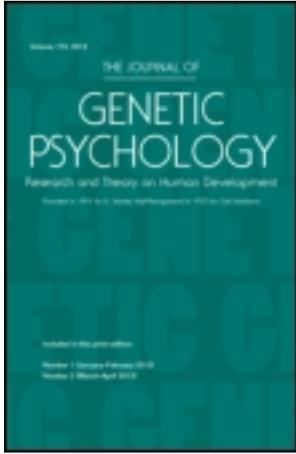


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ABSTRACT. The authors present the initial validation of a romantic relationship motivation scale, enabling the level of self-determined involvement in romantic relationships during adolescence to be examined. The inclusion of Self-Determination Theory (E. L. Deci & R. M. Ryan, 2000) in the motivational constructs enhances the developmental perspective regarding adolescent romantic involvement. The scale was administered to 284 adolescents (163 girls and 121 boys, age 14–19 years) with a self-esteem scale and some questions about their romantic experiences to provide some elements of external validation. The results confirmed the 4-factor structure: intrinsic motivation, identified regulation, external regulation, and amotivation, which follow the self-determination continuum, previously highlighted in friendship motivation. As hypothesized, adolescents became more self-determined with age and girls were more self-determined than boys. Other findings show specific links between motivation for romantic relationships, self-esteem and romantic experiences. It highlights the importance of considering adolescents' motivations when exploring their romantic relationships.

Keywords *affective development, assessment, gender differences, motivations, romantic relationships, self-determination*

Many scholars acknowledge that the development of romantic relationships is a normative developmental task in adolescence, which is part of identity construction and contributes to ulterior social functioning (Sullivan, 1953; Zani, 1993). Over the last decade, numerous studies have investigated adolescent romantic relationships. However, many of these have focused on interpersonal aspects such as the selection and socialization effects of the romantic partner or proximal processes in the dyad (e.g., Welsh & Shulman, 2008). The development of romantic relationships during adolescence, however, also depends on intraindividual processes, such as perceptions,

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beliefs or motivations. Motivation is deeply linked to the self and both are recognized as being central in explaining romantic behavior (Sanderson & Cantor, 1995). In adolescence particularly, the question of motivation to enter into a romantic relationship therefore appears crucial. During adolescence, motivation develops with age but differ with some other factors, as suggested by different scholars.

The Developmental Process in Orientation Toward Romantic Relationships

Brown's (1999) seminal work identifies four basic phases of orientation toward romantic relationships. His model emphasizes a developmental trend: the first step is called initiation. The basic goal when establishing a romantic relationship is based on self needs: to gain confidence in one's own achievements to date and to integrate this new ability into the self. The second stage is status, which includes more social concerns. Current or potential partners could serve social objectives in the peer group by gaining status and enhancing social image. In the third phase, known as affection, the adolescent's orientation shifts the relationship and its characteristics away from the peer context replacing this with emotional and sexual concerns. Finally, in the last bonding step, the adolescent's preoccupation will turn toward commitment. This mature phase of getting involved with somebody leads the adolescent to integrate multiple aspects of: emotions, sexual desire, and also the possibility of long-term commitment, regarding their partner's and their own characters.

Romantic relationships during adolescence could therefore be regarded as being driven by several motivations encompassing different needs or systems, as suggested by Furman and Wehner (1994): biological (sexual-reproductive), affiliative, attachment, and caregiving. Thus, biological needs could drive motivations to get involved in a romantic relationship early on in adolescence. For example, Lam, Shi, Ho, Stewart, and Fan (2002) demonstrated that early-maturing girls date earlier than late-maturing girls. The romantic relationship could also satisfy the affiliative system (i.e., the need to be connected) at an early stage. This could explain why adolescents mention support and companionship as advantages of being involved in a romantic relationship (Furman, Ho, & Low, 2007). The other two systems, attachment and caregiving, are involved later on, when a committed relationship starts to develop and the partner becomes an attachment figure (Furman & Wehner, 1994). Numerous other goals have been proposed including socialization, recreation, and reducing uncertainty (Ott, Millstein, Ofner, & Halpern-Felsher, 2006; Smiler, 2008) Among them, three appear to describe the most common reasons given for dating: identity, intimacy, and social status. They have recently been validated in a scale by Zimmer-Gembeck, Hughes, Kelly, and Connolly (2012). Although the terms used to describe these goals encompass the dating motivations proposed in Brown's (1999) model, it downplays the developmental aspect put forward. This could be because these goals have always been investigated in older adolescents and young adults. We thus propose to focus on a younger population, including midadolescence. In addition, the developmental trend could be highlighted by the inclusion of Self-Determination Theory (SDT; Deci & Ryan, 2000). By combining both theories places integrating the origin of the romantic behavior within the self as a central feature and enables hypotheses about adolescents' well-being and consequences of their behavior to be postulated.

The Self-Determination Continuum in Romantic Relationship Motivation

SDT has been empirically supported for instrumental goals: academic (Vallerand, Pelletier, Blais, & Brière, 1992), sport and leisure (Pelletier, Vallerand, Green-Demers, Brière, & Blais, 1995). Less traditionally, SDT has also been applied to interpersonal goals: in child friendships (Richard & Schneider, 2005) or in adult romantic relationships (Blais, Sabourin, Boucher, & Vallerand, 1990). However, the validity of the tool used by Blais et al. has not been tested. Our study therefore proposed to fill this gap, for the period of adolescence. The key construct of SDT is the self-determined continuum of motivation. Individuals could start an activity due to external pressure (avoiding punishments or gaining rewards) and maintain it by appropriating the motive. The behavior is freely and intrinsically determined when the individual pursues the activity for its own worth (Deci & Ryan, 2000). This idea is in line with Brown's (1999) developmental view about adolescents' romantic motivations.

Before reaching intrinsic motivation, three levels of extrinsic motivation exist, depending on the individual's perception of behavioral control: external, introjected, or identified. External control occurs when individuals exhibit behaviors to obtain rewards or to avoid punishment (material or social). In romantic relationships, an adolescent could engage with a partner for material gifts (e.g., be offered a snack or taken to a movie). In the social area, Brown's (1999) model suggests that adolescents' romantic involvement is strongly linked to peer pressure (status phase). Introjected regulation is the first step toward internalization. Individuals display behaviors because of feelings of duty. They incorporate the former social pressure and feel culpability or shame when they do not show the behavior. Introjected regulation also occurs when behavior is pursued for other internal mechanisms, such as self-enhancement (Vallerand et al., 2003). Brown suggested that involvement in romantic relationships could be based on its contribution to the self, by providing a sense of prestige and success, and is typical during early adolescence. Even later on, the romantic relationship could be pursued to fulfill some other needs (impressing others, maintaining social status; Kelly, Zimmer-Gembeck, & Boislard, 2012; Smiler, 2008). Finally, identified regulation occurs when the external (social) regulation is totally accepted. People recognize the importance of behavior in the social context, without feelings of duty or shame. They control themselves freely to exhibit appropriate behavior. This would lead the adolescents to consider romantic relationships as crucial in their identity development and to acknowledge them as an important developmental task. Among goals that have been described previously, adolescents appear to acknowledge they have a particular urge to enter sexual activity (Ott et al., 2006).

In the last phase of the continuum, adolescents engage in romantic relationships for intrinsic reasons. They become invested in the relationship for itself and for the pleasure they get from it. In fact, romantic relationships could fulfill several needs despite being inherent to this kind of relationship. The theory of love in adulthood (Sternberg, 1986) suggests that love includes three dimensions: intimacy, passion (sexual desire), and commitment. These dimensions coincide with some adolescents' romantic goals: intimacy, love, and companionship (Kelly et al., 2012; Ott et al., 2006; Smiler, 2008). The phase of bonding in Brown's (1999) model suggests that these concerns occur particularly in late adolescence. However, empirical evidence shows that they could occur relatively early. Indeed, many midadolescents rate companionship as central in their dating relationships. At 15 years old, they simply like to hang out and to do things

together (Feiring, 1996; Ott et al., 2006). Then, the intimacy dimension is known to develop with age in romantic relationships as in friendships (Collins, 2003). At the end of adolescence, the romantic partner becomes central and this relationship is seen as the most supportive and intimate (Simon, Bouchev, & Furman, 2000). Finally, the passion dimension (sexuality) would develop with age. Once puberty has started, sexual desire could drive adolescent behavior toward the partner, leading generally from a phase of kissing to sexual intercourse. In this phase, sexuality is not pursued for discovery but as a means to promote the romantic relationship.

Finally, SDT suggests that some adolescents would not be motivated to get involved with a partner because of lack of sexual needs and few social concerns. Thus, they would show no interest in romantic relationships. This would occur particularly during early adolescence, when biological needs and peer pressure linked to romantic relationships would be weak.

Age and Gender Differences in Self-Determined Motivation

Both conceptual frameworks (SDT and developmental models) would suggest that age differences would be observed in motivational development toward romantic relationships. Whatever the type of intrinsic motivation involved, the literature suggests that these motivations would be greater at the end of adolescence. The opposite is true for younger adolescents who would engage in romantic relationships with more extrinsic motivations, influenced by peer pressure or a desire to behave in an adolescent way.

Self-determination levels of motivation also demonstrate gender differences. Girls are commonly described as being more intrinsically motivated than boys, in academic work (Vallerand et al., 1992) or in sports (Fortier, Vallerand, Brière, & Provencher, 1995). In romantic relationships, girls would also show more intrinsic motivation, reporting more commitment (Kuttler & La Greca, 2004; Ott et al., 2006). In addition, the sexual double standard invites girls to claim an interest in romance, characterized by intimacy and commitment, rather than in sexuality (Sahl & Keene, 2010).

Potential Correlates of Romantic Relationship Motivation

In addition to intraindividual changes with age, some adolescents could have different motivational trajectories toward romantic relationships because of other developmental aspects, such as self-perceptions or romantic experiences. Motivations are recognized to be dimensions of the self (Deci & Ryan, 2000). Thus, romantic relationship motivation would share links with other self-dimensions, such as global self-esteem, but also with the social one. Brown (1999) and Zani (1993) postulated that the continuation of romantic relationships is largely linked to the search for status gain in a peer network, which would have a role of self-enhancement. This suggests that extrinsic motivation toward a romantic relationship would be related to a lower social self-esteem. It would be more pronounced in older adolescents who pursue this goal, while their counterparts would exhibit more intrinsic motivations (intimacy). The discrepancy in romantic timing would decrease their self-perceptions (Davila, 2008).

Moreover, previous studies have shown that romantic involvement is linked to feelings of general self-worth (Connolly & Konarski, 1994). Similarly, SDT suggests that every activity

carried out for its own worth provides positive emotions and feelings of self-worth as the activity becomes an integral part of the identity (Vallerand et al., 2003). Thus, adolescents with strong involvement, driven by intrinsic motivations, would also have a greater global self-esteem. As motivation becomes intrinsic with age, these links would become stronger in late adolescence.

As motivation is important in determining behavior in initiation, maintenance, or break-up stages (Deci & Ryan, 2000), its level of self-determination would lead to involvement in different kinds of romantic experiences. These experiences could also shape the ulterior motivations toward romantic relationships. A wide range of romantic experiences could be experimented during adolescence; each involving different romantic and sexual intensities (Boucheay & Furman, 2003). Some may only be concerned with emotions, for example passionate friendships or crushes on a movie star, while others may only focus on sensual practices such as casual dating (Furman et al., 2007). One type of behavior could also include different realities. For example, most adolescents had gone steady before the age of 14 (Zimmer-Gembeck, 2002). However, this could have been just for fun without emotional investment (Médico & Levy, 2005). Finally, sexual intercourse generally occurred before graduating from high school (70% by the age of 18 years; Zimmer-Gembeck & Helfand, 2008), when adolescents are emotionally involved with their partner and suggested that this experience includes romantic and sensual feelings. These different practices could be rooted in the motivation toward romantic relationships. We expected that kissing for fun would be linked to extrinsic motivations; this experience would be a mean to convince oneself to be able to find someone (Brown, 1999). On the other hand, kissing for love and sexual intercourse during late adolescence would be linked to intrinsic motivation (emotional concerns and commitment). As commitment would sustain the orientation toward intrinsic motivation, the length of the romantic relationship would also matter. Furthermore, the onset and the number of each kind of romantic experience could be related to the romantic motivations. For this reason, these links were explored.

To summarize, the aim of this study was to develop and validate a scale measuring romantic relationship motivation during mid and late adolescence, based on the self-determination theory (Deci & Ryan, 2000). We aim to provide some elements regarding internal validity through structural equation modeling. The external validity was explored by examining the motivational development with age and gender, and the links between romantic relationship motivations and self-esteem and romantic experiences.

METHOD

Participants

A group of 284 adolescents including 163 young women (57.39%) were recruited to participate in this data collection. They were between 14 and 19 years old (M age = 16.78 years, SD = 1.47 years) and lived in an urban area in France. They attended a junior high and two high schools. One of the high schools provided general teaching preparing for higher education, while the other provided vocational training. The impact of these different school environments on romantic motivations could therefore be explored. This research was conducted in respect of the rights and dignity of the participants: participants were informed about the purpose and the procedure of the research (duration and nature of the tasks) and they gave their informed consent. Parental

consent was obtained for adolescents under the age of 18 years. The study design was approved by the educational institution and ethical aspects were taken into account: the questionnaires were adapted according to the age of the students (see subsequent sections).

Procedure

The questionnaires were administered collectively during the school schedule. The data collection took about 45 min. Once the aim of the study had been presented, the adolescents were invited to fill out their questionnaire individually and to ask for help if need be. They answered the romantic motivations and self-esteem scales on a Likert-type scale ranging from 1 (*not at all*) to 5 (*completely*). Both scales were counterbalanced for half of the questionnaires.

Measures

Development of the Romantic Motivation Scale

The preliminary items of the questionnaire were developed from pilot interviews. Four 16-year-old adolescents and five undergraduate students (18 years old) were interviewed individually by a research assistant and Cécile Kindelberger. The semistructured interview asked them to recollect their initial and subsequent dating relationships and to consider why they initiated and maintained those relationships. The content analysis revealed different kinds of motivations. The adolescents' responses were then used to generate items, by applying the conceptual meaning of each form of self-determined motivation. This preliminary version of the questionnaire was proposed to a first group of 369 older adolescents (209 girls, 56.6%), whose ages ranged from 15 to 19 years, from two urban and two rural high schools. The procedure was similar to that described above. The general instruction for each item asked adolescents "Why did you/will you get involved in a romantic relationship?" whether they had already had a relationship or not.

To identify the best factorial structure of the Romantic Motivation Scale (RMS), a principal components factor analysis with oblique rotation was conducted. The simultaneous consideration of the scree test and psychological pertinence of the factorial structure obtained indicated the superiority of the four dimensions solution. This solution explained 46% of the total variance of the questionnaire. The four factors were: intrinsic motivation (to intimacy and companionship, Cronbach's $\alpha = .85$), identified regulation (need for sexual practices, Cronbach's $\alpha = .84$), external motivation (peer pressure and self-enhancement, Cronbach's $\alpha = .77$), and amotivation (Cronbach's $\alpha = .77$). After this initial development, the scale was modified slightly. This preliminary result indicated that certain items should be removed because of dual or no saturation. The remaining items were not evenly divided between the four dimensions. In order to propose a more balanced scale, the items that were less representative or with weak statistical indexes (e.g., skewness) were removed. This resulted in a parsimonious scale with 20 items (five per dimension; see Table 1). The factorial structure of this new version was analyzed for confirmation and validation in the present study. We have provided some commentaries about the evolution of the romantic motivation scale in the discussion section.

TABLE 1
Final Version of the Romantic Motivation Scale With 20 Items

Amotivation

- All things considered, it's better to stay alone
- I can't see the point of dating someone
- I wouldn't get anything out of a romantic relationship
- I think that looking for a partner would be a waste of time

External regulation

- I don't want to appear uncool
- The others would laugh at me if I had never gone steady with someone
- All my friends are involved in romantic relationships
- You are expected to go to parties with a boy/girl friend

Identified regulation

- It's important to discover what a boy/girl is like
- It's a way to find out about physical feelings
- It's practice for future romantic relationships
- Adolescence is the best time to share "erotic sensations" with someone

Intrinsic regulation

- It provides someone to share my feelings with
 - We are on the same wavelength
 - It provides someone to share cool activities with and who I feel at ease with
 - It makes me happy to be committed to someone
-

Self-esteem

Social and global self-esteem were assessed using a French scale designed to measure adolescents' global and specific self-esteem (social, professional, academic, in the family and physical; Kindelberger & Picherit, 2014), inspired by Harter's Self-Perceptions Profile for Adolescents (SPPA; 1988). The total scale contains 42 items, half of which were reversed. Each subscale contains 7 items. This scale presents a satisfactory fidelity, with test–retest correlations (at an interval of one month) ranging from 0.65 to 0.81. Both subscales used in this study had good internal homogeneity (Cronbach's $\alpha = .82$) for global self-esteem ("I'm mostly happy with what I am") and alpha value of .72 for social self-esteem ("I'm at ease with people of my age," reverse item).

Romantic experiences

Romantic experiences were rated using several questions about the onset of adolescents' romantic experiences, used by Lagrange and Lhomond (1997) and similar to those described in Smiler (2008). The adolescents were asked if they had ever kissed someone for fun (a) kissed someone for love, (b) and had sexual intercourse, (c) They answered each question with either "yes" or "no." For each romantic experience, they also reported the age of their first experience and the number of such experiences they had had. Finally, they were asked if they were currently engaged in a romantic relationship and if it was the case, how long it had lasted for. In order to respect ethical concerns raised by the Educational Institution, the younger adolescents (Grade 3 [France]/Grade 9 [United States]) did not reply to the question about sexual intercourse.

RESULTS

Factorial Structure Confirmation

Structural equation modeling with AMOS 5.0 (Arbuckle, 2003) was used to confirm the goodness of fit of the four-factor model to the data. Goodness of fit indexes were satisfactory, after entering four correlations between error covariances, saturating the same dimension (one in the identified regulation factor and three in the extrinsic factor): $\chi^2(1.682)$, root mean square error of approximation = .043, adjusted goodness of fit index = .903, and comparative fit index = .805. The internal consistency of each subscale remained satisfactory, the Cronbach's alphas were .77 for amotivation, .84 for extrinsic motivation, .76 for identified regulation, and .85 for intrinsic motivation. Moreover, the structural invariance of the RMS was tested by computing a confirmatory factor analysis for multiple groups. The results indicated that there were no differences in the number of factors and their patterns of interrelationships either between boys and girls, $\chi^2(16) = 27.115$, $p = .582$, or between age groups (mid vs. older adolescents), $\chi^2(16) = 12.939$, $p = .677$. The strength and the direction of the correlations between the four dimensions (see Table 2) highlighted that the romantic relationship motivations follow the self-determination continuum as previously observed in schoolwork (Guay, Mageau, & Vallerand, 2003), leisure activities (Pelletier et al., 1995), and also in friendship (Richard & Schneider, 2005).

The factorial structure suggested that a single motivational score could be computed, reflecting the degree of sense of autonomy. This procedure is typically performed in self-determined motivation studies because this computation enables the general trends of each factor to be summarized (Blais et al., 1990; Grolnick & Ryan, 1987; Richard & Schneider, 2005). Furthermore, this index has the advantage of considerably reducing the number of variables required to represent the evolution toward more intrinsic motivation. This self-determination index (SDI; also named Relative Autonomy Index) was obtained by assigning weights to each subscale and then adding these scores. The formula used was that of Grolnick and Ryan: $SDI = (2*IM) + (1*IRM) - (1*EM) - (2*AM)$. Higher SDI values indicated greater self-determined motivation. The validity and the reliability of this score have been confirmed in a number of previous studies (Guay et al., 2003; Markland & Ingledew, 2007).

TABLE 2
Correlations Among the Four Dimensions of Romantic Relationship Motivations

	<i>IM</i>	<i>IR</i>	<i>EM</i>
Intrinsic Motivation (IM)	—		
Identified Regulation (IR)	.44****	—	
Extrinsic Motivation (EM)	.07	.24****	—
Amotivation	-.57****	-.37****	.04

Note. $N = 284$.

**** $p = .0001$.

Self-Determined Romantic Relationship Motivation: Age and Gender Effects

To examine the age effect, the variable was used as nominal in order to run an analysis of variance on the four groups (the last group of 17-year-olds also included a few older adolescents of 18 and 19) crossed with gender. For the sake of readability, the results presented here were those with SDI, reflecting self-determined motivation, as the dependent variable.

The results revealed a significant effect for gender, $F(1, 284) = 9.82, p = .002, \eta = .31$, and age, $F(3, 284) = 10.23, p = .0001, \eta = .56$, while the interaction between the two was not significant, $F(3, 284) = 2.14, p = .10$. As shown in Table 3, girls had greater self-determined romantic relationship motivation than boys. The important age effect showed that the adolescents switched from extrinsic to intrinsic romantic relationship motivations with age. This pattern of results was similar to those found by the multivariate analysis of variance (MANOVA) compiled with each kind of romantic motivation as the dependent variables: gender effect $F(4, 272) = 8.23, p = .0001, \eta = .25$; age effect, $F(12, 719) = 4.42, p = .0001, \eta = .31$; and no interaction. The univariate results of this MANOVA highlight that the age effect occurred for all four romantic motivations, while the gender effect was only for intrinsic and extrinsic motivations (there were no differences between boys and girls in identified regulation and amotivation). Finally, we tested the scholarship effect, opposing adolescents in general teaching to those in vocational training, by controlling for age. No difference was observed $F(1, 190) = 2.16, p = .14$.

Self-Determined Romantic Relationship Motivation and Self-Esteem

Some correlations were computed to examine the links between global and social self-esteem, and motivations. To include the moderator effect of age, the sample was divided into two groups: mid (14–15 years old) and late (16 years old and older) adolescents.

The correlations corresponded partially to our expectations. In late adolescence, greater self-determination was related to higher levels of both self-esteem dimensions ($r = .18, p = .019$ for global self-esteem; $r = .22, p = .01$ for social self-esteem). In mid adolescence, greater self-determination was also related to higher social self-esteem ($r = .33, p = .0001$), but no link

TABLE 3
Means of Self-Determined Index, by Age Level and Gender

Age level (years)	N	Boys		Girls	
		M	SD	M	SD
14–15	47	4.07	2.92	6.69	2.18
15–16	60	4.74	3.90	4.74	4.39
16–17	88	6.49	2.65	6.97	2.60
17+	88	6.49	3.59	8.14	2.03

Note. Because of the Self-Determined Index formula, the product could range from -8.14 to 11.40 .

TABLE 4
Contributions of Romantic Relationship Motivations to Romantic Experiences

	<i>Kissing for fun</i>		<i>Kissing for love</i>		<i>Sexual intercourse</i>	
	<i>OR</i>	<i>99% CI</i>	<i>OR</i>	<i>99% CI</i>	<i>OR</i>	<i>99% CI</i>
Intrinsic motivation	0.57*	[0.29, 1.10]	0.86	[0.44, 1.69]	0.97	[0.43, 2.19]
Identified regulation	2.56***	[1.54, 4.26]	1.33	[0.79, 2.21]	1.61*	[0.88, 2.95]
Extrinsic motivation	0.85	[0.51, 1.44]	0.71	[0.42, 1.21]	0.33***	[0.16, 0.70]
Amotivation	0.59*	[0.34, 1.02]	0.38*	[0.22, 0.68]	0.41***	[0.19, 0.88]

Note. The independent variable sexual intercourse was not obtained for adolescents in Grade 3 (France; Grade 9, United States). OR = odds ratio.

* $p < .05$. *** $p < .001$.

appeared with global self-esteem ($r = .08, p = .37$). As expected, once adolescents identified and incorporated the origins of their behaviors they had greater social and global self-esteem.

Romantic Relationship Motivations and Romantic Experiences

In this part, the four kinds of motivations were examined individually in detail to determine the specific links of each with the different romantic experiences (kiss for fun, kiss for love, and sexual intercourse). The unique contribution of each romantic motivation was compared between adolescents who had had romantic experiences and those who had not using binary logistic regressions. Odds ratios (ORs) were calculated to approximate relative probability of having engaged in each romantic experience and are presented with 99% confidence intervals. 146 adolescents had already kissed someone for fun (57.9%), 195 had kissed someone for love (75.5%) and 102 (of 186) had had sexual intercourse (54.8%). In a first phase, we verified if age and gender would predict these different romantic experiences. Gender was never a significant predictor, whereas age was significant for kissing: kiss for fun (OR = 1.03, 99% CI [1.01, 1.04], $p = .0001$) and kiss for love (OR = 1.02, 99% CI [1.00, 1.04], $p = .01$). The subsequent analysis included age as a covariate in order to control for its influence.

As reported in Table 4, amotivation contributed to reducing the probability of having engaged in all romantic experiences (ORs < 1.00). Identified regulation increased the probability of having kissed someone for fun, whereas intrinsic motivation lessened this probability. Identified regulation also contributed to increasing the probability of having had sexual intercourse, whereas extrinsic motivation reduced it (ORs > 1.00; see Table 4).

Finally, we explored the links between romantic relationship motivations and the age of onset and number of each romantic experience, using correlations. For ease of presentation and interpretation, the results are presented with the SDI—showing the degree of self-determined motivation. There was no significant correlation between the number of experiences and self-determined motivations, whereas the age of onset showed some correlation. Significant correlations highlighted that greater self-determined motivation is negatively linked to early onset of kissing for fun ($r = -.19, p = .01$) and positively linked to delayed onset of kissing for love ($r = .14, p = .05$). The length of the relationship was also positively related to self-determined motivation ($r = .18, p = .01$).

DISCUSSION

As described by different scholars (e.g., Brown, 1999; Ott et al., 2006; Smiler, 2008), adolescents can engage with a partner in different ways, but until now few tools had been developed to assess this, particularly during mid and late adolescence. To date, none has aimed to focus on the developmental stage of romantic involvement. A romantic relationship motivation scale was created, applying the self-determination continuum (Deci & Ryan, 2000). This conceptualization should enable the interindividual differences in romantic involvement of adolescents to be assessed and also the developmental trend in motivations to be verified, with a shift from an extrinsic to an intrinsic perspective. Moreover, it suggests that adolescents' self-determined level of motivation influences what kind of romantic experiences they engage in.

Psychological Significance of the Four Factors of Romantic Motivation

A structure with four factors emerged in the preliminary study and was confirmed and replicated across gender and age group thereafter. According to the correlational structure, each factor follows a self-determination continuum: amotivation, external regulation (social and self-preoccupations), identified regulation (urge to discover sexuality), and intrinsic motivation (to intimacy and companionship). The structure and its interpretation are in line with what Richard and Schneider (2005) identified for motivation toward friendship. Overall, these results suggest fewer factors can be identified in relational motivation compared to those involved in activities like schoolwork (Grolnick & Ryan, 1987; Guay et al., 2003). The particular structure of motivation and the theoretical basis of external regulation vary according to the domain involved. Compared to other activities that are imposed by parents or institutions, adolescents cannot be forced to have a friend or a partner. Thus, adolescents cannot endorse total extrinsic relational motivations (in either friendship or romantic relationships). Furthermore, to date somebody only for money or gifts would appear socially unacceptable, even manipulative and mean, resulting in the formation of an extrinsic motivation factor that highlights social and personal rewards. Our study shows that a four-factor structure is typical of adolescence. This could change with age, as Blais et al.'s (1990) study of adult romantic relationships suggested more motivational dimensions, although internal validity of their tool has not been tested.

The intrinsic romantic relationship motivation emphasizes the emotional and companionship aspects of the relation and downplays the sexual side. For adolescents, emotions and sexuality appear largely disconnected. Miller and Benson (2010) postulated that emotional regulation develops earlier in other relations, especially with best friends. Thus, emotional sharing and companionship are less troublesome than sexuality in a romantic relationship. This may contribute to separating sexuality and emotion.

Reference to sexuality constitutes a single factor, referred to as identified regulation, as adolescents stressed the desire to discover sexual practices. Similarly to the proposals of Claes (1993) and Zani (1993), adolescents acknowledge sexual discovery as a developmental task. This factor describes the adolescents' desire to have sexual experiences because they are they are an integral part of normal adolescence (Ott et al., 2006).

SDT suggests the existence of a factor of amotivation, and the construct emerged in the initial interviews when older adolescents were invited to recollect their state of mind at the onset of their

romantic experiences. This factor is not traditionally described in the developmental literature but should be taken into account, as it could be linked with psychosocial difficulties (discussed subsequently).

Finally, the conceptual framework of this tool focuses on the way adolescents determine their romantic behavior. In addition to the goals adolescents give priority to when they are in a romantic relationship (Zimmer-Gembeck et al., 2012), this tool considers the integration of the origin of the adolescents' engagement in romantic relationships that evolves with age.

Developmental Trend and Gender Differences in Romantic Motivation

Our findings show a strong effect of age on the SDI, suggesting that the motivation toward romantic relationships becomes intrinsic with age. In addition to the self-determination theoretical framework (Deci & Ryan, 2000), this result also supports Brown's (1999) model of the development of romantic relationships. Preoccupations about peers' opinions, his or her own status, and self-enhancement shift with age to focus more on the advantages offered by the relationship: emotional support, companionship, and possible commitment.

As expected, girls described themselves more intrinsically motivated toward romantic relationships than boys. Previous results showed similar findings, with girls describing more intimacy and identity goals than boys (Ott et al., 2006; Zimmer-Gembeck et al., 2012). As in other domains, (schoolwork, Guay et al., 2003; Vallerand et al., 1992; or leisure activities, Pelletier et al., 1995), girls tend to show greater intrinsic motivation than boys. Girls would appear to identify and integrate social norms in their behavioral regulations whatever the domain. Other explanation could underlie this gender differences in romantic relationship: Society also expects girls to be involved in a relationship for the emotional bonds rather than to pursue it for sexual reasons (Miller & Benson, 2010; Sahl & Keene, 2010).

Motivation, Self-Esteem, and Romantic Experiences

The pertinence of the scale, applying the self-determined continuum to romantic motivation, is also supported by the specific links of the four motivation factors with self-esteem and romantic experiences. In line with our suppositions, older adolescents with low global and social self-esteem endorsed greater extrinsic motivation. While this motivation is widespread in early adolescence, the older adolescents who continue to seek social- and self-enhancement would be those who are trying to improve their low self-esteem. Between the ages of 15 and 17 years, most adolescents have at least experienced kissing (average age of 14 years in France, Lagrange & Lhomond, 1997; 225 of our participants had already experienced kissing [79%]) and started to consider engaging in sexual intercourse (Zani & Cicognani, 2006). This result supports the idea that the achievement of developmental task at the right time in adolescence has a protective effect (Davila, 2008). Thus, adolescents claiming less self-determined motivation for romantic relationships would be those who encountered difficulties in these. The lack of interest claimed toward romantic relationships would avoid having to admit potential failure in this domain and could be due to a lack of any experience. This idea is partially supported by the results concerning romantic relationship motivation and romantic experiences. In general, adolescents who said they had not had any

romantic experiences (kissing or sexual intercourse) endorsed more motivation. Furthermore, additional statistical analyses showed that the lack of romantic experiences was associated with lower self-esteem. Unfortunately, these interpretations are hypothetical and a longitudinal study is required to investigate them in greater depth.

Analysis of each type of motivation indicates specific links with romantic experiences. Adolescents who had experienced kissing for fun and those who had had sexual intercourse tended to endorse identified regulation motivation. In other words, their motivation to discover erotic and sexual aspects would drive them to subsequent practices. In addition, adolescents who had experienced sexual intercourse, at least once, described themselves as being less extrinsically motivated, suggesting that the majority of adolescents start sexuality freely, through self-determined motivation. Thus, adolescents conform to Western norms, whereby romantic feelings, affection, and a minimum level of commitment develop before having sex (Moore & Rosenthal, 2006). Finally, intrinsic motivation played a role in specifically reducing the behavior of kissing for fun and postponing the onset of kissing for love. It suggests that this motivation slows down the exploration of romantic practices. Possessing this motivation would lead the adolescent to search for the right person with whom to commit durably. This is also supported by the positive link between self-determined motivation and length of the current romantic relationship.

Because of the transversal design of our study, this explanation remains hypothetical and the opposite is also possible: once adolescents have had romantic experiences, their motivations become more self-determined. Motivations would determine behavior toward romantic relationships, but could also depend on the success or failure in previous romantic experiences, as suggested in the self-determined theory (Deci & Ryan, 2000). Overall, the findings about romantic relationship motivation and romantic experiences show that they both develop in the same way, shifting toward greater commitment at the emotional and behavioral level (Brown, 1999; Zani, 1993).

Several limitations of this study should be addressed. First, the previous speculative assumptions highlight the limits of a transversal design. A longitudinal study would provide a better means of determining the link between romantic relationship motivation development and age, by focusing on intraindividual changes. Moreover, this link was not investigated in depth in our study due to the lack of early adolescents in the sample. A longitudinal approach and a larger sample size would enable greater understanding of this subject. Furthermore, the use of questionnaires limits access to deep motivations. Social desirability influences responses to questionnaires, and has even greater effects when dealing with relationship matters. This could explain why total extrinsic motivation, such as going out with somebody for gifts or money, failed to be identified. Finally, external validity needs to be explored further including some other aspects of adolescent romantic development (attachment processes, cultural backgrounds). Convergent and divergent validity could also be explored by comparing this tool with the newer version, developed by Zimmer-Gembeck et al. (2012).

This romantic motivation scale could be extremely useful to understand better romantic development, especially during adolescence. Its conceptual framework, combining developmental theory and SDT, shed light on the origin of romantic behavior, which is integrated in the identity to a greater or lesser degree. Romantic experiences should be regarded not only on their own, but also for the intrinsic or extrinsic concerns that drive them. This scale could thus be a means to examine deeper the link between romantic experiences and self-esteem and depression (Davila,

2008). It could also be useful to examine self-determined motivation in the area of sexual behaviors, particular in forced sex. When an adolescent's romantic relationship fulfils some other needs (e.g., ego needs), a sexual relationship could occur between adolescents, even though one partner did not really accept it. Rape in dating relationships or psychological maltreatment by romantic partners (Gallaty & Zimmer-Gembeck, 2008) could be in part explained by extrinsic romantic relationship motivations in one or both partners. In summary, the romantic relationship motivation scale developed in this study offers promising findings, despite the need for further validation. It is a tool that could be used to incorporate intraindividual characteristics into studies about romantic relationships.

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AUTHOR NOTES

Cécile Kindelberger is interested in peer relationships (popularity, friendships and romantic relationships), especially during adolescence. They are considered as proximal processes contributing to social and emotional development, but also shaped by personal characteristics. **Raphaële Tsao** is interested in emotional and cognitive development, especially for disabled children and adolescents. Social relationships are taken into account to understand the well-being (or quality of life) and to examine the risk for subsequent psychopathology.

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