

## The influence of affect intensity and self-schema on the attitude toward self-destructive behaviors in adolescence

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**Abstract:** The aim of this study is to determine the influence of affect intensity and self-schema on the attitude towards self-destructive behaviors in adolescence. Theoretical background is provided through self-presentation, self-schema and the affect intensity. We assume that self-schema and the affect intensity influence the attitude towards self-destructive behaviors (alcohol, tobacco, drugs, piercing, tattoos and esthetic surgery). The short affect intensity scale (AIS), a self-schema measure and an attitude measure were used. The scores of AIS were computed separately for expressed emotions and serenity scale. Expressed emotions had more impact on the participant's attitudes than serenity. The results showed combined effects of self-schema and affect intensity on the attitude towards drugs, tobacco, smoking and tattoos. Non-schematics and low expressivity participants were more prone to engage in self-destructive behaviors. The cognitive and affective parts of the self had a joint influence on the vulnerability to engage in risked behaviors, especially addictive behaviors.

**Key words:** self-schema, affect intensity, attitude, self-destructive behavior, addictive behavior

Lately the research focused on adolescence has to turn its focus on a phenomenon that has proven to be increasingly frequent: the self-destructive behaviors. These behaviors have been found to contribute significantly to the social and emotional development in adolescence.

Diener et al. (1985) characterize *affect intensity* as an individual difference in response intensity to a given level of emotion-provoking stimulation. Larsen & Diener (1987) defined it as "a stable individual difference in the strength with which individuals experience their emotions" (p. 2). The affect intensity can be generalized across specific emotions (e.g. Kardum, 1999) and seems to be independent of the hedonic quality of the mood states. Diener et al. (1985) found that, across a number of the examined populations, the intensity of a person's positive emotions correlated about at .70 with the intensity of their negative emotions. The original study of Larsen measured the affect intensity for positive and negative emotions, but also had items for low emotional resonance, in a subscale called "serenity".

Some research (e. g. Popov, 2002) described the self-destructive behaviors in adolescents, their effects (Figuroa, 1988), or causes (Boyer, 2006). These studies showed that adolescents engage in risked behavior in order to externalize overwhelming emotions and to gain control over their emotions (Messer &

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Fremouw, 2008). Self-destructive behaviors may also serve to express the intensity or depth of an emotion, when one lacks the verbal ability to do it (Suyemoto, 1998), or in order to distance oneself from that emotion.

Gratz (2006) has shown that, in a nonclinical sample of adult women, the AIM subscales discriminated women with a history of self-harming behavior from women with no history of self-harm. In particular, high negative affect intensity and low positive affect intensity have distinguished women high in self-harm (illustrating the utility of considering subscales, in addition to the total score, when using the AIM).

Flett and Hewitt (1995) found that affect intensity correlated positively with indices of borderline personality, as well as with passive-aggressive personality, and negatively with compulsive-conforming personality. Affect intensity also correlated with symptom measures of poor adjustment, somatization, hypomania, alcohol abuse and psychotic thinking. The authors concluded that affect intensity may contribute to a variety of forms of psychopathology, primarily through diminished self-control of emotion and poor inhibition. Persons high in affect intensity are at risk for substance abuse, most likely in attempts to self-medicate for emotional suppression (Thorberg & Lyvers, 2006). Linking cognition and emotion, Larsen et al. (1987, 1996) reported that affect intensity is associated with a cognitive style of personalizing events and overgeneralizing from events. Dance, Kuiper, and Martin (1990) demonstrated that affect intensity is associated with a higher number of distinct self-relevant roles, as assessed in a role-sorting task. It may be that affect intensity is related to high self-concept complexity (Linville, 1985).

Self-destructive behaviors may serve personal identity purpose, to singularize oneself from the others, to increase self-concept and self-esteem and for self-presentational purposes (Frederick & Bradley, 2000, Suyemoto, 1998). A cause for engaging in self-destructive behaviors may be the desire to enhance or maintain one's personal identity or sense of self, to be special and different from all others. Armstrong and McConnell (1994, as cited in Frederick & Bradley, 2000) showed that many participants out of the 642 high-school students they interviewed motivated their desire to get a tattoo to enhance their self-concept and create a certain personal image for the others. Researches cited by Frederick & Bradley (2000) found that the decision to engage in self-destructive behaviors was motivated by a search of one's self and identity. An important concept and important part of the self is the self-schema. Previous studies have shown that the strength of self-schema is an important predictor of engaging in different self-harm behaviors and is linked with some psychopathological disorders.

Corte & Stein (2007) showed that persons with antisocial alcohol dependence (AAD) had a trend toward fewer positive self-schemas than did controls, and had more negative self-schemas than did those in recovery and controls. The evidence supported a model that uses properties of self-concept to predict high levels of

alcohol abuse. These findings provide a foundation for the development of interventions aimed at altering self-structure to prevent antisocial alcohol dependence.

Stein & Corte (2007) used the cognitive model of self-concept to test the theoretical proposition that disturbances in overall identity development are a core vulnerability that leads to formation of a fat body weight self-definition and eating disorder symptomatology. The results showed that self-concept properties predicted eating disorder attitudes and behavior, and that disturbance in the overall collection of identities and an impoverished self are important contributors to eating disorder symptomatology.

Avants, Margolin & McKee (1999) employed structural equation modeling to examine cognitive, affective and behavioral predictors of treatment response in addiction recovery intervention. Cocaine use was predicted by pre-treatment severity of addiction, low self-efficacy, and lack of negative affect and strength of self-schema.

We can assume, based on the studies mentioned above, that a person with a stronger self-concept and sense of the self may not be motivated to engage in self-destructive behaviors, therefore the self-schema concept as conceptualized by Markus (1977) was chosen to measure the participants sense of self.

The review of the literature showed an interest to study cognitive and affective predictors of substance abuse or self-harm behaviors separately. We could not identify studies that brought together affect intensity and self-schema in order to study their joint impact on the self-destructive behaviors.

**The aim** of this study is to determine the influence of affect intensity and self-schema on the attitude towards self-destructive/ risked behaviors during adolescence.

*The main assumption* is that self schema and the affect intensity influence the attitude toward self-destructive behaviors.

### **Hypotheses**

1. Participants low in expressiveness will have a more positive attitude towards engaging in self-destructive behaviors, compared to those high in expressiveness.

2. Participants high in serenity will have a more positive attitude towards engaging in self-destructive behavior, compared to those low in serenity.

3. Non- Schematic participants will have a more positive attitude towards engaging in self-destructive behaviors compared to schematic participants.

*The method* is quasi-experimental with a 2 (schematics/ non-schematics) x 2 (high/low emotional intensity) between subjects design.

## Measures

To measure the dependent variable, the attitude towards the six selected types of self-destructive behaviors, we built a Likert type scale. The items refer to positive and negative effects of these behaviors, that will be rated by the participants using a scale ranging from 1=agree to 6=disagree. The scale has a total of 36 items, out of which 8 items are for the attitude for alcohol use, 9 for drugs, 7 for smoking, 7 for tattoos and piercing and 5 for esthetic surgery. 11 items are computed with the reversed score. The higher the total score, the less positive attitude.

The scale contains items such as: “Esthetic surgery has very high risks for health”, “People who do not smoke live longer”, “Tattoos and piercing may lead to serious infections”, “Alcohol is a good method to cope with stress”, “and Drugs make you more relaxed and friendly”.

To measure the independent variable -affect intensity- we used the shortened version of the AIM (Affect Intensity Measure, Larsen & Diener, 1987) developed by (Geuens & de Pelsmacker, 2002) called the AIS (Affect Intensity Scale). This scale has 19 items, out of which 8 items are for expressed positive emotions, 6 for expressed negative emotions and 5 items for inhibited emotions or “serenity”. It is a Likert type scale, with ratings varying from 1=agree to 6=disagree. High scores indicate a low expressive, respectively a low serenity person.

Examples of items for a) positive emotions: “When I feel happy, it is a strong type of exuberance”, “When I'm feeling well, it's easy for me to go from being in a good mood, to being really joyful”; b) negative emotions: “Sad movies deeply touch me”, “When I am nervous, I get shaky all over”; c) serenity: “When I'm happy, it's a feeling of being untroubled and content, rather than being zestful and aroused”, “When I feel happiness, it is a quiet type of contentment”.

In the statistical analysis we computed the total scores for expressed emotions (positive and negative) and for serenity, the two dimensions being considered as related but distinct separately.

In order to measure the the second independent variable, the self-schema, we employed the method of Markus (1977). We asked the participants to rate a list of 40 adjectives (20 positive and 20 negative) according to their self-descriptive character and, respectively, to their importance of self. The self schema in our study does not refer to a particular domain or trait, as in the study of Markus (dependence/independence). The adjectives were pretested on 40 high-school students who were asked to give as many adjectives that came to mind (at least 5), that may describe people of their age. The 20 more frequently positive, respectively and 20 more frequently negative adjectives were retained. Therefore, the self-schema reflected a more clear and structured sense of self in general, rather than the schematicity to a particular trait. Participants who are classified as schematics will have a strong sense of self (what is important to them) and a good knowledge of self (what describes them). The 40 adjectives were rated for their descriptiveness and importance on a scale ranging from 1=very much, to 6=very little.

A total score was calculated separately for descriptiveness and importance. These two totals were divided by the median in high/low descriptive and high/low importance. Participants high in descriptiveness and importance were classified as schematics, and all the others were classified as non-schematics.

### **Participants**

120 adolescents, males and females, aged from 15 to 18 years, participated in this study. They are enrolled in Cuza Vodă High School from Huși, County of Vaslui, which has a total number of 1200 students. This high school is rated as average according to student performance.

### **Procedure**

The measures were administered collectively in one session during class. They were completed individually. The order of administration was: a self-schema scale, followed by AIS and the attitude scale, for half of the participants, and AIS, followed by self-schema and the attitude scale, for the other half. T tests showed no significant differences for the order of administration.

### **Results**

Statistical Procedure: The scores of AIS were computed separately for expressed emotions and the inhibited (serenity) scale, and the results will be presented separately in part A and part B.

#### **Part A- expressed emotions**

A series of univariate ANOVA's were run with a 2 (schematics/ non-schematics) x 2 (high/low emotional intensity) on the dependent variable attitude towards self-destructive behaviors, with the following subscales: alcohol, tobacco, drugs, piercing, tattoos and and esthetic surgery. In Table 1 the means and standard deviation for the self-schema by expressed emotions on the six behaviors mentioned above are displayed.

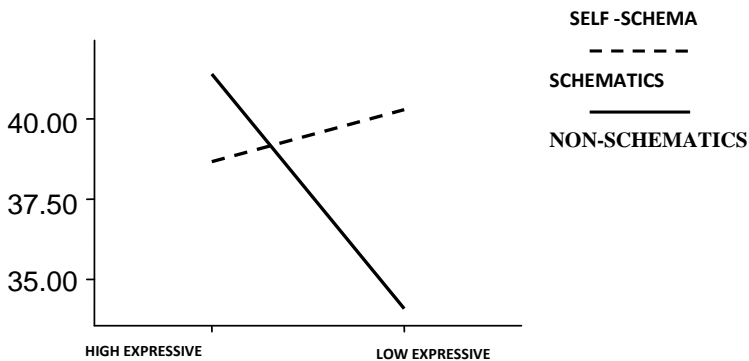
*Table 1.* Means and standard deviation for the self-schema and emotional expressivity

Variables	<i>M (SD)</i>			
	Schematics		Non-schematics	
	High expressivity	Low expressivity	High expressivity	Low expressivity
Alcohol	38.66 (7.07)	40.28 (5.91)	41.40 (8.98)	34.08 (8.82)
Drugs	44.52 (6.64)	45.28 (6.82)	45.08 (4.94)	37.24 (10.48)
Smoking	34.61 (6.47)	36.92 (5.64)	35.28 (6.35)	28.42 (10.35)
Piercing	30.72 (7.21)	31.21 (6.07)	32.00 (5.83)	27.15 (8.55)
Tattoo	25.94 (6.48)	26.64 (5.94)	28.20 (5.46)	23.26 (7.63)
Esthetic surgery	23.63 (5.93)	22.71 (6.03)	24.36 (4.65)	19.53 (6.54)

NOTE: A lower mean on attitude indicates a positive attitude and a higher mean indicates a negative attitude.

a) Attitude towards alcohol use. ANOVA Univariate shows an interaction effect of self-schema x expressed emotions  $F(1, 116) = 7.568, p = .007, \eta^2_p = .061$ , presented in Figure 1. Additional t tests using one independent variable as a split file variable show that there are no significant differences between the participants in the high-expressive groups  $t(59) = -1.327, p = .190$ , or the participants in the schematic groups  $t(48) = -.758, p = .452$ , but there are significant differences in the low expressive  $t(57) = 2.454, p = .017$  and non-schematic groups  $t(68) = 3.300, p = .002$ . The participants in the low expressive, non-schematic group have the most favourable attitude towards alcohol use; therefore this is the most vulnerable group. The least vulnerable group is the high-expressive, non-schematic group with the least favourable attitude towards alcohol use. We can conclude that, for this risky behavior, self-schema and emotional expressivity are important variables and have a joint impact in shaping the participants' attitude. It seems though that alone these variables do not influence the participant's attitude.

Figure 1. The interaction effect of self-schema and expressed emotions on the attitude towards alcohol use



b) Attitude towards drug use. ANOVA Univariate shows a main effect of the variable expressed emotions on the attitude towards drug use  $F(1, 116) = 4.753, p = .031, \eta^2_p = .039$  and the main effect of self-schema  $F(1, 116) = 5.321, p = .023, \eta^2_p = .044$ . There is also an interaction effect of self-schema x expressed emotions on the attitude towards drug use  $F(1, 116) = 7.006, p = .009, \eta^2_p = .057$ , presented in Figure 2.

Additional t tests using one independent variable as a split file variable show that there are no significant differences between the participants in the high-expressive groups  $t(59) = -0.353, p = .726$ , or the participants in the schematic groups  $t(48) = -0.359, p = .721$ , but there are significant differences in the low

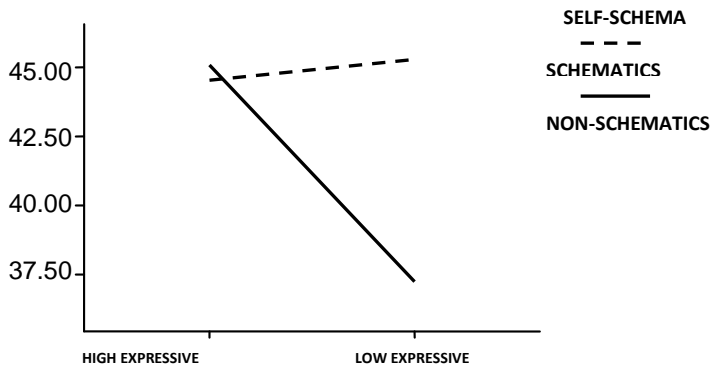
expressive  $t(57) = 2.690$ ,  $p = .009$  and non-schematic groups  $t(68) = 4.236$ ,  $p < .001$ .

The participants in the low expressive, non-schematic group have the most favourable attitude towards drug use; therefore, this is the most vulnerable group. The least vulnerable group is the low-expressive, schematic group with the least favourable attitude towards drug use.

The main effects show that participants in the high-expressive and schematic groups have a less favourable attitude towards drug use than the participants in the low-expressive and, respectively, the non-schematic groups.

We can conclude that, for this risked behavior, self-schema and emotional expressivity are important variables and have a joint impact in shaping the participants attitude. Their influence is significant as single variables or interaction with each other.

Figure 2. The interaction effect of self-schema and expressed emotions on the attitude towards drug use



c) Attitude towards smoking. ANOVA Univariate shows a main effect of the variable self-schema  $F(1, 116) = 5.833$ ,  $p = 0.017$ ,  $\eta_p^2 = .048$ . There is also an interaction effect of self-schema x expressed emotions on the attitude towards smoking  $F(1, 116) = 7.994$ ,  $p = .006$ ,  $\eta_p^2 = .064$ , presented in Figure 3.

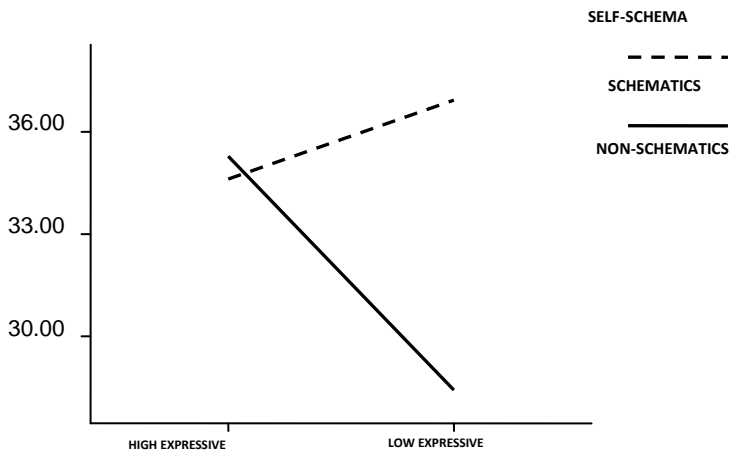
Additional  $t$  tests using one independent variable as a split file variable show that there are no significant differences between the participants in the high-expressive groups  $t(59) = -0.400$ ,  $p = .691$ , or the participants in the schematic groups  $t(48) = -1.175$ ,  $p = .246$ , but there are significant differences in the low expressive  $t(57) = 3.940$ ,  $p < .001$  and non-schematic groups  $t(68) = 3.430$ ,  $p = .001$ .

The participants in the low expressive, non-schematic group have the most favourable attitude towards smoking; therefore, this is the most vulnerable group. The least vulnerable group is the high-expressive, non-schematic group.

The main effect shows that participants in the schematic group have a less favourable attitude towards smoking, than the participants in the non-schematic group.

We can conclude that for this risked behavior, self schema is an important variable, alone or in interaction with emotional expressivity.

*Figure 3.* The interaction effect of self-schema and expressed emotions on the attitude towards smoking



d) Attitude towards tattoos. ANOVA Univariate shows an interaction effect of self-schema and expressed emotions on the attitude towards tattoos  $F(1, 116) = 4.370, p = .039, \eta^2_p = .036$ , presented in Figure 4.

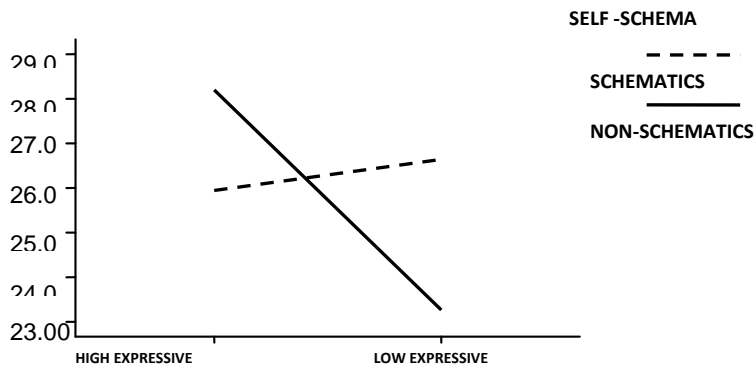
Additional t tests using one independent variable as split file variable show that there are no significant differences between the participants in the high-expressive groups  $t(59) = -1.421, p = .160$ , the participants in the schematic groups  $t(48) = -0.349, p = .728$ , or the participants in low-expressive groups  $t(57) = 1.728, p = .095$ , but there are significant differences in non-schematic groups  $t(68) = 3.125, p = .003$ .

The participants in the low expressive, non-schematic group have the more favourable attitude towards tattoos, and the participants in the non-schematic high-expressive group are the least inclined to get a tattoo. We can conclude that, for this risked behavior, self-schema and emotional expressivity are important variables,



and have a joint impact in shaping the participants' attitude. It seems though that alone these variables do not influence participant's attitude.

Figure 4. The interaction effect of self-schema and expressed emotions on the attitude towards tattoos



e) Attitude towards piercing. ANOVA Univariate shows one marginally significant interaction effect of emotional expressivity and self-schema on the attitude towards piercing  $F(1, 116) = 3.22, p = .075$ . This result may be caused by the fact that piercing is less popular among the adolescents in Romania and less used as a mean of self-presentation.

f) Attitude towards esthetic surgery. ANOVA Univariate shows a main effect of the variable expressed emotions on the attitude towards esthetic surgery  $F(1, 116) = 5.780, p = .018, \eta^2_p = .047$ . Participants in the low expressive group are more in favor of esthetic surgery than the participants in the high expressive group. This result indicates that esthetic surgery is rather employed for emotional expression, than as a self-presentation oriented behavior.

### Part B-serenity

A series on univariate ANOVAs were run with 2 (schematics/ non-schematics) x 2 (high/low serenity) on the dependent variable attitude towards self-destructive behaviors, with the following subscales: alcohol, tobacco, drugs, piercing, tattoos and esthetic surgery. In Table 2 the means and standard deviations for the self-schema by serenity on the six behaviors mentioned above are displayed.

Table 2. Means and standard deviation for the self-schema and serenity

Variables	<i>M (SD)</i>			
	Schematics		Non-schematics	
	High serenity	Low serenity	High serenity	Low serenity
Alcohol	38.90 (5.87)	39.28 (7.47)	34.84 (10.82)	40.25 (4.61)
Drugs	44.54 (6.03)	44.89 (7.17)	37.86 (10.52)	44.20 (5.84)
Smoking	34.04 (5.95)	36.21 (6.48)	28.17 (10.38)	36.04 (5.17)
Piercing	30.77 (7.38)	30.92 (6.55)	27.93 (7.73)	30.70 (8.33)
Tattoo	26.27 (6.50)	26.03 (6.23)	24.47 (7.17)	26.08 (7.56)
Esthetic surgery	20.59 (5.47)	25.57 (5.37)	19.89 (6.52)	23.87 (5.16)

NOTE: A lower mean on attitude indicates a positive attitude and a higher mean indicates a negative attitude.

a) Attitude towards alcohol use. ANOVA Univariate shows only a marginally significant main effect of serenity on the attitude towards alcohol use  $F(1, 116) = 3.350, p = .07$ , and no interaction effect of serenity and self-schema on the attitude towards alcohol use.

b) Attitude towards drug use. ANOVA Univariate shows a main effect of the variable serenity on the attitude towards drug use  $F(1, 116) = 4.522, p = .036, \eta^2_p = .038$  and a main effect of self-schema

$F(1, 116) = 5.481, p = .021, \eta^2_p = .045$ . There is also a marginally significant interaction effect of self-schema and serenity on the attitude towards drug use  $F(1, 116) = 3.63, p = .059$ . Schematic and low serenity participants are less in favour of drug use.

c) Attitude towards smoking. ANOVA Univariate shows the main effect of the variable serenity on the attitude towards smoking  $F(1, 116) = 11.007, p = .001, \eta^2_p = .087$  and the main effect of self-schema  $F(1, 116) = 3.992, p = .048, \eta^2_p = .033$ . There is also a marginally significant interaction effect of self-schema and serenity on the attitude towards smoking  $F(1, 116) = 3.54, p = .062$ . Schematic and low serenity participants are less in favour of smoking.

d) Attitude towards tattoos. ANOVA Univariate shows no significant main or interaction effects of serenity and self-schema on the attitude towards tattoos.

e) Attitude towards piercing. ANOVA Univariate shows no significant main or interaction effects of serenity and self-schema on the attitude towards piercing.

f) Attitude towards esthetic surgery. ANOVA Univariate show a main effect of the variable serenity on the attitude towards esthetic surgery  $F(1, 116) = 16.367, p < 0.001, \eta^2_p = .124$ . Low serenity participants are less in favor of esthetic surgery.

### **Conclusions and discussions**

Our research was aimed at verifying three hypotheses. Participants low in expressiveness, those high in serenity and non-schematic participants will have a more positive attitude towards engaging in self-destructive behaviors, compared to high expressive, low serenity and schematic participants.

The results supported these hypotheses for some of the six targeted self-destructive behaviors.

Analyzing the influence of self-schema and expressed emotions we have found interaction effects for five out of the six self-destructive behaviors, one of them marginal. Previous studies have, with a few exceptions, overlooked the possible interaction between emotional-dispositional aspects of personality, such as affect intensity and the social-cognitive part of the individual psyche, such as self-schema. Our hypotheses were inspired by past research but were aimed to verify the joint influence of these variables. The significant interaction effects that we obtained demonstrate that our assumption of a joint influence is supported.

The influence of self-schema alone is consistently present for two of the targeted self-destructive behaviors, particularly those which are socially tolerated, indirect forms of self-harm, drugs and smoking but with no impact over the attitude towards the alcohol use. This result may be explained by the fact that in our country alcohol use is quite widely spread, considered recreational, and there is no clear social norm that forbids or stigmatizes alcohol use. The verification of this alternative explanation will be the aim of future research. This result points out the necessity of a classification of self-destructive behaviors in our culture.

The results showed no main effect of self-schema on the self-destructive behaviors oriented towards body alteration. One may assume that body altering is more linked to one's identity. Therefore, the attitude towards body altering behaviors should be more influenced by self-schema. In our country though, these behaviors have only started to be used and are frequently associated with abnormal, weird or atypical individuals and not as a form of social identity. This alternative explanation also needs further exploration. We can conclude that adolescents may consider the behaviors that can be considered as indirect self-harm, such as drug use and smoking, but not, at least not yet, the body altering behaviors as an identity mark.

The influence of the variable expressed emotions alone was present in two behaviors: drug use and esthetic surgery. This result may indicate that participants consider that coping with unwanted or overwhelming emotions require quite extreme measures: drug use (evading reality) or body alteration (reparation).

The same influence of the emotional resonance was found in the case of serenity. Serenity proved to be more impactful on the participant's attitude as a single variable. Participants high in serenity proved to be more in favor of drug use, smoking and esthetic surgery and marginally significant on the alcohol use.

These results, and the fact that serenity did not have a combined effect with self-schema on the evaluation on the targeted behaviors, may indicate that expressed emotions and serenity are two separate aspects of emotional expressivity; they are related but are not necessarily opposed.

Neither expressed emotions, nor serenity had any impact on the attitude towards tattoos and piercing. On the overall results, the attitude towards tattoos was influenced by a self-schema by expressed emotions interaction effect and the attitude towards piercing by a marginally significant self-schema by the expressed emotions effect. This could indicate that our alternative explanation, concerning their popularity and current use, may have some basis, and we have to further investigate the “popularity” of these behaviors.

As a concluding remark concerning the variables measuring the affect, the expressed emotions and serenity, we can notice that each of them has more impact on the participants’s attitudes than the self-schema. There is a difference of their influence in the way they interact with self-schema: the expressiveness interacts consistently with the self-schema, whereas serenity has more impact alone.

The interaction effects of self-schema and emotional expressivity show that both emotional and self-concept aspects are important to influence the attitude towards self-destructive behaviors. It is important to study their joint impact, in particular for those behaviors where the influence of only one of these two variables is not present.

It should also be noted that, out of the six target behaviors, the attitude towards tattoos and piercing is influenced very little by self-schema or affect intensity and the most sensitive behaviors are drug use and smoking. These are the most well-known by the participants, and the social norms are quite clearly against them. There are information campaigns in schools against drug use and a law that forbids smoking in public places. That makes these behaviors both known and forbidden. In the case of alcohol use, there is no clear banning of this behavior. Tattoos and piercings are still uncommon and esthetic surgery is too expensive and not widely used as a means of self-expression.

The first hypothesis is confirmed for drug use and esthetic surgery but not for the other behaviors. The second hypothesis is confirmed for drug use, smoking, esthetic surgery and marginally for alcohol use but not for tattoos and piercing. Finally, the third hypothesis is confirmed only for drug use and smoking. The scale measuring the attitude towards self-destructive behaviors needs further validation and a more in depth analysis of the knowledge and classification of self-destructive behaviors is required. Future research has to take into account the social and cultural context, the social norms and the way each behavior is socially framed as acceptable or unacceptable.

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