarding how they would like these classes to be conducted. To that end, you will next be presented with four work-mode descriptions. After reading the description of each work-mode, you will be asked to indicate if you want to participate in classes run in this way, and what you think and feel about such classes.

TABLE 1 Factor loadings for sociability and shyness items in Study 1's Bedouin and Jewish samples, and subscales' means, standard deviations, and internal consistencies

	Item	Bedouin (*n* = 300)		Jewish (*n* = 271)	
		Sociability	Shyness	Sociability	Shyness
1	I always like to be in the company of people	.77		.83	
2	I prefer to be in places where there are a lot of people	.71		.77	
3	When there are a lot of people around me—I enjoy it very much	.71	−.20	.73	
4	I enjoy talking to people	.67		.52	
5	I would rather spend time with other children than be by myself	.66		.63	
6	I enjoy parties, which have a lot of people	.64		.73	−.27
7	I prefer to study on my own rather than with other children	−.23	.20	−.22	
8	When I need to meet strangers—I am shyer than most people		.77		.79
9	I am shy		.70		.75
10	When I meet people I do not know—I am embarrassed.		.67		.78
11	I am not shy	.23	−.62	.21	−.70
12	When strangers are paying a lot of attention to me—I am embarrassed		.54		.68
13	It takes me a lot of time to feel comfortable among people I don't know/ strangers		.51		.73
14	When I am with people who I do not know well—I feel stressed.		.49		.64
15	I do not like to speak in front of an audience		.46		.51
	Eigenvalue	2.45	3.36	2.35	4.96
	% of variance	16.34	24.20	15.7	33.1
	Subscale mean	5.05	3.97	5.15	3.83
	Subscale standard deviation	1.11	1.08	1.05	1.13
	Cronbach's alpha	.79	.75	.85	.85

Note: Loadings smaller than .20 are not presented.

Work modes' presentation. Each of the four work modes was depicted via a verbal description accompanied by a picture (see Figure 1). The four descriptions were created in a series of pilot tests aiming to ascertain that each description had the intended (frustrating or supporting) effect on the relevant disposition (shyness or sociability). The results of Study 1, in fact, corroborated that these descriptions indeed had the effects they were designed to create. The two shyness work modes descriptions included core aspects of the shyness disposition as conceptualized by Asendorpf and Meier (1993) and by Cheek and Buss (1981). As shown in the top row of Figure 1, the major focus of these two work modes was on support versus frustration of the preference to avoid interaction with strangers and to minimize public attention. The two sociability descriptions included core aspects of the sociability disposition as conceptualized by Cheek and Buss (1981) and by Asendorpf and Meier (1993). Thus, as shown in the bottom row of Figure 1, the focus of these two work modes was on support versus frustration of the preference to be with and communicate with a number of people rather than being alone. We added a sentence concerning the option to communicate with other people to ensure that students would not feel isolated and unable to receive advice from others.

Self-reported intrinsic motivation scale

For each of the four work modes, students completed a 3-item scale assessing intrinsic motivation to participate in a class that would work in the described way. The scale was used previously to assess intrinsic motivation in Western and non-Western cultures (Bao & Lam, 2008; Katz, Assor, & Kanat-Maymon, 2008). Participants rated items like "I would really enjoy participating in this work-mode" on a scale ranging from 1 (*full disagreement*) to 7 (*full agreement*). Cronbach's alphas for the intrinsic motivation scale were above .88 for each of the four work modes in both cultural groups.

2.2 | Results

2.2.1 | Preliminary results

Factor analyses of the shyness and sociability items produced a highly similar two-factor structure in both Bedouin and


Shyness frustration: You would meet 15 students you are not familiar with; each student would present her/his work to the whole group

Shyness support: You would meet 15 students you are familiar with; students would work on different tasks, and if they want to, they would tell other students what they have done
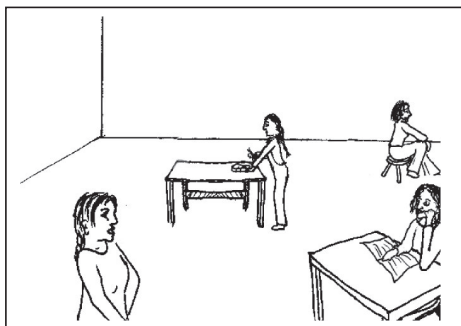
Sociability frustration: Activities are performed separately from others, but you can communicate with other students if you want to
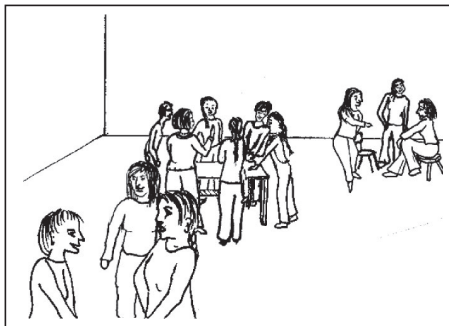
Sociability support: Activities are performed in groups, and you also have opportunities to communicate with students from other groups

FIGURE 1 Verbal and pictorial descriptions of temperament-frustrating and temperamentsupporting work-modes (used in Study 1 and Study 2)

Jewish samples. Nevertheless, we conducted an additional, more rigorous examination of the equivalence of the factor structure across the two cultural groups using mean and co-variance structure analysis (MACS; Little, 1997). The MACS results were consistent with the factor analyses presented in the Method section (see Table 1), indicating that the shyness and sociability constructs were sufficiently comparable across the two cultural groups. Additional invariance analysis also indicated that the self-reported intrinsic motivation scale was comparable across the two cultures. The MACS results are presented in the Supporting Information.

The correlations between the shyness and sociability scales were $r = -.23$ ($p < .05$) for Bedouins and $r = -.35$ ($p < .05$) for Jews. A similar pattern was reported by Cheek and Buss (1981). The low correlation coefficients suggest that the scales assess fairly distinct constructs. Only one difference emerged from the t-tests examining the effects of culture and gender: Jewish females obtained higher sociability scores than Jewish males, $t = -2.53$, $p < .05$.

2.2.2 | Testing the hypothesis that frustration of temperament undermines intrinsic motivation

We hypothesized that, across cultures, participants scoring high (but not low) on shyness or sociability would show less intrinsic motivation to participate in a disposition-frustrating work mode than in a disposition-supporting one. Therefore, in predicting participants' intrinsic motivation, we expected an interaction between participants' temperament dispositions and the extent to which the work mode was disposition-supporting or disposition-frustrating. This hypothesis was examined separately for the sociability and shyness dispositions using the MIXED procedure in SPSS 20. The MIXED procedure can treat both continuous and categorical variables and their subsequent interactions as independent factors via a multivariate repeated-measures design (McCulloch & Searle, 2000).

Each analysis included four independent factors: (a) participant's temperament disposition score, (b) work mode (temperament-frustrating vs. temperament-supporting), (c) gender, and (d) participant's cultural affiliation. The dependent measure was intrinsic motivation to participate in the

activity. Inasmuch as intrinsic motivation was measured for both temperament-supporting and temperament-frustrating work modes, we treated work mode as a repeated-measure variable and allowed the intercepts to vary randomly. To ease parameters interpretation, all predictors were mean centered. Preliminary analyses did not reveal any significant order effects for the temperament-supporting versus temperament-frustrating work modes; hence, further analyses did not include this variable. Results are presented in the Supporting Information document. In presenting the results, we first describe in detail the effects pertaining to the hypotheses for sociability and shyness, and then describe additional findings.

2.2.3 | Sociability: Hypotheses related effects

We found a significant main effect for work mode, indicating that participants reported stronger intrinsic motivation to pursue the work mode involving working with many people ($M = 4.74$, $SD = 1.32$) than the one involving working separately ($M = 3.77$, $SD = 1.50$). As expected, this main effect was qualified by a sociability disposition × work mode interaction. We measured sociability disposition as a continuous variable and expected a particularly strong work mode effect for participants who were high (but not low) on sociability; therefore, we examined the effect of exposure to sociability-frustrating versus sociability-supporting at three levels of this temperament disposition: low sociability (one standard deviation below mean), medium sociability (i.e., mean level), and high sociability (one standard deviation above mean). As shown in Figure 2, the effect of the difference between the two work modes at the low, medium, and high levels of the sociability disposition was expressed by a simple slope coefficient. Inspection of Figure 2 indicates that the interaction pattern was consistent with our hypothesis. Participants scoring high on sociability showed significantly stronger intrinsic motivation to participate in the disposition-supporting work mode than in the disposition-frustrating work mode ($B = .95$, $SE = .13$, $p < .001$). However, participants scoring low on sociability showed only a small, nonsignificant tendency toward increased intrinsic motivation to pursue the disposition-supporting work mode over the disposition-frustrating work mode ($B = .18$, $SE = .11$, ns).
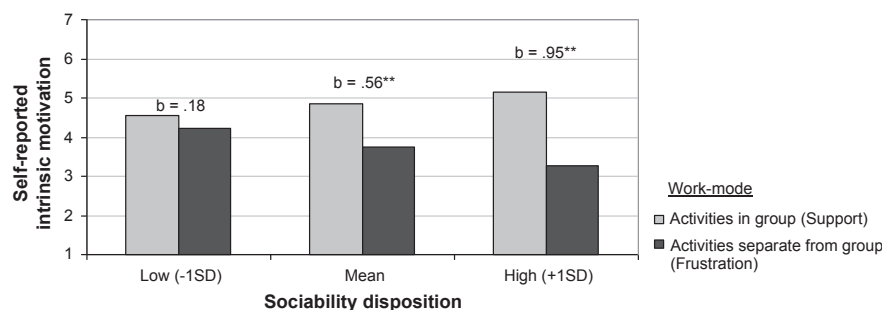

FIGURE 2 Study 1: Self-reported intrinsic motivation as a function of sociability disposition and expected work-mode. **$p < .01$

The magnitude of the effect observed for participants with a medium level sociability disposition fell, as may be expected, between the low and high sociability disposition groups ($B = .56$, $SE = .08$, $p < .01$). Notably, no main effect for culture was found and the disposition × work mode interaction was not moderated by cultural affiliation.

2.2.4 | Shyness: Hypotheses related effects

Significant main effects were obtained for shyness disposition and work mode; shyer participants were less intrinsically motivated ($B = −.18$, $p < .001$), and participants in the support work mode ($M = 4.63$, $SD = 1.33$) were more intrinsically motivated than those in the frustration work mode ($M = 4.00$, $SD = 1.54$). These effects, however, were qualified by two two-way interactions; one involving shyness disposition and work mode and another involving work mode and culture. These interactions, however, were then qualified by a three-way interaction involving shyness disposition, work mode, and culture. Because the three-way interaction encompassed the two two-way interactions, we proceeded to probe the tree-way interaction, examining the shyness by work mode interaction separately for each culture.

For both the Bedouin and the Jewish samples, we examined the effect of shyness-frustrating versus shyness-supporting work modes on intrinsic motivation for low, medium, and high levels of shyness disposition ($−1$ SD, mean, and $+1$ SD, respectively). The results of these simple slope analyses are shown in Figure 3 for the Bedouin and the Jewish samples. Inspection of Figure 3 indicates that, consistent with our hypothesis, a similar interaction pattern emerged for both cultures. Thus, the magnitude of the slope coefficients, representing the difference in intrinsic motivation between the shyness-supporting and the shyness-frustrating work modes, increased as participants' shyness level increased. In short, the more participants described themselves as shy, the more their intrinsic motivation was undermined following exposure to a shyness-frustrating work mode (relative to a

shyness-supporting work mode). These effects were stronger in the Jewish sample than in the Bedouin sample.

2.2.5 | Additional effects

In our analysis of sociability, a significant work mode × gender interaction emerged; the effect of work mode on intrinsic motivation was somewhat stronger for females ($B = .56$, $p < .001$) than for males ($B = .38$, $p < .001$). In analyzing shyness, we found an additional two-way interaction of disposition and gender; more specifically, shyness was significantly negatively linked with intrinsic motivation for females ($B = −.26$, $p < .001$), but not for males ($B = −.08$, n.s.).

2.3 | Discussion

Study 1 showed, as expected, very strong interactions of disposition with work mode; both Bedouins and Jews were sensitive to the frustration of their shyness and sociability dispositions and responded with decreased intrinsic motivation to these frustrations. The study also found a weak three-way interaction between disposition, work mode, and cultural affiliation for shyness, but not for sociability. As this difference was not expected, and cannot be easily explained, future research may need to ascertain that this is not a chance finding, simply occurring because of the large number of effects examined.

Study 1 used only a self-report measure of intrinsic motivation. However, previous research with Bedouin adolescents has shown that they often tend to avoid reporting less positive feelings on self-report measures (Katz & Assor, 2002; Katz et al., 2008). To address this tendency and allow a more comprehensive assessment, Study 2 included also a projective measure of intrinsic motivation.

The strong negative effects of disposition-frustration highlight the importance of sensitivity to adolescents' temperament dispositions as an aspect of autonomy-support that was not
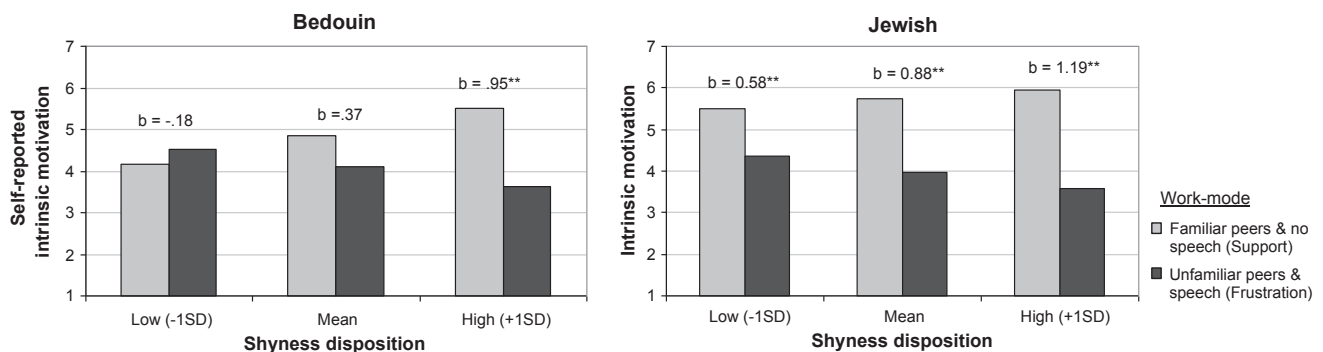

FIGURE 3 Study 1: Self-reported intrinsic motivation in the Bedouin and Jewish samples as a function of shyness disposition and expected workmode. **$p < .01$

conceptualized or examined empirically before, and suggest that this aspect is important across widely different cultures. However, to further understand the cross-cultural importance of temperament-sensitivity, it is necessary to examine whether the effects of temperament-insensitivity across cultures do not depend on the figures responsible for the frustration and the way they are conceived within each culture. Hence, given the importance of deference to parental authority in the Bedouin culture, Study 2 examined if temperament-insensitivity had a similar negative effect for Bedouins and Jews also when the people responsible for the temperament-insensitivity are the parents. In other words, can Bedouin parents be less concerned than Jewish parents with potential negative motivational costs when making decisions that are insensitive to their adolescents' temperament dispositions?

3 | STUDY 2

Study 2 moved into more controversial theoretical territory by examining whether, for Bedouin adolescents, the negative motivational effect of disposition-frustration emerges (and is similar to the effect observed in Jewish adolescents) also when the persons responsible for the choice of the frustrating work mode are one's parents. Based on SDT, we can expect that disposition-frustrating work modes will have a negative effect on the intrinsic motivation of both Bedouin and Jewish adolescents, even when these work modes are chosen and endorsed by the adolescents' parents. However, a cultural moderation view suggests that it is possible that parents' choice of temperament-frustrating work modes has a less negative motivational effect for Bedouin adolescents that for Jewish adolescents. Thus, because in the Bedouin culture obedience to parents is more normative and acceptable, parents might be respected and viewed as having more foresight, and adolescents might be more willing to accommodate to parents' preferences when parents' preferences conflict with their own.

The second study consisted of two parts: first, a disposition screening and then an experiment. First, Bedouin and Jewish adolescents completed questionnaires assessing their shyness and sociability dispositions. Then, adolescents who scored high or low on either shyness or sociability were invited to attend a second session, where an experimental manipulation was conducted. In that session, participants were given descriptions of two work modes related to their temperament dispositions: one disposition-frustrating and one disposition-supporting; then they were told that their parents had already chosen the work mode for them, and the activity would start in a few moments in another room. Half of the participants were told that their parents had selected for them the disposition-frustrating work mode (e.g., presenting one's work to strangers for those high on shyness) and half were

told that their parents had selected the disposition-supporting work mode (e.g., talking with familiar class-mates on the work each is doing). Participants then completed two measures assessing their intrinsic motivation to participate in the parent-selected work mode.

As temperament dispositions tend to be powerful and enduring propensities that shape our behavior, we predicted that, for both shyness and sociability, and in both cultures, adolescents scoring high on these dispositions, would manifest less intrinsic motivation to participate in parent-selected temperament-frustrating work modes than in parent-selected temperament-supporting work modes.

3.1 | METHOD

3.1.1 | Participants, design, and procedure

The study consisted of two sessions: Session 1, in which participants completed a questionnaire assessing their shyness and sociability dispositions, and session 2 involving two experiments (one shyness focused and one sociability focused), conducted with participants selected from session 1 because of their high or low scores on the two dispositions of interest.

Session 1: A questionnaire study

Participants in session 1 were 423 Jewish students from three non-religious Jewish schools and 255 Bedouin students from two Bedouin schools (all in southern Israel, Grades 8–10, ages 14–16 years, mean age = 14.8 years). The smaller size of the Bedouin sample relative to the Jewish sample was due to the difficulty of recruiting experimenters fluent in Arabic. The potential effect of the unequal sizes of the Bedouin and the Jewish samples was taken into consideration and controlled for in the data analyses reported in the Results section. Participants were included only if they were born in Israel, had a mother tongue of Hebrew for Jews and Arabic for Bedouins, and were not identified in the school records as having learning disabilities. All 678 adolescents completed the shyness and sociability scales (used in Study 1) in their mother tongue.

Session 2: Experiments

To ensure that the participants in the shyness-focused and the sociability-focused experiments were not high or low on the other disposition studied, we selected only participants who, in the questionnaire administered in the first session, scored in the top or bottom third for the disposition of interest (e.g., high or low shyness conditions) and were also in the middle third for the other disposition (e.g., sociability). In this way,

participants in each experiment had only one salient disposition (e.g., high or low shyness and moderate levels of sociability). The same selection rule was used to select high versus low sociability participants. A similar procedure was used in past studies by Fox, Henderson, Rubin, Calkins, and Schmidt (2001) and by Kagan, Snidman, and Arcus (1998). Following this selection procedure, we conducted the experiment with 194 Jewish students (88 males, 106 females) and 84 Bedouin students (34 males, 50 females, mean age = 14.9 years), excluding 6 participants who expressed some suspicion in the debriefing phase.

In the shyness-focused experiment, the total number of participants was 138 (40 Jewish participants in the low shyness condition [Mean shyness = 3.14, SD = 0.92] and 53 Jewish participants in the high shyness condition [Mean shyness = 4.20, SD = 0.95]; 22 Bedouin participants in the low shyness condition [Mean shyness = 3.47, SD = 0.84]; and 23 Bedouin participants in the high shyness condition [Mean shyness = 4.89, SD = 1.20]). In the sociability-focused experiment, the total number of participants was 140 (41 low sociability Jewish participants [Mean shyness = 4.19, SD = 1.47], 60 high sociability Jewish participants [Mean shyness = 5.72, SD = 0.72]; 17 low sociability Bedouin participants [Mean shyness = 3.71, SD = 1.07], 22 high sociability Bedouin participants [Mean shyness = 5.92, SD = 0.86]). Overall, then, the experiments employed a between subjects design, where the independent factors were: (a) participant's salient temperament disposition (high or low), (b) temperament -frustrating versus temperament-supporting work modes, and (c) participant's cultural affiliation (Bedouin vs. Jewish).

The shyness-focused and sociability-focused experimental procedures were conducted in a school room, where students of all four disposition levels (high or low on shyness or on sociability) coming from the same classroom, completed the measures simultaneously. Four university students served as administrators of the questionnaires containing the different experimental manipulations. Experimenters' nationality, mother tongue, and dress code coincided with the relevant school. At the beginning of the session, an experimenter provided the following instructions: "This year our University will offer enrichment classes in local schools, using different work-modes, As parents' involvement is important to us, we presented your parents two work modes, and they selected one of them for you. After you are informed about your parents' choice in a booklet we will now distribute, you will do two tasks appearing at the end of the booklet. Then, you will be asked to go to another room where you will be able to participate in the work-mode chosen for you, so that you can have a feel for the kind of activities that will take place in the enrichment classes."

Following the instructions, participants received a booklet including the instructions, the work mode their parents had ostensibly chosen for them, and two tasks. At the top of the second page, two work modes were presented in writing and pictorially. The booklet given to participants high or low on shyness showed the shyness-frustrating and supporting work modes, whereas the brochure given to participants high or low on sociability showed the sociability-frustrating and supporting work modes. These modes are shown in Figure 1 and are described in the Method section of Study 1. The work mode chosen by the parents was indicated below the two contrasting descriptions. At the bottom of the page, there was a note that following the two brief tasks in the next part of the booklet, participants would be asked to go to another room where they will participate in the work mode chosen for them, so that they could have a feel for the kind of activities that will take place in the enrichment classes. Half the participants were told their parents had chosen the disposition-frustrating mode, and half were told their parents had chosen the disposition-supporting mode.

Intrinsic motivation measurement phase

After reading the description of the work mode ostensibly chosen for them by their parents, participants completed a self-report and a projective measure assessing their intrinsic motivation to participate in the parentally selected work mode.

Debriefing phase

At the end of Session 2, participants were asked to voice their questions and comments about the experiment in an attempt to assess possible credibility problems. Responses indicating suspicion or disbelief were extremely rare, and participants expressing them were removed from the study. Then, participants were debriefed, and it was explained that parents did not really choose the work modes. Participants received a modest gift to acknowledge our appreciation for their participation.

3.1.2 | Measures

Shyness and sociability questionnaire

To identify participants who are high or low in the dispositions of interest, we used the same 6-item sociability and 8-item shyness scales as in Study 1. For Study 2, Cronbach's alphas for the shyness scale were .80 for the Bedouin sample (M = 4.16, SD = 1.25) and .85 for the Jewish sample (M = 3.93, SD = 1.21). Cronbach's alphas for the sociability scale were .75 for the Bedouin sample (M = 4.98, SD = 1.24) and .82 for the Jewish sample (M = 4.80, SD = 1.44).

Self-reported intrinsic motivation questionnaire

To assess participants' motivation to actually participate in a class with the work mode selected for them, we expanded the 3-item intrinsic motivation scale used in Study 1. In addition to the items deriving from scales used by Bao and Lam (2008) and Katz et al. (2008), we also included 11 items employed by Roth, Assor, Kanat-Maymon, and Kaplan (2006) to assess intrinsic motivation across different contexts. Participants rated 14 items like "I feel that I really want to participate in the class chosen for me" and "I will go to the class chosen for me even if no one asks me to go" on a scale ranging from 1 (*full disagreement*) to 7 (*full agreement*). Cronbach's alphas for the intrinsic motivation self-report scale were .84 for the Bedouin sample ($M = 4.5$, $SD = 1.04$) and .90 for the Jewish sample ($M = 3.9$, $SD = 1.2$).

Projective measure of intrinsic motivation

This measure was based on the method and scoring system developed and validated by Katz et al. (2008) and Katz and Cohen (2014). Adolescents were instructed as follows: "Please use the empty paper, pencil, and color markers to create an advertising slogan that would reflect the work-mode and work-style chosen for you." Based on the system developed by Katz et al. (2008), to analyze projected motivational content, trained judges evaluated the extent to which the text of the advertisement reflected intrinsic motivation on a scale ranging from 1 (*low*) to 5 (*high*). For example, the slogan "It is worth coming because we enjoy it here" was rated as reflecting high intrinsic motivation, whereas the slogan "Don't join—it is a boring class" was rated low. Interjudge reliability was $r = .87$ for the two scorers of Hebrew texts and $r = .79$ for the two scorers of Arabic texts. The projective measure of intrinsic motivation had a positive significant correlation with the self-report measure of intrinsic motivation in both the Bedouin and the Jewish samples ($r = .33$ $p < .001$ and $r = .30$ $p < .001$, respectively), indicating concurrent validity.

3.2 | RESULTS

3.2.1 | Testing the hypothesis that frustration of temperament dispositions undermines intrinsic motivation across cultural groups

We hypothesized that participants classified as high on the shyness or the sociability dispositions would show higher intrinsic motivation to participate in a work mode supporting that disposition than in a work mode frustrating it; in contrast, we expected that participants scoring low

on a given temperament disposition would not show this pattern. Thus, participants' temperament disposition level was expected to interact with the extent to which the parentally chosen work mode was disposition-supporting or disposition-frustrating.

We assessed this hypothesis by means of two sets of ANOVAs, corresponding to the two temperament dispositions of interest. Each set of ANOVAs included four independent between-subject factors: (a) participant's salient temperament disposition (high or low), (b) temperament-frustrating versus temperament-supporting work modes, (c) participant's cultural affiliation (Bedouin vs. Jewish), and (d) gender of participant. The dependent measures were the self-reported and projective measures of intrinsic motivation. Because the two measures of intrinsic motivation were scaled differently, we analyzed them separately. The ANOVAs addressed the unequal sizes of the Bedouin and Jewish samples using Tabachnick and Fidell's (2013) recommended method, the SSTYPE(3) sum of squares estimation in SPSS IBM. Results are shown in Table 2.

3.2.2 | Sociability analyses

We found significant main effects for disposition and culture in predicting self-reported intrinsic motivation, but not projective intrinsic motivation. More specifically, high sociability participants reported higher intrinsic motivation ($M = 4.39$, $SD = 1.14$) than low sociability participants ($M = 3.95$, $SD = 1.12$), and Bedouin participants ($M = 4.60$, $SD = 1.10$) reported higher intrinsic motivation than Jewish ones ($M = 4.05$, $SD = 1.15$). However, more important in terms of the main objective of the present study, as expected, a relatively strong significant two-way interaction emerged between sociability disposition and work mode (sociability-frustrating vs. sociability-supporting) on both the self-report and projective measures of intrinsic motivation. Notably, the disposition by work mode interaction was the only significant effect observed for the projective measure. Simple main effects, as shown in Figure 4, indicated that as expected, participants classified as high on sociability obtained higher scores in the disposition-support condition (self-report measure: $M = 4.76$, $SD = 0.99$; projective measure: $M = 3.82$, $SD = 1.22$) compared to the disposition-frustration condition (self-report measure: $M = 4.01$, $SD = 1.16$; projective measure: $M = 2.03$, $SD = 1.21$), both for the self-report measure of intrinsic motivation, $F(1, 122) = 5.08$, $p < .05$, and also for the projective measure, $F(1, 72) = 13.47$, $p < .001$. As for participants classified as low on sociability, in line with our predictions, they did not obtain higher scores in the "working in a group" condition than in the "working alone" condition, for either motivation measure. In fact, for the self-report measure, $F(1, 122) = 4.70$, $p < .05$, the intrinsic motivation score

TABLE 2 Effects of disposition, work mode, cultural affiliation and gender on participants' intrinsic motivation: F values and significance (Study 2)

	Sociability		Shyness	
	Intrinsic Motivation		Intrinsic Motivation	
	Self-Report	Projective	Self-Report	Projective
Disposition[a]	6.84**	0.01	0.39	0.25
Work mode[b]	2.27	1.13	0.02	0.57
Cultural affiliation	8.07**	3.61	10.21**	2.38
Gender	0.28	2.86	1.42	0.35
Disposition × Work mode	10.80**	11.72**	14.59**	62.05**
Disposition × Cultural affiliation	4.32*	0.16	0.03	0.04
Disposition × Gender	2.25	0.64	0.16	0.26
Work mode × Cultural affiliation	2.24	0.41	0.04	0.12
Work mode × Gender	3.50	0.93	0.06	4.01
Cultural affiliation × Gender	8.81**	0.53	0.01	0.54
Disposition × Work mode × Cultural affiliation	1.17	0.99	0.01	3.11
Disposition × Work mode × Gender	0.79	0.36	0.21	1.75
Disposition × Cultural affiliation × Gender	1.63	0.09	0.46	1.74
Work mode × Cultural affiliation × Gender	2.41	0.02	0.55	1.14
Disposition × Work mode × Cultural affiliation × Gender	0.48	0.13	2.76	1.51

[a]High versus low on the relevant disposition.

[b]For shyness, work modes were "activities with familiar others" versus "activities with unfamiliar others"; for sociability, work modes were: "activities performed separate from others" versus "activities in group & possible communication with other groups."
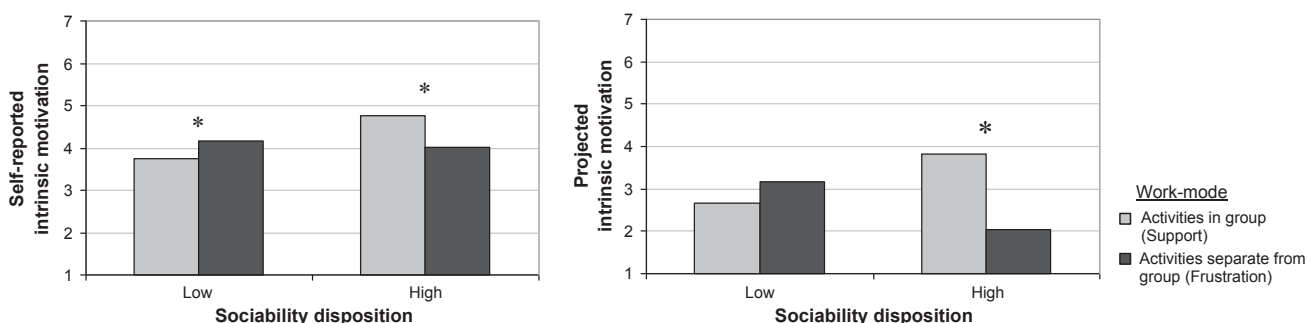
*$p < .05$; **$p < .01$.

FIGURE 4 Study 2: Self-reported and projected intrinsic motivations as a function of sociability disposition level and expected work-mode. *$p < .05$

in the "work in a group" condition ($M = 3.75$, $SD = 1.09$) was significantly lower than in the "work alone" condition ($M = 4.17$, $SD = 1.17$). These differences were not statistically significant for the projective measure, $F(1, 72) = 4.22$, ns (working alone: $M = 2.64$, $SD = 1.45$; work in a group: $M = 3.17$, $SD = 1.62$).

We found two additional significant two-way interactions for culture in predicting self-reported motivation, although this was admittedly less relevant to the issue of interest. The first culture-related interaction involved gender. Simple effects indicated that among Jewish participants ($F(1, 122) = 4.68$, $p < .05$), females reported higher intrinsic motivation

than males (M = 4.26, SD = 1.17 vs. M = 3.83, SD = 1.09, respectively), whereas among Bedouin participants (F(1, 122) = 5.30, p < .05), males reported more intrinsic motivation than females (M = 4.84, SD = 1.08, vs. M = 4.46, SD = 1.11, respectively). The second interaction involved the sociability disposition. Tests of simple effects among Jewish participants (F(1, 122) = 1.83, ns) revealed no significant differences between low and high sociability participants (M = 3.79, SD = 1.08 vs. M = 4.57, SD = 1.01, respectively), but among Bedouin participants (F(1, 122) = 8.53, p < .01), high sociability participants reported more intrinsic motivation than low sociability participants (M = 5.26, SD = .80 vs. M = 3.67, SD = 1.17).

3.2.3 | Shyness analyses

A significant main effect was found for culture in predicting intrinsic motivation assessed via the self-report measure, but not the projective measure; specifically, Bedouin participants (M = 4.35, SD = 0.98) reported more intrinsic motivation than Jewish participants (M = 3.70, SD = 1.22).

More importantly and as expected, a significant two-way interaction emerged between shyness disposition level and work mode (shyness-frustrating vs. shyness-supporting) on both the self-report measure, F(1, 117) = 14.59, p < .01, and the projective measure of intrinsic motivation, F(1, 67) = 62.05, p < .01. Simple main effects, shown in Figure 5, indicated that, as expected, participants classified as high on shyness manifested higher intrinsic motivation in the disposition-support condition (self-report measure: M = 4.39, SD = 0.93; projective measure: M = 4.21, SD = 0.97) than in the disposition-frustration condition (self-report measure: M = 3.49, SD = 1.15; projective measure: M = 2.00, SD = 0.89) for both the self-report measure, F(1, 117) = 7.94, p < .01, and the projective measure, F(1, 43) = 37.37, p < .001. In contrast, participants classified as low on shyness showed significantly higher motivation to pursue a work mode involving "making a speech to unfamiliar peers" (self-report measure: M = 4.21, SD = 1.14; projective measure: M = 3.92,

SD = 1.03) than a work mode involving "working with familiar others with no speech," (self-report measure: M = 3.51, SD = 1.28; projective measure: M = 2.00, SD = 1.09) for both self-reports, F(1, 117) = 6.69, p < .05, and the projective measure, F(1, 43) = 25.09, p < .001.

3.3 | DISCUSSION

As predicted, a relatively strong significant interaction emerged, in all four ANOVA, between participants' salient disposition and the expected impact of the work mode chosen for participants on that specific temperament disposition. The results provide strong support for the hypotheses, in that the effects of the expected interaction were stronger than all other effects in all four analyses, and in the case of the projective measure, which may be less susceptible to self-report and impression-formation biases, it was the only significant effect. Importantly, culture and gender did not moderate the disposition by work mode interaction, again attesting to the robustness of the expected pattern. The findings that Bedouin participants reported more intrinsic motivation than Jewish ones on the self-report measure are consistent with earlier results by Iyengar and Lepper (1999) and Rudy et al. (2015), showing that parental choice results in higher intrinsic motivation in children coming from a collectivist background. However, given lack of a similar effect on the projective measure, it appears that attempts at interpretation are premature.

4 | GENERAL DISCUSSION

We examined the hypothesis that disposition-frustrating decisions have similar negative effects on Bedouin and Jewish adolescents' intrinsic motivation to participate in decision-related activities, and these negative effects are not mitigated among Bedouins when parents are perceived as responsible for the decision. The lack of cultural moderation in the case of parental decisions is consistent with the assumption that temperament-support is an autonomy-supportive experience
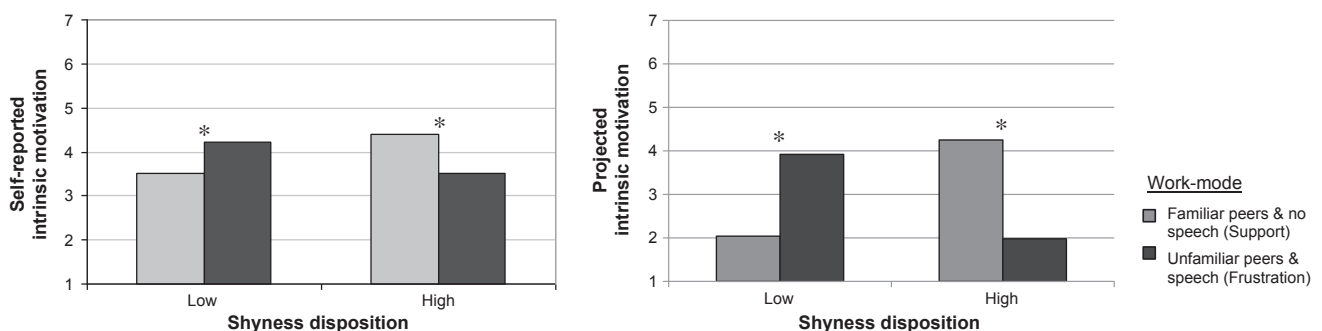

FIGURE 5 Study 2: Self-reported and projected intrinsic motivations as a function of shyness disposition level and expected work-mode.
*p < .05

that is important for adolescents across cultures, and parents' decisions which ignore or frustrate this striving are likely have negative motivational effects on adolescents also in cultures valuing obedience and respect for parental authority.

As predicted, when parents selected a work mode that frustrated their adolescent-children's shyness or sociability dispositions, adolescents showed less intrinsic motivation to participate in this work mode than in a parent-selected disposition-supporting work mode. Importantly, these effects were found for both Bedouin and Jewish adolescents, and were not moderated by culture or sex. Thus, the results of the present research suggest that adolescents' acceptance of and respect for parental authority do not mitigate the motivational costs of parental preferences that go against adolescents' shyness and sociability dispositions. Consistent with this finding, a study of early adolescents in mainland China also showed that disposition-frustrating decisions had negative motivational effects, when these decisions were made by parents (Assor et al., 2006).

The present research highlights an aspect of autonomy-supportive socialization that has not received sufficient empirical attention to date: parents' sensitivity to children's temperament dispositions. Conceptually, this kind of sensitivity can be viewed as part of the larger concept of perspective taking, one of the most fundamental components of autonomy support according to SDT (e.g., Grolnick et al., 1997). Thus, the identification of sensitivity to temperament as an important component of perspective-taking is part of an effort to develop a more differentiated conceptualization of perspective taking (see Assor, 2012, 2018). Furthermore, discussions of autonomy-supportive practices often emphasize the importance of parents' understanding and acknowledgment of their children's expressed opinions and goals (e.g., Assor, 2018; Grolnick et al., 1997; Sher-Censor et al., 2015). Our findings highlight the importance of parents' attempts to understand children's temperament-based preferences even when those are not expressed or articulated by the children themselves.

Another theoretically valuable aspect of the concept of temperament sensitivity is the link it creates with the view of the need for autonomy as the striving to act and live in ways that are congruent with one's authentic dispositions (Assor, 2018; Ryan & Deci, 2017), and the philosophical notions of autonomy and authenticity (Aviram & Assor, 2010; Taylor, 1992). From these perspectives, parents' sensitivity to their children's temperament dispositions is especially important because it helps children to accept their temperament dispositions, find ways of acting and living that are congruent with their dispositions, and sometimes willingly and reflectively try to moderate them in appropriate contexts, instead of feeling ashamed of their dispositions or denying and disowning them.

Our results indicating lack of culture moderation are inconsistent with the results of some studies showing that the effects of several aspects of parental autonomy support and control are culturally sensitive (e.g., Marbell-Pierre, et al., 2017; Qin et al., 2009; Soenens et al., 2015). For example, Qin et al. (2009) found that decision-making autonomy predicted enhanced emotional functioning more in the United States than in China. One possible explanation for the lack of a cultural moderating effect in our research may involve the more intense thwarting of basic psychological needs experienced by participants in our research.

Current theorizing in SDT (e.g., Ryan & Deci, 2017) distinguishes between need thwarting and lack of need support. For example, not allowing children to participate in classrooms that they like constitutes lack of need support. However, forcing children into classes that they clearly dislike can be conceived as need thwarting. Considerable research shows that need thwarting is more detrimental to human functioning than lack of need support (e.g., Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011). In the temperament-frustration condition in our experiment, adolescents were about to participate in an activity that would clearly and directly frustrate their personal dispositions; therefore, they likely experienced considerable thwarting of their need for autonomy. In contrast, it is not clear if Chinese participants in Qin et al. (2009) study experienced parental unilateral choice as strongly frustrating for them, because it is possible that they experienced their parents as generally sensitive to their preferences.

Beyond its contribution to the concept of autonomy support, our research identifies two specific temperament dispositions that educators and parents may do well to pay attention to: shyness and sociability. Research-based discussions of the concept of temperament "goodness of fit" during childhood or adolescence did refer to shyness-related temperament dispositions (e.g., Henderson & Fox, 1998). However, the present research is the first to highlight the importance of the disposition of sociability and the need to be sensitive to this disposition in designing and selecting activities for adolescents and children.

The findings on the negative effects of temperament-insensitivity on adolescents may also have practical child-rearing implications. Parents can be concerned that their children have temperament dispositions that are too extreme and therefore maladaptive (e.g., too shy, too active, cannot work alone and always need to be part of a group, etc.). Consequently, they may want to moderate these extreme dispositions by exposing their children to contexts requiring them to moderate their relatively extreme dispositions. For example, parents of shy children may try to expose them to contexts where they would learn to interact with unfamiliar children. This may be a reasonable parental objective, as there is some research suggesting that parents who are over-sensitive to the difficulties of their shy children and do not try to expose them to unfamiliar children, lower the chances of their children to become less shy (Rubin, Cheah, & Fox, 2001).

Given that parents may want to moderate their children's extreme maladaptive dispositions, it is possible that parents who view their children as very obedient and accommodating may think that they can choose learning or leisure contexts that go against their children's extreme dispositions, assuming that in these contexts, children will learn to regulate and moderate their extreme dispositions. Our findings suggest otherwise. Such beliefs are likely to be mistaken, leading to parental actions which may have negative motivational effects on adolescents.

Yet, parents may want to help their children to modify their extreme, and potentially maladaptive temperament dispositions. For example, a shy child with a talent and interest in some domain may benefit greatly by joining a highly advanced class of unfamiliar children sharing the same interest. By overcoming their shyness-based fears and avoidance inclinations, children may gain an opportunity to develop their interests and to develop ways to cope with their shyness in multiple contexts.

In other words, our results do not indicate that parents should not try to help their children modify extreme dispositions. Rather, consistent with the findings of SDT-based research (e.g., Assor et al., 2002; Grolnick et al., 1997; Soenens & Vansteenkiste, 2005), we suggest that in these attempts, parents should avoid using autonomy-suppressing practices and rely on various autonomy-supporting socializing practices. For example, they might first express their acceptance and understanding of their children's worries. They may then provide a rationale for gradual engagement in activities that are disposition-inconsistent while remaining open to criticism of the parents' position. They might also allow the children to choose the time, place, and specific aspects of the activity. Last, but not least, they should avoid using controlling language and behavior.

Interestingly, episodic comments made by the adolescent participants in our research indicated that some scoring high on the shyness scale felt uncomfortable with their shyness and aspired to find ways of reducing their inclination to avoid strange people or remain silent in group discussions. It is possible that if caregivers show their understanding of the fears accompanying the shyness disposition and use the autonomy-supportive practices outlined above, they will be able to help these adolescents cope with their shyness.

Our study suggests that lack of choice does not necessarily undermine adolescents' intrinsic motivation also in a Western egalitarian–individualist context (e.g., Israeli Jews), to the extent that these decisions allow the realization of adolescents' personal dispositions. This finding is consistent with the SDT notion that the essence of the need for autonomy is not making one's own choices, but having the opportunity to realize preferences that feel truly important and volitional (e.g., Katz & Assor, 2007; Ryan & Deci, 2017; Assor et al., 2019).

This SDT view of autonomy is consistent with research and theorizing by cross-cultural researchers comparing interdependent and collectivist cultures with independent and individualist ones (e.g., Markus & Kitayama, 2003; Oishi & Diener, 2001; Savani, Markus, Naidu, Kumar, & Berlia, 2010). Thus, studies have demonstrated that people from interdependent cultural contexts can feel a sense of choice and autonomy also when acting in response to strong social expectations (Miller, Das, & Chakravarthy, 2011), or when trying to attain goals that are primarily their families' goals rather than their own independent goals (Gore & Cross, 2006; Rudy, Sheldon, Awong, & Tan, 2007).

Another innovative aspect of our study is its contribution to the conceptualization of and research on the developmental notion of "goodness of fit" (Thomas & Chess, 1977). This notion assumes that children's functioning is enhanced when their temperament coincides with their environment's and/or their parents' behaviors and characteristics. Although "goodness of fit" is a well-known idea, only little research has examined this model empirically (e.g., Keogh, 1986; Lerner, 1984; Mabbe, Soenens, Vansteenkiste & De Pauw, in press).

The present study did not assess the motivational effects of disposition-frustrating (vs. supporting) decisions made by parents compared to identical decisions made by other agents (teachers, siblings, strangers, etc.). Further research may examine whether the effects observed in Study 2 will also be observed when the same choices are made by other agents. Thus, although cultural affiliation did not moderate the effects of frustrating versus supporting parental choice, it may moderate the effects of frustrating choices made by parents versus other agents.

For example, consistent with the notion of universalism without uniformity Soenens et al. (2015), it is possible that in the Bedouin culture, parental disposition-frustrating choice will have a less negative effect than an identical choice made by a young child not belonging to the large family, whereas in the Jewish culture, this effect would not occur. This is because in the Bedouin hierarchical-collectivist culture (much more than in the Jewish culture), it might be easier for adolescents to accept a frustrating choice made by high authority in-group members (parents) than by low authority out-group members (young adolescent belonging to another family). Thus, future research may show that if you want to impose on adolescents a disposition-frustrating activity, parents' choice (rather than a non-parent choice) may be the least harmful in the case of Bedouins, but not of Jews. However, even in this case, our study suggests that choice by a parent still cannot make a disposition-frustrating activity less damaging for Bedouins relative to Jews.

Our research has a number of limitations that can be addressed in future research. First, the findings suggest that decisions reflecting insensitivity to adolescents' temperament dispositions may undermine intrinsic motivation in cultures that are high on the dimension of vertical collectivism (Chirkov, Ryan, Kim, & Kaplan, 2003; Triandis, 1995). However, because we tested only two samples, we need to study more cultures that differ on this dimension. Second, as

adolescents may be especially sensitive to parental directives, future research should examine the motivational impact of parental insensitivity to temperament in older and younger people. Third, future research may examine the effects of frustration of temperament dispositions other than those examined in the present study. Fourth, we did not examine the effects of actual parental choice of temperament-frustrating versus temperament-supporting work mode. Future research could do so. Fifth, there is considerable evidence that Bedouin adolscents endorse higher levels of deference to parental authority than Jews, direct measurement of this orientation is desirable.

In conclusion, the present research highlights the importance of an aspect of parental autonomy support that was not examined until now: sensitivity to children's temperament dispositions. Specifically, the two studies underscore the role of sensitivity to adolescents' shyness and sociability dispositions as a determinant of adolescents' intrinsic motivation. Therefore, it seems that parents who are interested in enhancing their children's intrinsic motivation to participate in parentally valued activities would do well to be sensitive to their children's temperament dispositions. Furthermore, our research suggests that belonging to a culture showing great deference to parental authority does not mitigate the negative effects of parents' insensitivity to their children's temperament dispositions.

CONFLICT OF INTEREST
The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.