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Self- and Not-Self-Determined Solitude: French Version of the Motivation for Solitude Scale

Gérald Delelis[1]

[1] *SCALab, Université de Lille, Lille, France.*

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Corresponding Author: Gérald Delelis, Université de Lille, Site de Pont de Bois, Département de Psychologie, SCALab, BP 60149, F-59653 Villeneuve d'Ascq Cedex, France. Phone: (0033)320416955. Fax: (0033)320416324. E-mail: gerald.delelis@univ-lille.fr

Abstract

Thomas and Azmitia (2019, https://doi.org/10.1016/j.adolescence.2018.11.004) proposed a short version of the Motivation for Solitude Scale. They tested this short form using a population of emerging adults and adolescents and they presented both the psychometric characteristics of this scale and its links with several adjustment factors. The aim of this study was to propose a French version of this scale. We translated this scale in French and tested it using a population presenting a larger range of ages and sociodemographic characteristics (N = 268). We also used a measure of anxiety-depression and a scale of emotional competences. This French version showed factor loadings and scores similar to those of the original version and has satisfactory psychometric properties. We discuss the properties of this short scale and the links between its scores and the scores on the additional measures, and finally we propose several leads for its use.

Keywords

solitude, self-determined motivation, not self-determined motivation, scale, French version

Résumé

Thomas et Azmitia (2019, https://doi.org/10.1016/j.adolescence.2018.11.004) ont proposé une version courte de l'échelle de motivation à la solitude [*the Motivation for Solitude Scale*]. Elles ont testé cette version courte auprès d'une population d'adolescents et de jeunes adultes et ont présenté à la fois les propriétés psychométriques de cette échelle et ses liens avec plusieurs facteurs d'ajustement. L'objectif de cette étude est de proposer une version française de cette échelle et de tester ses liens avec une mesure d'anxiété-dépression et une échelle de compétences émotionnelles. Nous avons traduit cette échelle en français et l'avons testée auprès d'une population présentant une large étendue d'âges et de caractéristiques sociodémographiques (N = 268). Cette version

française montre des poids factoriels et des scores similaires à ceux de la version d'origine et a des propriétés psychométriques satisfaisantes. Nous discutons des propriétés de cette échelle courte ainsi que des liens entre ses scores et les scores sur les mesures additionnelles. Finalement, nous proposons plusieurs pistes pour son utilisation.

Mots-clés

solitude, motivation auto-déterminée, motivation non auto-déterminée, échelle, version française

Numerous authors have pointed out that solitude is a complex subjective phenomenon. Firstly, because it is difficult to study, insofar as it can refer to a variety of situations and behaviors, such as chosen isolation, repeated or non-repeated isolation, short or long-term isolation, isolation from others, isolation by others, and so on (Coplan & Bowker, 2014; Zavaleta et al., 2017). In this way, solitude is the result of an evaluation, it is the feeling of being alone, isolated from others; it is generally seen as being an imbalance between desired social interactions and actual social interactions (Cacioppo & Hawkley, 2009; Ernst & Cacioppo, 1999), but it could also be precisely what the individuals desire. Secondly, and most importantly, because solitude seems to have various, and sometimes opposing, effects on individuals, maybe specifically because they desire and choose this solitude or not.

These effects can be aversive: physical, emotional and cognitive disorders, cardiovascular disease, substance abuse, stress, increased risk of death in the elderly, reduced professional efficiency, increased dependence on others, etc. (e.g., Bossi et al., 2018; Gewirtz & Baer, 1958; Hakulinen et al., 2018; Holt-Lunstad et al., 2015; Lee & Ko, 2017; McKay et al., 2017; McWhirter, 1990; Menec et al., 2020; Perlman & Peplau, 1982; Shankar et al., 2011). The literature on this issue is particularly extensive. Nevertheless, it primarily focuses on the effects of social isolation and/or loneliness, not on the effects of *solitude* itself. There is a gap to be filled or, at the very least, a lack of precision to be clarified.

These effects can also be positive, constructive and pleasant, for example in the case of a choice for solitude, a desire for intimacy, or a pleasure found in isolation from others (Andersson, 1998; Galanaki, 2013; Larson & Lee, 1996; Lay et al., 2020; Long & Averill, 2003; Long et al., 2003; Ost Mor et al., 2020; Shua & Koestner, 2008).

Most empirical data are therefore varied and sometimes contradictory on the question of the beneficial or deleterious effects of solitude (or mainly its visible parts: social isolation, loneliness). Sometimes shown to be associated with a means of achieving efficient emotional regulation (Delelis & Christophe, 2018; Leroy et al., 2014; Nguyen et al., 2018), sometimes correlated with high levels of depression and anxiety, particularly social anxiety (Hall-Lande et al., 2007), the topic of the effects of solitude (or the concomitant factors of solitude) is complex. In fact, solitude encompasses various forms of behavior linked to different underlying motives. Updating these motives could be a key factor in sorting the existing data and, above all, in identifying possible health issues that may arise.

In order to disentangle these diversities, Nicol (2006) developed in her thesis a scale of motivation for solitude (the Motivation for Solitude Scale; MSS) based on the theory of self-determination (Deci & Ryan, 1985, 2000). Indeed, a self-determined behavior (in this case, solitude) would be associated with individual autonomy and psychological and social well-being, while a not self-determined behavior would be associated with deleterious effects for the individual. Nicol therefore proposed to distinguish these two dimensions and quantify a self-determined motivation for solitude (or intrinsic motivation) and a not self-determined motivation for solitude (or extrinsic motivation).

The choice to consider these two motivations independently and not as the extremes of a continuum is clearly supported by the necessary distinction between the choice to be alone and imposed solitude, which is likely to lead to a feeling of loneliness—loneliness having (generally) negative effects on individuals (e.g., Andersson, 1998; Galanaki, 2013; see also Nicol, 2006). While the common lay viewpoint does not make this distinction, solitude and loneliness must be disentangled: Marcoen and Goosens (1993, cited by Nicol, 2006) thus defined *solitude* as the constructive use of time alone and *loneliness* as one's social network not meeting interpersonal needs. Similarly, assessing these two motivations in parallel is important insofar as a habit developed by default through loneliness may guide a self-determined solitude but, also, this solitude may depend on a specific situation and on the focus placed on the Self and/or on the relationship between the Self and others (e.g., Davies, 1996; Rook, 1984). Solitude is not a unitary construct; for example, Leary et al. (2003) clearly showed that for positive issues, the types of solitude associated with these issues are independent of loneliness (and not opposed to loneliness). It therefore seems necessary to consider these two motivations as a common dynamic process in which behaviors and issues (social and health) depend on the interdependence of these two forms of solitude foundation, which are then "synergistic" dimensions.

Thomas and Azmitia (2019) revised the scale proposed by Nicol (2006), arguing that this scale is interesting for predicting individuals' psychological and social adjustments as a function of the score on each dimension. They validated a shortened version of this scale (14 items), thereby increasing the ease of use of this tool. Among the arguments provided, it is noteworthy that individuals with high scores in not self-determined motivation for solitude may experience social isolation that is neither adapted (because it is not chosen) nor adaptive. This experience may therefore be the result of peer rejection—or a feeling of peer rejection—(Gazelle & Druhen, 2009) or of low social or emotional competences (Wang et al., 2013). Thomas and Azmitia (2019) thus showed that this not self-determined motivation relates to high scores of social anxiety, feelings of loneliness, and depressive symptoms but also to low scores of self-acceptance, personal development, and feelings of mastery. Individuals who, conversely, have high scores of self-determined motivation for solitude could benefit from this time alone to clarify their thoughts and emotions, to develop personally without social constraints (e.g., others'

gaze) and to adjust psychologically or socially (Delelis & Christophe, 2018; Nguyen et al., 2018).

Accordingly, as Thomas and Azmitia (2019) pointed out, this scale in its short form makes it possible to distinguish readily between self-determined and not self-determined motivations for solitude. It thus makes it possible to distinguish between solitude that may or may not be a source of risk for the individual, and solitude that may or may not be a source of well-being, a context of emotional regulation and appeasement or adjustment.

We propose here a French version of this scale and test the links between its scores and measures of anxiety-depression and emotional competences. More precisely, we hypothesize that not self-determined motivation for solitude will positively relate to anxiety and depression while self-determined motivation for solitude will not (Thomas & Azmitia, 2019). We also hypothesize that the level of emotional competences will negatively correlate with the first motivation and negatively correlate with the second one.

Method

Participants

We recruited the participants (N = 268) in collaboration with student investigators who solicited them in their close social environment (family, acquaintances, and neighbors), in the social network of this entourage, and in their academic or professional network. These participants were first given oral information about the study and then completed a consent form before receiving a booklet of questionnaires. They were not paid or compensated for their participation.

In addition, Thomas and Azmitia (2019) exclusively considered a population of adolescents and young adults (mostly no older than 25 years and up to 35 years for a few). We wanted to test the extent to which the scale is applicable to a larger adult population. Thus, our participants ranged in age from 18 years to 60 years (M = 32.34, SD = 13.11). More specifically, the women (n = 159) were aged 18-60 years (M = 31.69, SD = 13.38) and the men (n = 159) were aged 18–59 years (M = 33.28, SD = 12.71).

One hundred and twenty-two were living with a partner at the time of the study and 99 had at least one child. Their education levels ranged from no diploma (11 participants) to PhD (three participants) with BEPC/CAP/BEP (GCSE'S under C graduate/Youth training/BTEC First diploma), 29 participants, French *Baccalauréat* (A levels), 57 participants, *Baccalauréat*+3, 133 participants, and *Baccalauréat*+5, 25 participants.

Procedure and Material

The original version of the Motivation for Solitude Scale - Short Form was translated separately by the author and a student investigator, conformed and back-translated by a professional translator. We made the resolution of disagreements and the choice of equivalent terms on an ad hoc basis through direct exchanges between the author and the translator. We also chose to use a wording that was as close as possible to a common verbal form and a level of language that most people could understand. In addition to the fact that, a priori, we think that few differences in the item interpretation exist between American and French, the back-translation used has made it possible, in our opinion, to limit the measurement non-equivalence (see Davidov et al., 2014).

We based the assessment on self-reported measures using a paper-and-pencil survey. The people we approached, who agreed to participate in the study, first completed an individual consent form and then received a booklet of questionnaires. We assigned a participation code to each participant to guarantee their anonymity and, to reinforce the confidentiality of the data, an investigator different from the one who approached them coded their answers.

The short form questionnaire proposed by Thomas and Azmitia (2019) includes 14 items and focuses on two types of solitude: self-determined motivation for solitude (eight items) and not self-determined motivation for solitude (six items). The order of the items was identical to the original version. Thus, Items 1, 2, 4, 7, 10, 11, 13, and 14 refer to self-determined motivation for solitude and Items 3, 5, 6, 8, 9, and 12 refer to not self-determined motivation for solitude. The participants rated on four-point scales (1: Not at all important, 4: Very important) the importance of each statement as a reason for spending time alone. The score for each type of motivation for solitude is the sum of participants' answers to the corresponding items. The participants filled in these items according to the instruction - also repeated identically and translated:

> "*Prenez un moment pour réfléchir au temps que vous passez seul.e. Cela peut inclure les choses que vous avez tendance à faire lorsque vous êtes seul.e, vos ressentis ou vos pensées. Evaluez l'importance de chacun des énoncés suivants comme étant une raison pour laquelle vous voulez passer du temps seul.e.*
>
> *Quand je passe du temps seul.e, je le fais parce que…*". (Please take a moment to think about the time you spend alone. This could include the things you tend to do when you're alone, what you think about, and how you feel. Rate the importance of each of the following statements as a reason that you spend time alone. "When I spend time alone, I do so because…" [Thomas & Azmitia, 2019, p. 41])

As in the original version (see Thomas & Azmitia, 2019, p. 41), an example completed this instruction in order to clarify the request made to the participants:

> "*Par exemple, pour l'énoncé J'aime le calme, rappelez-vous que nous ne vous demandons pas d'évaluer dans quelle mesure vous appréciez le calme quand vous êtes seul.e, mais* l'importance *de ce motif comme raison pour laquelle vous passez du temps seul.e. Si "être au calme" est une raison très importante pour passer du temps seul.e, vous devez cocher "Très important". A l'inverse, si ce n'est pas une motivation importante pour passer du temps seul.e, vous devez cocher "Pas du tout important" ou une des réponses intermédiaires ("Assez important" ou "Modérément important") pour nuancer votre réponse*". (For example, one item is "I enjoy the quiet." Remember, we are not asking you to rate the extent to which you enjoy the quiet when you are alone, but the *importance* of that as a reason that you spend time alone. If enjoying the quiet is a very important reason that you spend time alone, you should check "Very important." If it is not at all important as a reason you spend time alone, you should check "Not at all important." [Thomas & Azmitia, 2019, p. 41])

We used two additional measures. We used the Short Profile of Emotional Competences (S-PEC; Baudry et al., 2019), a shortened 13-item version of the Profile of Emotional Competences (Brasseur et al., 2013) to assess the level of participants' emotional competences (one factor accounted for 24.4% of item variance; Cronbach α = .79). The participants filled in this questionnaire by giving their level of agreement with the propositions made on scales ranging from 1: Strongly disagree to 5: Strongly agree. Example items are, for intrapersonal emotional competences, "I can easily find words to describe how I feel", and for interpersonal emotional competences, "I know when someone is angry, sad, or happy even if they don't tell me". The score was the mean of the answers given.

Next, we used the Hospital Anxiety and Depression Scale (HADS; Razavi et al., 1989; Untas et al., 2009; Zigmond & Snaith, 1983) to assess participants' anxiety and depression levels. HADS is a 14-item measure ranging from 0 to 3, which, by summing the responses, allows for the identification of the existence of anxiety and depressive disorders in the respondents. Seven items address anxiety (35.5% of item variance, Cronbach α = .74, e.g., "I feel tense or angry"), seven items target depression (24.8% of item variance, Cronbach α = .65, e.g., "I feel as if I have slowed down").

Finally, the participants filled in a series of socio-demographic information (age, gender, level of education, and marital status). Once the questionnaire was completed, they placed it in an anonymous large envelope provided by the investigators.

Results

Factor Analysis and Weights

We conducted a principal component analysis on the data collected (maximum likelihood), with the assumption that a two-factor structure would best fit the data. Kaiser-Meyer-Olkin (KMO = .83) and Bartlett's sphericity tests, $\chi^2(91) = 1158.08$, $p < .001$, were performed to attest the factorability of the data.

The principal component analysis identified three factors with eigenvalues greater than 1 (3.84, 2.71, and 1.25). Examination of the plot of these eigenvalues (Cattell, 1966) and Horn's parallel analysis (Horn, 1965) allowed us to keep two factors representing respectively 27.43% and 19.33% of the total variance. We performed an oblique rotation to the extent that the theoretical model assumes two slightly correlated dimensions (here, $r = .18$, $p = .0034$; Thomas & Azmitia, 2019: $r = 0.22$). Table 1 shows that the items primarily load (> .30) on the assumed dimensions: Self-Determined Solitude and Not Self-Determined Solitude. The factor weights for Self-Determined Solitude range from .373 to .730. For Not Self-Determined Solitude, the factor weights range from .371 to .842.

Table 1

Factor Configuration for the French Version of the Motivation for Solitude Scale - Short Form (MSS-SF)

Item	Factor 1. Self-Determined Motivation for Solitude	Factor 2. Not-Self-Determined Motivation for Solitude
14. …Je me sens ressourcé.e quand je passe du temps seul.e	**.730**	.075
4. …Etre seul.e m'aide à me trouver spirituellement	**.669**	.133
7. …Cela m'aide à rester en harmonie avec mes sentiments, mes ressentis	**.656**	.136
13. …Cela m'aide à mieux comprendre pourquoi j'agis comme je le fais	**.489**	.046
10. …J'apprécie l'intimité, la solitude	**.468**	.224
11. …Je peux réaliser des activités qui m'intéressent réellement, qui me plaisent vraiment	**.464**	.108
1. …Cela stimule ma créativité	**.390**	.064
2. …J'aime le calme	**.373**	.219
12. …J'ai l'impression de ne pas être à ma place quand je suis avec d'autres personnes	.109	**.842**
9. …Je ne me sens pas à l'aise quand je suis avec d'autres personnes	.096	**.790**
5. …Je ne me sens pas apprécié.e quand je suis avec d'autres personnes	.076	**.789**

Item	Factor 1. Self-Determined Motivation for Solitude	Factor 2. Not-Self-Determined Motivation for Solitude
3. …Je me sens anxieu.x.se quand je suis avec d'autres personnes	.250	**.685**
6. …Je ne peux pas être moi-même avec les autres	.186	**.683**
8. …Je regrette des choses que j'ai faites ou dites quand j'étais avec d'autres personnes	.168	**.371**

Note. The highest loadings on a factor are in bold and in decreasing order. The Appendix shows the original items.

We completed this initial analysis by doing a confirmatory factorial analysis (Table 2). We tested a model including only one dimension (Motivation for Solitude), a model including the two supposed dimensions (Self- and Not Self Determined Motivation for Solitude), and a last model similar to this second one but excluding Item 2. Indeed, this item had both the lowest loading on the Self-Determined Motivation for Solitude factor and a non-negligible loading on the other factor.

Table 2

Goodness-Of-Fit Indices for the Confirmatory Analysis Models

Model	Chi^2	*df*	Chi^2/df	*p*	CFI	SRMR	RMSEA	AIC	BIC
1. Motivation for Solitude	508	77	0.075	< .001	0.607	0.144	0.145	9646	9797
2. Self and Not Self-Determined Motivation for Solitude	**163**	**76**	**2.14**	**< .001**	**0.921**	**0.062**	**0.0653**	**9303**	**9457**
3. Model 2 minus Item 2	**121**	**64**	**1.89**	**< .001**	**0.945**	**0.055**	**0.0578**	**8649**	**8793**

Note. CFI = Comparative Fit Index; SRMR = Standardized Root Mean Squared Residual; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion. The indices for the most satisfactory models are shown in bold

The model including the two expected dimensions had better Goodness-of-fit indices (Hu & Bentler, 1999; Kline, 2016) than a model with only one dimension, even if improvements could be made, notably by choosing to remove Item 2 from the scale (Table 2). In its full state, CFI is "adequate" (CFI is also good for the version excluding Item 2), SRMR and RMSEA are "reasonable" (again they are more so with the version without Item 2). Finally, AIC and BIC are better for this version than for a model presenting a single corpus (and are even better when removing Item 2 from the scale). Moreover, the number of standardized residuals above .10 in absolute value falls from 31 to 11 when considering two dimensions (nine with Item 2 removed).

Reliability Analysis

We performed an internal reliability analysis (Cronbach's alphas) on the French version. This analysis shows outcomes comparable to the original alphas (.81 and .89, respectively) provided by Thomas and Azmitia (2019): .76 for Self-Determined Motivation for Solitude and .84 for Not Self-Determined Motivation for Solitude. We also determined the Cronbach's alpha, all items combined, since the two types of loneliness are assumed to correlate, this alpha is .78.

Scores of the Dimensions

The mean scores and standard deviations per dimension (Self-Determined Solitude: M = 22.41, SD = 4.70, Not Self-Determined Solitude: M = 10.93, SD = 4.18) are comparable to those of the original version (respectively: M = 21.60, SD = 5.22 and M = 10.04, SD = 4.24; Thomas & Azmitia, 2019).

These scores also did not differ by gender, respectively for Self-Determined Solitude: for men, M = 22.00, SD = 4.80 and for women, M = 22.70, SD = 4.62, $F(1, 266) = 1.43$, p = .2326; for Not Self-Determined Solitude: for men, M = 10.71, SD = 3.78 and for women, M = 11.08, SD = 4.44, $F(1, 266) = .52$, p = .4716. Age did not influence these scores for either Self-Determined Solitude (p = .3276) or Not Self-Determined Solitude (p = .3339). The same was true for living or not living in a couple (Self-Determined Solitude, p = .3279; Not Self-Determined Solitude, p = .6118), for having children or not having children, (Self-Determined Solitude, p = .3465, Not Self-Determined Solitude, p = .6512), or for education (Self-Determined Solitude, p = .0923, Not Self-Determined Solitude, p = .1020).

Links With Anxiety-Depression and Emotional Competences

Thomas and Azmitia (2019) considered the correlations between the tested dimensions and various other measures such as personality, social anxiety, or depression. We were interested in testing the links between these dimensions and anxiety-depression. To complete the picture drawn by Thomas and Azmitia, we were also interested in testing the links between these dimensions and the level of emotional competences.

While Self-Determined Solitude did not correlate with participants' anxiety-depression score (r = .11, p = .0713), Not Self-Determined Solitude correlated positively with this score (r = .45, p < .001). These results are consistent with those of Thomas and Azmitia (2019). Participants' level of emotional competences correlated positively with their motivation to Self-Determined Solitude (r = .15, p = .0138) and negatively with their motivation to Not Self-Determined Solitude (r = -.19, p = .0021).

Discussion and Conclusion

This article aimed to propose a French version of the Motivation for Solitude Scale in its short form. The factor structure of this French version, the similarities of the scores and Cronbach's alphas with those of the original version, as well as the absence of differences according to the sociodemographic indices considered, lead us to think that researchers can use this scale with interest. On a more cautious note, we believe that practitioners could also find this scale useful, at least for the part dealing with not self-determined motivation for solitude, for identifying risk behavior and preventing adverse health outcomes (anxiety, depression). Its short form makes it easy to use and, beyond the results of Nicol (2006) and Thomas and Azmitia (2019), themselves with adolescents and emerging adults, this use seems to be applicable to a large population.

Item 2 ("*J'aime le calme*") had a non-negligible loading on the not self-determined motivation for solitude factor while presenting the lowest loading on the self-determined motivation for solitude factor. Although this was already the case, to a lesser extent, in Thomas and Azmitia (2019), and the translation was the most suitable, it is possible that there is a measurement non-equivalence here and that the French wording is too general to be discriminating. Cognitive interviewing might help clarify this point. In the use of the scale, the deletion of this item seems nevertheless conceivable (Cronbach's alpha remains at .75 in case of deletion of this item; Table 2).

Thus, independently of the previous comment, in its current state, the French version of this motivation for solitude scale can be useful in distinguishing forms of motivation to be alone and in predicting individuals' psychological and social well-being. In particular, the score of not self-determined motivation for solitude helps to identify individuals potentially at risk for anxiety-depression—or other psychosocial risk—, as Thomas and Azmitia (2019), Gazelle and Druhen (2009), or Wang et al. (2013), showed for anxiety, social competences, and social isolation in adolescents or, for depression, as showed by Loades et al. (2020) in children and adolescents and Lee et al. (2020) in young adults during the COVID-19 pandemic. The score of self-determined motivation for solitude could make it possible to identify the individuals for whom solitude would have a beneficial role insofar as solitude would help to improve negative affect and to increase positive affect by ensuring a self-regulatory function (e.g., Larson et al., 1982; Nguyen et al., 2018; Ost Mor et al., 2020). Long and Averill (2003) therefore noted that because solitude is characterized by reduction in external structure and the number of sources of focus, it can lead to an increase in fluidity, flexibility, cognitive change and stimulation—as well as a strengthening of social relationships (Davies, 1996). When solitude is self-determined, it could constitute a favorable environment for promoting mindfulness.

For self-determined motivation for solitude, whether here or in Thomas and Azmitia (2019), the correlations with personality, functioning, adjustment, or well-being outcomes are less clear-cut than for not self-determined motivation for solitude. We think that it is understandable because self-determined solitude is itself two-sided. It can be

a fully motivated choice, for example linked to a desire to clarify the situation, to calm down without being subjected to the gaze of others (Delelis & Christophe, 2018; Galanaki, 2013; Nguyen et al., 2018). But it also can be *self-determined in retrospect*, that is, it can be a self-favorable reevaluation of what is primarily a default choice, a social routine that has to be perceived by oneself as a true choice. Future research could attempt to unravel these aspects.

In the specific case of dealing with the deleterious effects of loneliness, assessing these motivations for solitude (in particular, identifying the level of not self-determined solitude) and disentangling them can therefore help identify the pattern of social interaction desired at a given time, in a specific context and for a particular individual. This would allow for more effective, targeted intervention: strengthening of the social support network or strengthening of social/socio-emotional competences or group therapy versus adjustment of individual habits and strengthening of the social perception of these according to the context, readjustment in terms of attachment strategies, etc. (DiTommaso et al., 2003; Rook, 1984). In addition, individual (Burger, 1995; Zavaleta et al., 2017) and socio-demographic factors should be considered, as they are likely to lead to differences (e.g., for age: see Lay et al., 2020) in both the tendency to isolate and the tendency to feel loneliness. Moreover, this could quickly guide work, for example in mindfulness workshops (Hafenbrack et al., 2014; Lindsay et al., 2019) insofar as feelings of loneliness and their negative corollaries associated with not self-determined motivation for solitude appear to be reduced by such workshops (e.g., Rosenstreich & Margalit, 2015).

The positive link between the level of emotional competences and the self-determined motivation for solitude, on the one hand, and the negative link between this level and the not self-determined motivation for solitude, on the other hand, seem to us particularly interesting, especially for the latter.

In fact, given that emotional competences can be developed and improved, and are positively related to health—psychological, social and physical outcomes (e.g., Mikolajczak et al., 2015), it seems to us that future studies should focus on this aspect. If it is possible to reduce social isolation behaviors initiated for extrinsic reasons, known to be deleterious to individuals, by reinforcing their emotional competences (see Szczygiel & Mikolajczak, 2018), a new avenue of intervention is probably opening up for therapists, particularly for a readjustment of self- and other-perception.

In addition, future studies could also explore the links between these forms of motivation for solitude and the extent of an individual's social network, or even the links between social network members' perceptions of that individual's motives for solitude and their adjustment.

The avenues of exploration and exploitation of this scale are numerous. To begin with, whether it is a concern with the links between these motivations and the feeling of efficacy (which in itself can lead to withdrawal or exhaustion of the social network;

Bandura et al., 1996) or efficacy as such (including academic or professional efficacy; Dussault & Deaudelin, 2001), the challenge of identification is important to assess individuals' social integration and collective activities or maybe to highlight possible factors of change. Then, in the same vein, considering the links between these forms of motivation and social affiliation behaviors, particularly in emotional situations, the social sharing of emotions and the motives expressed for the display (or initiation) of these social behaviors constitutes a promising avenue of research. As an extension of this, addressing couple dynamics or attachment strategies with regard to these motivations could maybe provide a better understanding of relationships that are sometimes unfavorable to good personal, dyadic, and/or social adjustment in the broad sense.

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Appendix

Original Items of MSS-SF (Thomas & Azmitia, 2019)

1. It sparks my creativity
2. I enjoy the quiet
3. I feel anxious when I'm with others
4. Being alone helps me get in touch with my spirituality
5. I don't feel liked when I'm with others
6. I can't be myself around others
7. It helps me stay in touch with my feelings
8. I regret things I say or do when I'm with others
9. I feel uncomfortable when I'm with others
10. I value the privacy

11. I can engage in activities that really interest me
12. I feel like I don't belong when I'm with others
13. It helps me gain insight into why I do the things I do
14. I feel energized when I spend time with myself