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What Prones Adolescents to Act Assertively: The Social Information Processing in Assertiveness

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O Que Leva os Adolescentes a Serem Assertivos: *O Processamento de Informação Social na Assertividade*

Resumo

O objetivo do presente estudo prende-se na compreensão dos diferentes passos do processamento de informação social que está na base do comportamento assertivo durante a adolescência. Tendo como conceptualização teórica o Modelo de Processamento de Informação Social (SIP), explorámos o valor preditivo sequencial das etapas do SIP nas respostas assertivas, numa amostra de adolescentes retirada da comunidade e por recurso a modelos de equações estruturais. O modelo foi testado separadamente para rapazes e raparigas. Os principais resultados revelam que todas as respostas assertivas são preditas por atribuições de intenção neutras. Além disso, atribuições hostis predizem a assertividade quando mediadas por emoções como a zanga ou a tristeza. A vergonha teve um efeito mediador negativo entre atribuições hostis e a assertividade. A avaliação de resposta, preconizada como um dos antecedentes do comportamento social, não se mostrou preditora da resposta assertiva, apenas para os rapazes a avaliação antecedeu a escolha de uma resposta assertiva, por intermédio da emoção tristeza. Ao abordar o processo cognitivo e emocional subjacente ao comportamento assertivo, este estudo revela-

se inovador e contribuiu para um maior entendimento do Modelo de Processamento de Informação Social no comportamento assertivo de adolescentes, particularmente pelas diferenças de género encontradas.

Palavras chave: Processamento de Informação Social; Assertividade; Adolescência.

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Abstract

The purpose of the present study is to understand the different steps of social information processing beyond assertive behavior during adolescence. Having as theoretical framework the model of Social Information Processing, we explored the predicted role of SIP steps on assertive responses, in a sample made of adolescents, using a model of sctrutural equations. The model was tested separately for girls and boys. The main results suggested that neutral attributions predict assertive responses. Hostile attributions predict assertive responses when mediated by anger and sadness. Shame was the single negative mediator between assertiveness and hostile attributions. Evaluation of response did not have the main effect in anticipating social behavior and only boys evaluated the convenience of acting assertively, when sad. In this sudy we approached the cognitive and

emotional process that underlies assertive behavior, adding to a better undersating of Social Information Process, especially because of the gender differences we found.

Key Words: Social Information Processing; Assertiveness; Adolescents; Emotions; Preemptive Process.

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Índice

Introdução

A dissertação seguidamente apresentada aborda o Modelo de Processamento de Informação Social (PIS) na Assertividade, em adolescentes. A razão que levou à escolha do tema foi a notória novidade que este traz à investigação no âmbito das interações sociais, na medida em que, de acordo com o que foi possível apurar, este modelo nunca foi estudado de forma sequencial nem aplicado à assertividade, tal como nós nos propomos fazer.

Várias componentes do Modelo de Processamento de Informação Social têm sido estudadas, focando apenas algumas variáveis. No entanto, este processo não tem sido estudado como é proposto teoricamente, ou seja, de forma sequencial. De igual modo, este modelo tem sido particularmente aplicado a comportamentos sociais desajustados (*i.e.*, agressivos), descurando a investigação sobre a sua aplicabilidade a comportamentos sociais ajustados (*e.g.*, assertividade).

Embora o conceito de assertividade já seja um conceito definido desde há muitos anos (e.g. Alberti & Emmons, 1970; Arrindel, Sanderman and Ranchor, 1990; Gambril, 1995; Lange & Jakubowski, 1976; Rakos, 1991, 2006; Schroeder, Rakos, & Moe, 1983; Trower, 1995), continua a ser escassa a investigação focada na compreensão do contexto e motivações subjacentes à ativação da resposta assertiva. Com efeito, e no âmbito da recente criação de um

instrumento que avalia sequencialmente três passos do modelo PIS, em respostas de assertividade, passividade e agressividade, o primordial objetivo desta investigação será colmatar a falta de informação acerca das motivações da resposta assertiva. Uma vez que a literatura se centra em estudar a agressividade, descobrindo resultados que suportam que há determinadas características no processamento de informação que levam ao comportamento agressivo (e.g., Camodeca & Goosens, 2005; De Castro, 2004; De Castro, Merk, Koops, Vermaan, & Bosch 2005; DiLiberto, Katz, Beauchamp, & Howells, 2002; Dodge & Crick, 1990; Dodge & Somberg, 1987; Graham, Hudley, & Williams, 1992), inferimos que a resposta assertiva também é influenciada pelas diferentes componentes do modelo. Desta forma, neste estudo pretende-se entender a influência preditiva de cada variável na resposta assertiva. Num segundo momento, procuramos explorar o contributo, (i.e., o valor preditivo) de cada uma das variáveis de forma sequencial. Assim, tentamos perceber se os passos que compõem o Modelo de Processamento de Informação Social influenciam o fenómeno da resposta assertiva.

A presente dissertação consiste num artigo científico, escrito em língua inglesa, onde é apresentada a investigação realizada, cujo formato e organização seguem as normas da revista *Journal of Adolescence*, para a qual se pretende submeter o mesmo, posteriormente. A decisão da elaboração deste trabalho neste formato deve-se à inovação que o mesmo apresenta, mostrando-se pertinente a

sua publicação para a comunidade científica.

What prones adolescents to act assertively: the social information processing in assertiveness

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Abstract:

The purpose of the present study is to investigate the different steps of social information processing that may prone assertive behavior during adolescence. The Social Information Processing Model was used as a theoretical framework to explore the predictive role of various SIP steps on assertive responses. Considering emotional processing alongside the cognitive processing of social information, as well as applying both to the understanding of adolescent's assertiveness has been neglected in the literature. Through a new instrument (SSIPA) that evaluates the SIP steps, we tested the model sequentially, and separately for boys and girls. The main results suggested that neutral attributions predict assertive responses. Additionally, hostile attributions influenced assertive responses through emotional states. Furthermore, anger and sadness lead to a tendency to be assertive, while shame had a negative effect in it. Evaluation of response did not had a great effect, being only associated with sadness in boys. Considering this, our research contributed to the understanding of SIP's role in adolescent's assertive behavior, especially given the differences found between girls and boys model. Overall, these results raise the hypothesis that SIP in adolescents occurs as a "preemptive process". Thay way the choice of response would be based on a more emotional reactivity process.

Key-words: social information processing; assertiveness; adolescents; emotions;

preemptive process.

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Introduction

A considerable number of authors have defined assertiveness (e.g. Gambril, 1995; Schroeder, Rakos, & Moe, 1983; Trower, 1995) and have recognized it as an expression of personal desires with respect for other people's wishes (e.g. Alberti & Emmons, 1970; Lange & Jakubowski, 1976; Rakos, 2006). Rich and Schroeder (1976) aditionally, established that assertiveness includes an ability to search for, maintain or augment reinforcement in an interpersonal situation. Likewise, assertive responses involve an adequate expression of personal desires and needs, when that expression can bring privation of reinforcements or punishment (Rich & Schroeder, 1976). Accordingly, Rakos (1991) defined assertive behavior as a learned and expressive skill that only applies to interpersonal situations, involving a risk of a negative reply by others. Such situations may be conceptualized as: a) negative assertiveness, characterized by the expression of negative feelings and disagreement, asking someone to change a specific behavior, defense of one's rights and the denying of unreasonable requests; b) display and management of personal limitations, as the capacity to ask for help when facing problems and dealing with critics and pressure; c) initiating assertiveness, that refers to taking initiative in social situations; and d) positive assertiveness, as the expression of positive emotions and feelings, giving and receiving complements and thanks (Arrindel, Sanderman, & Ranchor, 1990).

Diverse assertive contexts have distinct indirect effects in substance use. Negative assertiveness was found to be related with the no use of substances while the initiating assertiveness associated with its onset (Trudeau, Lillehoj, Spoth, & Redmond,

2003) and to the pursuit for care services (Godley, Godley, Dennis, Funk, & Passeti, 2002). Furthermore, initiating assertiveness was also negatively associated with depression (Spirito, Hart, Overholser, & Halverson, 1990), and loneliness (Jones, Freemon & Goswick, 1981; Jones, Hobbs, & Hockenbury, 1982), and to reduced homelessness and its symptoms (Coldwell & Bender, 2007). Adittionally, assertiveness in general may impact several levels of the psychosocial functioning. Many advantages of assertive training have been found in chronic pain (Winterowd, Beck, & Gruener, 2003) and chronic diseases, such as HIV (Weinhardt, Carey, Carey, & Verdecia, 1998); depression (Klosko & Sanderson, 1999); children at risk of bullying (MacIntyre Carr, Lawlor, & Flattery, 2000); Borderline Personality Disorder, bipolarity and addictions (Beck, Freeman, & Davis, 2004); psychiatric patients' self-concept and adequate expression of humor and thoughts (Lin et al., 2008); and chronic schizophrenics' social anxiety and communication skills (Lee et al., 2013). Finally, assertiveness training increased rates of self-esteem in girls and women (Stake, DeVille, Pennel, 1983; Stake & Pearlman, 1980), decreasing their negative emotions and promoting mental health (Chan, 1993).

Particularly, assertiveness may help adolescents to act in a more adaptive way. Recent studies have identified a link between assertiveness and well-being and reduced anxiety (Sarkova et al., 2013). For instance, research showed that assertive adolescents report more often having friends' support, being the older ones the most assertive (Kimble, Marsh, & Kiska, 1984; Eskin, 2003). Also, according to Wise, Bundy, Bundy and Wise (1991) assertiveness plays an important role in the education of young people. Assertive training in adolescents is associated with improvements in aggressive behavior, perception of self-efficacy (Dong, Hallberg, & Hassard, 1979; Pentz &

Kazdin, 1982) and decreased drugs abuse (Englander-Golden, Elconin, Miller, & Schwarzkopf, 1986).

Given its negative implications, aggressive behavior has been the most commonly studied social behavior, including using a social information processing framework (e.g. Calvete & Orue, 2012; Crick & Dodge, 1996; De Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Harper, Lemerise, & Caverly, 2010; Laible, McGinley, Carlo, Augustine, & Murphy, 2014; Perry, Perry, & Rasmussen, 1986; Slaby & Guerra, 1988). In contrast only a few studies have looked on competent social behavior (Crick & Dodge, 1994; Dodge & Price, 1994; Laible et al., 2014; Nelson & Crick, 1999), which is directly associated with prosocial and assertive responses (Deluty, 1981; Pettit, Dodge, & Brown, 1988) and may have positive implications as stated above. Thus, and even if cognitive perspectives have early on been applied to assertiveness (Heimberg & Becker, 1981), there is still a general lack of knowledge and understanding of the idiossyncratic cognitive processes underlying assertiveness, which might prove useful in improving assertiveness training and assertiveness based intervention strategies.

The Social Information Processing model, as conceptualized by Dodge (1986), proposes that children process social information sequentially, following several steps. In its reformulated version (Crick & Dodge, 1994), the first step is the encoding of social cues that defines the situation and gives information to the individual, taken both from internal (e.g. anxiety, palpitations or perspiration) and/or external (e.g. the context and the people involved) cues. Next, those cues are interpreted according to the cognitive schemas, emotions and past experiences that framed the individuals' social experiences, guiding the process by which the individual attributes intent to others'

behaviors. Concurrently, goals for the situation are clarified, which can be social (e.g. being accepted in a social group) and/or individual (e.g. achieving victory). Considering these goals, the individual accesses useful and available behavioral responses from his idiosyncratic repertoire, depending on their past application in similar situations or in trying to attain similar goals. Each behavior is evaluated according to the perception of the consequences of responses, the adequacy of those responses and the expectancy of self-efficacy in practicing them. Consequently, one of the responses is chosen and, finally, the chosen response is enacted. More recently, De Castro (2004) and Lemerise and Arsenio (2000) have underlined the importance that emotion may play in SIP. The intensity and the capacity for coping with feelings arisen from social situations could lead to a limited variety of available responses (Lemerise & Arsenio, 2000), since emotions would interfere with reasoned thinking or tasks that demands concentration (Lazarus, 2006). Additionally, Crick and Dodge (1994) defended that emotions increase the probability to be involved in a "preemptive processing", meaning an impulsive and premature behavioral enactment: instead of undergoing all processing steps, the choice of response would be based on a strong emotional reactivity.

To date, research about SIP steps showed differences according to the social behavior it refers (Laible et al., 2014). Evidence has supported a tendency of prosocial adolescents to do less hostile and more benign attributions (Nelson & Crick, 1999; Laible et al., 2014). Regarding emotional process, prosocial adolescents engaged in less negative emotions (Nelson & Crick, 1999). Concerning the type of emotions linked to assertiveness, anxiety (Larijani, Aghajani, Baheiraei, & Neiestanak, 2010) and shame have been negatively associated with assertive responses, since shame is a negative state associated to disruption of behavior and cognitive confusion, priming to bad adjustment

(Lewis, 2008; Schmader & Lickel, 2006). In addition, studies showed prosocial adolescents evaluated aggressive responses more negatively and prosocial responses more positively (Laible et al., 2014; Nelson & Crick, 1999). So far, research has demonstrated assertive individuals to have higher self-efficacy expectations (Chiauzzi & Heimber, 1983). Therefore, assertive individuals evaluated more positively the consequences of negative assertiveness, particularly refusal (Kuperminc & Heimberg, 1983), judging them as more appropriated (Frisch & Froberg, 1987). In fact, Rakos (1991) found that the general population evaluated assertiveness as more competent and desirable than aggressive behavior for expressing personal rights, seeing it as suitable for competitive persons (Levin & Gross, 1987) and useful in people who work in corporations (Solomon, Brehony Rothblum, & Kelly, 1982). However, much is still to be learnt in social information processing (Fraser et al., 2005).

Although assertiveness has been studied according to some concepts that integrate SIP's model, as emotions and evaluation of response, it has never been fully perceived in light of this model, though it has been designed for any social interaction (Crick & Dodge, 1994). We intended to do that, and by doing so help clarify the role that attributions of intent, emotions and evaluation of assertive responses may play in the self-reported practice of assertive behavior. Conclusions derived from our results may, moreover, yield practical implications to designing assertive training models. Accordingly, and in line with previous research, we expected that all types of assertiveness would be positively related to a neutral attribution of intent and to a positive evaluation of SSIPA assertiveness, with no significant correlation with negative emotions. Finally, shame would be negatively related to all assertive responses.

Method

Participants

The sample was made of 522 adolescents recruited from eight Portuguese public schools, between the 9th and 12th school grade. Of the sample, 57.5% were girls (n=300) and 42.5% were boys (n=222). Participants' mean of years in school was 10.03 (SD=0.823). Due to missing data, it was impossible to determine the number of education years of two participants. Boys' mean of school years was 9.97 (SD=.800) and girls 10.08 (SD=.838). Of the sample, 31.8% were attending 9th grade, 33.3% were attending 10th grade, 34.1% were attending 11th grade and 0.4% were attending 12th grade; boys and girls had attended a similar mean number of school years (*t* test=-1.5; df=518; p=.137). The majority of the students had never been retained in a school year before (57.7%). Regarding the socioeconomic status, 54.0 % of the participants were classified has having a low socioeconomic status (n=282); 41.0% were from a medium socioeconomic status (n=214) and 1.1% (n=6) were from a high socioeconomic status. As for the household, the majority of the participants live with their nuclear family (93.9%). Boys and girls were uniformely distributed regarding socioeconomic status ($\chi 2$ = 4.943; p = .08) and school grades ($\chi 2$ = 4.353; p = .23). Socioeconomic levels were defined as low, medium and high.

Measures

The Scenes for Social Information Processing in Adolescents (**SSIPA** - Vagos, Rijo, & Santos, 2015) propose to evaluate diverse steps involved in the processing of social information. It uses ambiguous stories that depict relational or overt provocation, as asks respondents to rate probabilities of a neutral or hostile attribution, followed by

the intensity of three negative emotions: anger, sadness and shame. Then, four options of social behavior (assertiveness, passiveness, overt aggression and relational aggression) are presented, and the individual is asked to rate each one of them, according to several evaluation criteria: response valuation, response self-efficacy, personal outcome expectancy and social outcome expectancy. Afterwards, a probability of response is asked. In this study we used the measures referring to both types of attribution, all three emotions, and the positive evaluation and probability of choosing an assertive response. The internal consistency values in the original study for almost every subscale were satisfactory (ranging between .69 and .93), considering a cutoff point of .70 (Field, 2009). In our study the internal consistency was satisfactory: α=.67 for neutral attribution; α=.69 for hostile attribution; α=.76 for anger; α=.66 for sadness; α=.79 for shame; α=.90 for evaluation of assertive response when relationally provoked; α=.91 for overt evaluation of assertive response when overtly provoked; α=.70 for assertive response in men; α=.67 for assertive response in women. It is important to note that in the present study we named "SSIPA assertiveness" to the assertive response evaluated by SSIPA.

The ***Short Version of the Scale for Interpersonal Behavior*** (**SBI-r**; Vagos, Pereira, & Arrindel, 2015) uses 25 items rated twice, to measure the emotional and behavioral components of assertiveness (i.e., discomfort in being assertive and frequency of assertive behavior); we only used the frequency of behavior measure. It is organized in 4 dimensions: negative assertiveness, positive assertiveness, initiative assertiveness and display and management of personal limitations assertiveness (cf. introduction section). The internal consistency coefficients of this measure for

Portuguese adolescents were .68, .77, .70 and .75. All four subscales were found to have good internal consistency within the current sample (α >.70): α=.71 for Negative Assertiveness; α=.78 for Management of Personal Limitations Assertiveness; α=.75 for Initiative Assertiveness; α=.81 for Positive Assertiveness.

Procedures

Data collection involved self-report instruments and was approved by the national committee for evaluation of ethics within procedures for studies conducted in school settings. Authorization was asked from the participants with age above 18 and to the parents of minors. A member of the investigation team went to each school and asked for the authorization, in addition to granting confidentiality and anonymity of the responses. Information about the study was presented in a paper that preceded the instrument, where socio-demographic information was also collected. The questionnaires took 20-25 minutes to fill by the adolescents that voluntarily accepted to participate in this research, and that was done in the classroom using time provided by available teachers.

Data Analyses

Firstly, data analyses were carried out using SPSS software, version 22 (SPSS, Chicago, IL, USA), for analyzing the reliability for each measure/dimension we intended to include in the research (see instruments section). After that, using Mplus, version 6.12 (Angeles, CA: Muthén & Muthén) we conducted confirmatory factorial analyses and path analyses including causality relations and interdependence between variables. Confirmatory factor analyses (CFA) were initially computed in order to

evaluate the validity of the measures' factorial models. Sequentially path analysis was used to test the main goals and hypothesis of the current work. Path analysis is a special case of Structural Equation Modeling (SEM) that considers the hypothetic casual relations between variables that have already been defined (Pilati & Laros, 2007; Schreiber, Nora, Stage, Barlow, & King, 2006). Structural equation modeling procedures estimate the optimal effect of one set of variables on another set of variables in the same equation, controlling for error (Byrne, 2012; Kline, 2005). According to Hoyle and Smith (1994) SEM has two advantages over analysis of variance or multiple regression analysis. First, SEM can evaluate the magnitude of relations among psychological constructs while controlling for measurement error associated with fallible indicators of theoretical constructs. Second, it can estimate and evaluate multiple equations (i.e., unique and common paths) simultaneously in a single structural model. Effects with $p<0.050$ were considered statistically significant. Model fit was evaluated by indicators able to evaluate the regression coefficients significance and goodness of fit indices. According to Hair, Back, Babin and Anderson (2009): two global adjustment indicators (i.e., Root Mean Square Error of Approximation (RMSEA $\leq$.07) and Chi-square ($\chi 2 \geq$.05) test, giving priority to RMSEA because of $\chi 2$ sensitivity to sample size above 200 subjects); and one comparative adjustment indicators (i.e. Comparative Fit Index (CFI $\geq$.92). The used values were in accordance with the sample size and the number of variables.

Results:

Confirmatory factor analyses

We preliminarly tested for the distribution of the results of each measure were

analyzed against a normal distribution, using the One-Sample Kolmorogov Smirnov tests. All tests were significant ($p<.001$) with values ranging between .068 and .230. Consequently, non-parametric tests were used throughout the data analyses.

A model was proposed concerning the previously elaborated hypothesis, derived from previous research results and existing literature about this topic. The model assumes a linear and sequential processing of social information. The model included 12 latent variables: two attributions of intent (hostile and neutral), three emotions (anger, sadness and shame), two types of evaluation of assertive response (according to relational or overt scenarios) and five types of assertive behavior (SSIPA assertiveness, negative assertiveness, expression and management of personal limitations assertiveness, initiative assertiveness and positive assertiveness). Firstly, preliminary confirmatory factor analyses indicated the appropriateness of measuring the latent variables as reflected by the observed indicators (i.e., items). Results for these analyses are presented in Table 1 and were satisfactory, although in some instances they were slightly higher than the cutoff criteria for RMSEA (i.e., four-factor EC-r).

Table 1: Confirmatory Factor Analyses.

	$\chi 2$	df	*p*	RMSEA	CFI
SSIPA Hostile Attribution	14.728	5	.012	0.062	.988
SSIPA Neutral Attribution	3.640	2	.16	.040	.997
SSIPA Anger	13.592	5	.854	.059	.992
SSIPA	3.877	2	.14	.043	.997

Sadness					
SSIPA Shame	3.311	2	.19	.037	.999
SSIPA Evaluation of Ass. Responses	583.154	245	.000	.053	.985
SSIPA Assertive Responses for Girls	3.301	2	.19	.047	.994
SSIPA Assertive Responses for Boys	.315	2	.85	.000	1.00
SBI-r Negative A. Limitation A. Initiative A. Positive A.	1008.054	269	.000	.075	.887

SSIPA= Scenes for Social Information Processing in Adolescents. SBI-r= Short Version of the Scale for Interpersonal Behavior.

Structural equation modeling

The hypothesized structural model was then tested. This model included both direct and indirect paths between attributions of intent and assertive behavior. Indirect paths consisted of mediation through SIP components. With this model, we tried to understand if attributions of intent predicted assertive responses and if emotions and evaluations of response mediated that influence. This was carried out for boys and girls separately, given that measures for the choosing of assertiveness taken from the SSIPA

(Vagos, Rijo & Santos, 2015) were found to be variant and constituted differently for boys and girls.

For boys, the fit indexes were not satisfactory for the original model ($\chi 2$ =1061.012; df=472; p<.001; RMSEA=.082; p<.001; CFI=.884). As some of the paths were non-significant, a new model was estimated, with non-significant paths excluded. The fit indexes improved, although they were still not excellent ($\chi 2$ =1106.140; df= 472; p<.001; RMSEA=.085; p<.001; CFI=.874). The resulting model is presented in Figure 1.

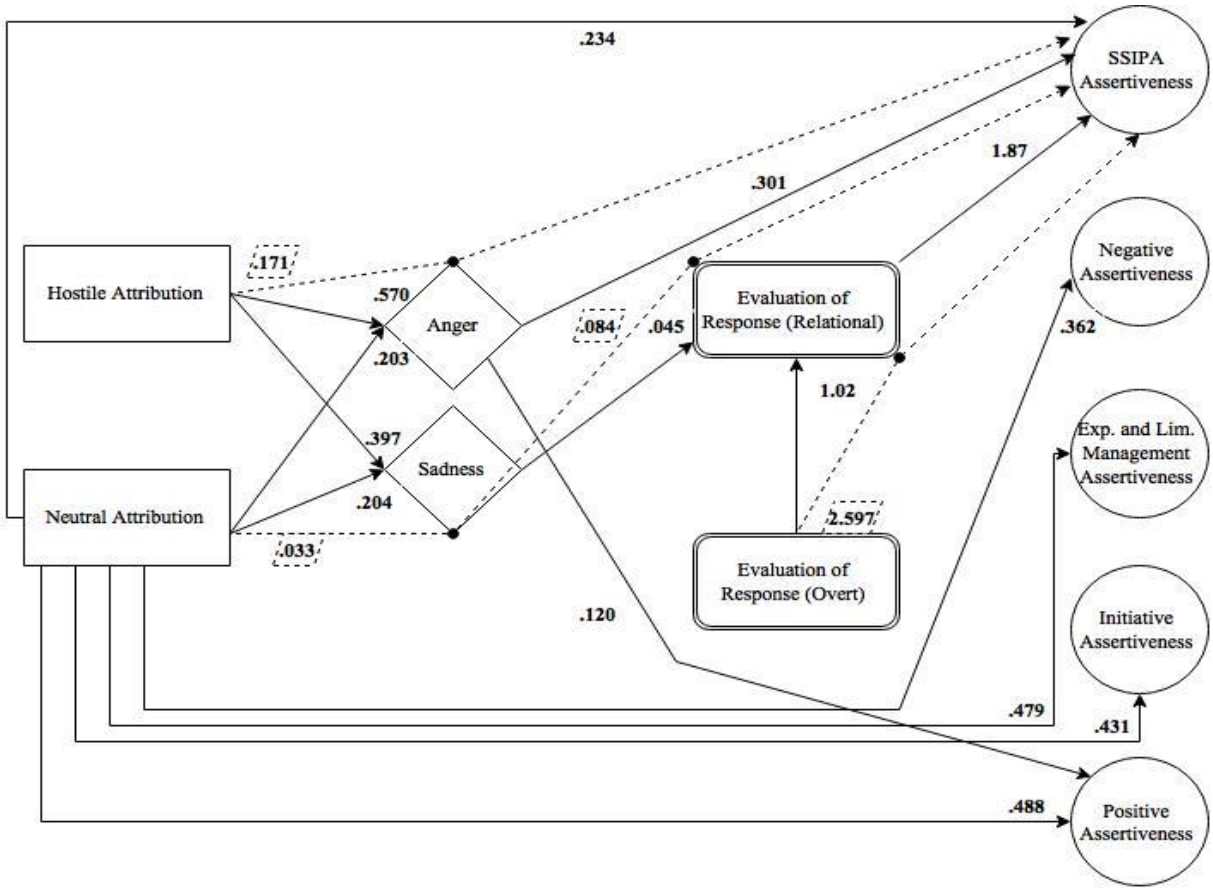

Figure 1. Structural Equation Modeling for Social Information Processing in boys.

Results displayed significant direct paths between neutral attribution of intent and all types of assertive responses, with the highest regression coefficient being found for positive assertiveness. Also, a positive direct effect was found from anger to positive assertiveness. No other effects were found for the other three types of assertiveness (i.e., negative assertiveness, display and management of personal limitations assertiveness and initiative assertiveness). Both hostile and neutral attribution predicted anger and sadness, although hostile attribution had the bigger effects. Anger is the only emotion that predicted directly and positively SSIPA assertiveness. Sadness predicted the evaluation of assertive responses when relationally provoked; thus relational evaluation of response predicted positively SSIPA assertiveness. The evaluation of assertive responses when relationally provoked predicted SSIPA assertiveness and was positively predicted by the evaluation of assertive responses when overtly provoked. Evaluation of assertive response when overtly provoked was not associated with any other variable.

As for significant indirect paths, anger had a mediator effect between hostile attribution and SSIPA assertiveness. Evaluation of response in relationally provoked situations mediated the association between evaluating assertiveness in overtly provocative situations and choosing to behave assertively. Anger also had a mediatior effect between hostile attribution and SSIPA assertiveness. An indirect path was found between hostile attribution and SSIPA assertiveness, mediated by sadness and a positive relational evaluation of the assertive response.

For girls, the fit indexes were satisfactory for the original model ($\chi2$=1085.709;df=473;p<.001; RMSEA=.069; P<.001; CFI=.917). To achieve a more parsimonious model, the non-significant paths included in that model were

subsequently excluded, and a new was estimated. The fit indexes improved, being good ($\chi 2$=1085.709; df=473;p<.001; RMSEA=.069;p<.001; CFI=.917).

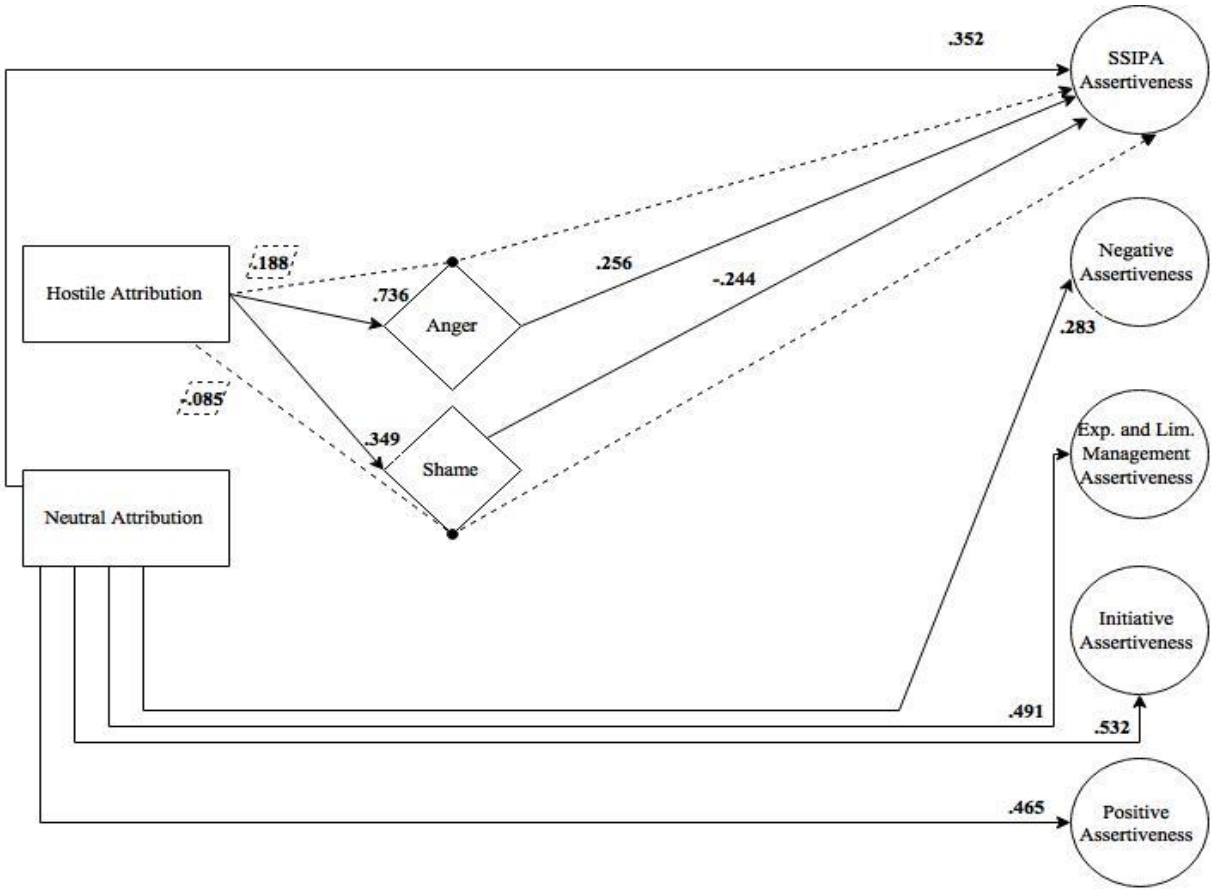

Figure 2. Structural Equation Modelling for Social Information Processing in girls.

Similarly, to what was found for boys, significant direct paths showed that neutral interpretations of the situation predict assertive responses, with the highest regression being found for initiating assertiveness. Shame and anger were predicted by hostile attribution. SSIPA assertiveness was positively predicted by anger and negatively by shame. No other effects were found for the other types of assertiveness

(i.e., negative, expression and management of limitations, initiative and positive assertiveness). Evaluation of response did not have any effect or mediated any variables.

As for indirect paths, SSIPA assertiveness was predicted by hostile attribution and SSIPA assertiveness, mediated positively by anger and negatively by shame.

The regression coefficients we obtained for negative assertiveness, expression and management of limits assertiveness, initiative assertiveness and positive assertiveness showed that these variables were not widely explained by the predictors of the model. However, SSIPA assertiveness had an acceptable regression coefficients evidencing that 67% of the SSIPA assertiveness in girls and 31% of the SSIPA assertiveness in boys were explained by the predictors (Table 2).

Table 2: R^2 square coefficients.

	Girls	Boys
SBI-r Negative Assertiveness	.032	.049
SBI-r Expression and Management of Limits Assertiveness	.099	.093
SBI-r Initiative Assertiveness	.133	.083
SBI-r Positive Assertiveness	.085	.103
SSIPA Assertiveness	.665	.309

Discussion

The present study intended to provide some insights into the complex Social Information Processing as it applies to assertiveness. This is an established and largely

disseminated theoretical model explaining the way we process social information (Crick and Dodge, 1994). Although SIP had been largely applied to explaining aggression, it had seldom been investigated in relation to other interpersonal patterns, namely assertiveness. In this study we attempted to fill an existing gap in the literature by exploring the sequential predictive role of SIP steps, including emotional states, on different types of assertive responses (De Castro, 2004; Lemerise, & Arsenio, 2000). In accordance with Pössel, Seemann, Ahrens and Hautzinger (2006), we assumed that each step of the SIP mediated the relationship between earlier and later steps, through multiple regressions. In addition, the model was separately applied to boys and girls.

To start with, we intended to explore the relations between attributions of intent and assertive responses. In the case of neutral attributions justifying competent behavior, our results supported the literature (Nelson & Crick, 1999; Laible et al., 2014). In fact, neutral attributions predicted all types of assertiveness and had the main predictor effect for both boys and girls. It is important to emphasize thinking neutrally of ambiguous provocations in social situations predicted the expression and management of personal limitations the highest for girls and positive assertiveness for boys. As for hostile attributions, our findings showed that assertive responses evaluated by the SSIPA are positively predicted by hostile attributions when mediated by anger and sadness. Furthermore, assertiveness was negatively predicted by hostile attributions when mediated by shame. Consequently, it seems that even when adolescents interpret hostility of ambiguous situations, they can be assertive, meaning they can express negative emotions and feelings in a competent away, as for example negative assertiveness. These findings constitute a new contribution to the understanding of assertive behavior, associating it to hostile interpretations and not only to neutral

attributions of intent. It shows that even when negative emotions arise adolescents can engage in an adaptive behavior.

In this study, we expected negative emotions to be only predicted by hostile attributions. However, boys' emotions were predicted both by the two types of interpretations. Ciarrochi, Hynes and Crittenden (2005) found out that women and girls have more cognizance about their emotional display in hypothetical scenarios than men. Accordingly, boys may have had difficulties in becoming aware and reporting what their emotions would be when facing hypothetical situations. That way, and given that previous humor can influence evaluation of response and the access of negative emotional states (Harper, Lemerise, & Caverly, 2010), boys would have more problems identifying what they would feel in those situations from what their humor was in that moment. That way, even thinking neutrally about the situations, boys would identify emotional arousal.

Our results showed that when boys and girls get angry they can be assertive without evaluating the response as positive or negative. This is in line with literature that defends that some emotions are often difficult to control, leading people to act impulsively (Lazarus, 2006). In fact, anger was the only emotion felted by both genders, leading to assertive responses. Although Simon and Nath (2004) reported that men and women seem to express anger as often but women get more intensely angry, literature has found inconsistent data about differences of gender in anger (e.g. Brody & Hall, 2008; Fischer, Rodriguez Mosquera; van Vianen, & Manstead, 2004; Garside & Klimes-Dougan, 2002). Moreover, our results showed an association between positive assertiveness and anger. A possible explanation could lie in the theoretical model of social ranking (Gilbert, 2000), according to which an inferior self-perception could lead

to prosocial behavior as a defense mechanism. In this line, boys would choose to express positive assertive responses in order to pacify the situation. However, this is speculative and we will need to wait for future research to analyze in depth the role of anger in assertive responses.

Despite literature reporting sadness as more felted by women (Hess et al., 2000; Garside & Klimes-Dougan, 2002), in our research this emotion showed to possess a mediator effect between attributions of intent and assertiveness, but only for boys. Sadness was the only emotion related to evaluation of response when relationally provoked. This is consistent with researchers' assumptions that this emotion prone people to engage in attention inward process (Lazarus, 1991), promoting a reflective function (Bonanno & Keltner, 1997). In fact, sadness seems to be related with more detail-oriented information processing, analytic strategies (Overskeid, 2000), more deliberation (Schwarz, 1990) and less reliance on heuristics and stereotyping when making a decision (Bodenhausen, Gabriel, & Lineberger, 2000; Schwarz, 1998). According to Schwarz (1990), the decreased of self-confidence characteristic of sadness promotes an accounted decision making process: "with sadness comes accuracy" (Storbeck & Clore, 2005, p.785).

Concerning shame, the results confirmed a negative effect of it in assertive responses, which is consistent with previous studies (Lewis, 2008; Schmader & Lickel, 2006). As a negative mediator between hostile attributions and assertiveness in this study, shame was only felted by girls. This is in accordance with studies that showed shame as especially stated by women (Plant, Hyde, Keltner, & Devine, 2000) and girls (Alessandri & Lewis, 1996). Motives and goals in life are different for men and women and, since emotions have motivational functions (Brody & Hall, 2008), gender

differences in emotional processes would be comprehensible. However, results in this area are inconsistent (Brody & Hall, 2008) and some authors (Berkowitz, 1993; Lazarus, 1999; Lewis, 1992) further state that anger can be a reaction to internally derived negative feelings, such as shame, in males. In that line of thinking, boys in our sample could have reacted to shame by becoming angry, and so that would be the reason why they did not report shame at all.

In contrast, our hypothesis about the evaluation of response being paramount in explaining differences in the choosing of assertive responses, was not confirmed. In fact, for girls, the evaluation of response did not play any role in activating any assertive response. These findings reinforce the idea that women are more emotionally intense (Robinson & Johnson, 1997), conscious, expressive, involved and complex than men (Briton & Hall, 1995; Simon and Nath, 2004; Thayer, Rossy, Ruiz-Padial, & Johnsen, 2003). That way, girls made a choice of being assertive according to an emotional activation and not a cognitive deliberation on the response. In boys, evaluation of response overtly provoked had a positive impact in evaluation of response when relationally provoked but none of the others variables had a predictive value in overt evaluation. Thus it's probable that, when confronted with more relational meanings of a situation, people experience more emotional arousal, as suggested by Lazarus (2006). That way would be understandable that emotions may lead to an evaluation of response relationally provoked rather to an overtly provoked, as depicted in our findings.

It is also probable that other variables influence the choice for assertiveness since neutral attributions, which did not predict negative emotions, did not lead to the evaluation of response either. This possibly happens due to the influence of several other steps of SIP such as reappraisals, previous humors, emotional process, individual

differences and responses repertoires.

Although SIP variables have been tested and associated with assertiveness, this had never been attempted using a sequential process. In this study, results do not support a major effect of evaluations of response in choosing or actually behaving assertively. However, it seems that emotion influences social processing (Lemerise & Arsenio, 2000), increasing the tendency to engage in a "preemptive processing" (Crick & Dodge, 1994). It is, therefore, possible that adolescents engage in a different SIP, which does not considers evaluation of responses before selecting and enacting.

One of the present study limitations lies using what would be latent variables in the structural equation model as observed variables/ indicators, after computing the sum of the items that constituted each one of them. This was done in trying to achieve model identification and may have resulted in the small percentage of variance explained by the independent variables of the study. Furthermore, the structural model did not fit as expected for boys, indicating that diverse variables and/or data gathering methods should be used in the future to better understand the cognitive and emotional motivations underlying boys' assertiveness. Wherein, our second limitation is linked with data collection, since only self-report instruments were used. Despite the good psychometric proprieties of the instruments, this type of assessment has issues of reliability and validity as answers depend entirely on subjective responses. Moreover, social desirability may have biased the responses. This would explain why the individuals choose negative emotions (which are deemed acceptable to feel) but then choose particularly assertiveness (which is deemed acceptable to act), though the more impulsive behavior following, for example, anger, might actually be aggression in real life. Moreover, although we compared the models as gender differences, we did not test

their differences statistically. That way, being a limitation of our study, this gender differences need to be admitted carefully. Finally, we faced the impossibility to test such a complex process as SIP with feedback loops. The model was tested with sequential attributions of intent, emotions, evaluation of response and enactment of several responses. Thereby, we conceptualized SIP as a multiple regression model in which each stage would influence the preceding and subsequent stages. Still, Crick and Dodge (1994) refer to possible loop effects between the several steps of SIP, which would be interesting to consider in future research.

Despite the limitations presented above, results indicated that neutral attribution was the most associated predictor of assertive behavior, and pinpointed the relevance of considering negative emotions within the cognitive processing of social information (De Castro, 2004; Lemerise & Arsenio, 2000), also pertaining to assertiveness, mediating hostile attributions. Anger and shame lead to a less cognitive and more emotional processing, while sadness pointed to a deliberated process. Also, this emotional and cognitive process may diverge in boys and girls, and so, as underlying assertiveness, assertive training may need to be specified to gender idiosyncrasies of adolescent development.

References

Alberti, R. E. & Emmons, M. L. (1970). *Your perfect right: a guide to assertive behavior*. San Luis Obispo, CA: Impact.

Alessandri, S. A., & Lewis, M. (1996). Differences in pride and shame in maltreated and nonmaltreated preschoolers. *Child Development*, *67* (4), 1857– 1869.

Arrindell, W. A., Sanderman, R., & Ranchor, A. (1990). The scale for interpersonal behaviour and the Wolpe-Lazarus assertiveness scale: A correlational comparison in a non-clinical sample. *Personality and Individual Differences*, *11* (5), 509–513. doi.10.1016/0191-8869(90)90064-X.

Beck, A., Freeman, A., & Davis, D. (Eds.). (2004). *Cognitive therapy of personality disorders* (2nd ed.). New York: The Guilford Press.

Berkowitz, L. (1993). Pain and aggression: Some findings and implications. *Motivation and Emotion*, *17* (3), 277–293. doi.10.1007/BF00992223.

Bodenhausen, G. V., Gabriel, S., & Lineberger, M. (2000). Sadness and susceptibility to judgmental bias: The case of anchoring. *Psychological Science*, *11* (4), 320–323.

Bonanno, G. A., & Keltner, D. (1997). Facial expressions of emotion and the course of conjugal bereavement. *Journal of Abnormal Psychology*, *106* (1), 126–137.

Briton, N. J., & Hall, J. A. (1995). Beliefs about female and male nonverbal communication. *Sex Roles*, *32*(1-2), 79–90. doi.10.1007/BF01544758.

Brody, R. L., & Hall, J. A. (2008). Gender and emotions in context. In Lewis, M., Haviland-Jones, J. M., & Barret, L. F. B. (3rd ed.). *Handbook of Emotions*. (pp.

395-408). New York/London: The Guilford.

Byrne, B. M. (Ed.). (2012). *Structural equation modeling with Mplus: basic concepts, aplications, and programming.* New York: Routledge.

Calvete, E., & Orue, I. (2012). Social information processing as a mediator between cognitive schemas and aggressive behavior in adolescents. *Journal of Abnormal Child Psychology, 40* (1), 105–117. doi.10.1007/s10802-011-9546-y.

Camodeca, M., & Goossens, F. A. (2005). Aggression, social cognitions, anger and sadness in bullies and victims. *Journal Child Psychology Psychiatry, 46* (2), 186-197.

Chan, D. W. (1993). Components of assertiveness: Their relationships with assertive rights and depressed mood among Chinese college students in Hong Kong. *Behaviour Research and Therapy. 31* (5), 529-538.

Chiauzzi, E., & Heimberg, R. G. (1983). The effects of subjects' level of assertiveness, sex, and legitimacy of request on assertion-relevant cognitions: An analysis by postperformance videotape reconstruction. *Cognitive Therapy and Research, 7* (6), 555–564. doi.10.1007/BF01172891.

Ciarrochi, J., Hynes, K., & Crittenden, N. (2005). Can men do better if they try harder: Sex and motivational effects on emotional awareness. *Cognition & Emotion, 19* (1), 133–141. doi.10.1080/02699930441000102.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115* (1), 74–101. doi.10.1037/0033-2909.115.1.74.

Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in

reactive and proactive aggression. *Child Development, 67* (3), 993–1002. doi.10.2307/1131875.

Coldwell, C. M., & Bender, W. S. (2007). The effectiveness of assertive community treatment for homeless populations with severe mental illness: A meta-analysis. *The American Jornal of Psychiatry*, *164* (3), 393–399. Retrieved from http://ajp.psychiatryonline.org/cgi/content/abstract/164/3/393.

De Castro, B. O. (2004). The development of social information processing and aggressive behaviour: Current issues. *European Journal of Developmental Psychology*, *1* (1), 87–102. doi.10.1080/17405620444000058.

De Castro, B. O., Merk, W., Koops, W., Veerman, J.W., & Bosch, J. D. (2005). Emotions in Social Information Processing and Their Relations with Reactive and Proactive Aggression in Referred Aggressive Boys. *Journal of Clinical Child and Adolescent Psychology 34* (1), 105–116. doi.10.1207/s15374424jccp3401.

De Castro, B. O., Veerman, J. W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: A Meta-Analysis, *Child Development, 73* (3), 916–934.

Deluty, R. H. (1981). Alternative-thinking ability of aggressive, assertive, and submissive children. *Cognitive Therapy and Research*, *5* (3), 309–312. doi.10.1007/BF01193414.

DiLiberto, L., Katz, R. C., Beauchamp, K.L., & Howells, G. N. (2002). Using articulated thoughts in simulated situations to assess cognitive activity in aggressive and nonaggressive adolescents. *Journal of Child and Family Studies*, *11* (2), 179–189.Retrieved from

http://link.springer.com/article/10.1023/A:1015125625312.

Dodge, K. A. (1986). A social information processing model of social competence in children. In Perlmutter, M. (Ed.). *Cognitive perspectives of children's social and behavioral development* (pp. 77-125). New York: Psychology Press.

Dodge, K. A., & Crick, N. R. (1990). Social information-processing bases of aggressive behavior in children. *Personality and Social Psychology Bulletin*, *16* (1), 8–22. doi.10.1177/0146167290161002.

Dodge, K. A., & Price, J. M. (1994). On the relation between social information processing and socially competent behavior in early school-aged children. *Child Development*, *65* (5), 1385–1397. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.1994.tb00823.x/full

Dodge, K. A, & Somberg, D. R. (1987). Hostile attributional biases among aggressive boys are exacerbated under conditions of threats to the self. *Child Development, 58* (1), 213–224. doi.10.1111/1467-8624.ep7264206.

Dong, Y. L., Hallberg, E. T., & Hassard, J. H. (1979). Effects of assertion training on aggressive behavior of adolescents. *Journal of Counseling Psychology, 26* (5), 459-461.

Englander-Golden, P., Elconin, J., Miller, K. J., & Schwarzkopf, A. B. (1986). Brief say it straight training and follow-up in adolescent substance abuse prevention, *Journal of Primary Prevention, 6* (4), 219–230.

Eskin, M. (2003). Self-reported assertiveness in Swedish and Turkish adolescents: A cross-cultural comparison. *Scandinavian Journal of Psychology, 44* (1), 7–12.

Field, A. P. (Ed.). (2009). *Discovering statistics using SPSS.* (3rd ed.). London: SAGE.

Fischer, A. H., Rodriguez Mosquera, P. M., van Vianen, A. E. M., & Manstead, A. S.

R. (2004). Gender and culture differences in emotion. *Emotion, 4* (1), 87–94.

Fraser, M. W., Galinsky, M. J., Smokowski, P. R., Day, S. H., Terzian, M. A., Rose, R. A., & Guo, S. (2005). Social information-processing skills training to promote social competence and prevent aggressive behavior in the third grades. *Journal of Consulting and Clinical Psychology, 73* (6), 1045–1055. doi.10.1037/0022-006X.73.6.1045.

Frisch, M. B., & Froberg, W. (1987). Social Validation of assertion strategies for handling aggressive criticism: evidence for consistency across situations. *Behavior Therapy, 18* (2), 181-191.

Gambrill, E. (1995). Assertion skills training. In W. O'Donohue & L. Krasner (Eds.). *Handbook of psychological skills training: clinical techniques and applications* (pp. 81–117). Boston, MA: Allyn and Bacon.

Garside, R. B., & Klimes-Dougan, B. (2002). Socialization of discrete negative emotions: Gender differences and links with psychological distress. *Sex Roles, 47* (3-4), 115–128. doi.10.1023/A:1021090904785.

Gilbert, P. (2000). The relationship of shame, social anxiety and depression: the role of the evaluation of social rank. *Clinical Psychology & Psychotherapy, 7* (3), 174–189.

Godley, M. D., Godley, S. H., Dennis, M. L., Funk, R., & Passetti, L. L. (2002). Preliminary outcomes from the assertive continuing care experiment for adolescents discharged from residential treatment. *Journal of Substance Abuse Treatment, 23* (1), 21–32. doi.10.1016/S0740-5472(02)00230-1.

Graham, S., Hudley, C., & Williams, E. (1992). Attributional and emotional determinants of aggression among African-american and Latino young

adolescents. *Developmental Psychology*, *28* (4), 731-740.

Hair, J. F. Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analyses* (7th ed.). Upper Saddle River: Prentice-Hall.

Harper, B. D., Lemerise, E. A., & Caverly, S. L. (2010). The effect of induced mood on children's social information processing: Goal clarification and response decision. *Journal of Abnormal Child Psychology*, *38*, 575–586. doi.10.1007/s10802-009-9356-7.

Heimberg, R. G., & Becker, R. E. (1981). Cognitive and behavioral models of assertive behavior: review, analysis and integration. *Clinical Psychology review, 1*, 353-373.

Hess, U., Senécal, S., Kirouac, G., Herrera, P., Philippot, P., & Kleck, R. E. (2000). Emotional expressivity in men and women: Stereotypes and self-perceptions. *Cognition & Emotion*, *14*(5), 609–642. doi.10.1080/02699930050117648.

Hoyle, R. H., & Smith, G. H. (1994). Formulating clinical research hypotheses as structural equation models: A conceptual overview. *Journal of Consulting and Clinical Psychology*, *62*, 429–440. doi:10.1037/0022-006X.62.3.429.

Hollandsworth, J. G. (1977). Differentiating assertion and aggression: Some behavioral guidelines. *Behavior Therapy*, *8* (3) 347-352.

Jones, W. H., Freemon, J. E., & Goswick, R. A. (1981). The persistence of loneliness: Self and other determinants. *Journal of Personality*, *49* (1), 27-48.

Jones, W. H., Hobbs, S. A., & Hockenbury, D. (1982). Loneliness and social skill deficits. *Journal of Personality and Social Psychology*, *42* (4), 682–689. doi.10.1037/0022-3514.42.4.682.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.).

New York: Guilford.

Klosko, J. S. & Sanderson, W. C. (Eds.). (1999). *Cognitive-behavioral treatment of depression*. Northvale, NJ: Jason Aronson.

Kimble, C. E., Marsh, N. B., & Kiska, A. C. (1984). Sex, age and cultural differences in self-reported assertiveness. *Psychological Reports, 55* (2), 419-422.

Kuperminc, M., & Heimberg, R. G. (1983). Consequence probability and utility as factors in the decision to behave assertively. *Behavior Therapy, 14* (5), 637–646.

Laible, D., McGinley, M., Carlo, G., Augustine, M., & Murphy, T. (2014). Does engaging in prosocial behavior make children see the world through rose-colored glasses? *Developmental Psychology, 50* (3), 872–80. doi.10.1037/a0033905.

Lange, A. J., & Jakubowski, P. (Eds.). (1976). *Responsible assertive behavior*. Champaign, IL: Research Press.

Larijani, T. T., Aghajani, M., Baheiraei, A., & Neiestanak, N. S. (2010). Relation of assertiveness and anxiety among Iranian university students. *Journal of Psychiatric and Mental Health Nursing, 17*, 893–899. doi.10.1111/j.1365-2850.2010.01607.x.

Lazarus, A. A. (1973). On assertive behavior: A brief note. *Behavior Therapy, 4*, 697-699.

Lazarus, R. S. (Ed.). (1991). *Emotion and adaptation*. New York: Oxford University Press.

Lazarus, R. S. (Ed.). (1999). *Stress and emotion: A new synthesis*. New York: Springer Publishing Company, Inc.

Lazarus, R. S. (2006). Emotions and interpersonal relationships: Toward a person-centered conceptualization of emotions and coping. *Journal of Personality, 74* (1), 9–46.

Lee, T. Y., Chang, S. C., Chu, H., Yang, C. Y., Ou, K. L., Chung, M. H., & Chou, K. R. (2013). The effects of assertiveness training in patients with schizophrenia: A randomized, single-blind, controlled study. *Journal of Advanced Nursing*, *69*, 2549–2559. doi.10.1111/jan.12142.

Lemerise, E., & Arsenio, W. (2000). An integrated model of emotion processes and cognition in social information processing. *Child Development, 71* (1), 107–1118.

Levin, R. B., & Gross, A. M. (1987). Assertiveness style: effects on perceptions of assertive behavior. *Behavior Modification*, *11* (2), 229–240.

Lewis, M. (Ed.). (1992). *Shame: The exposed self.* New York: Free Press.

Lewis, M. (2008). Self-conscious emotions: Embarrassment, pride, shame and guilt. In Lewis, M., Haviland-Jones, J. M., & Barret, L. F. B. (3rd ed.). *Handbook of Emotions*. (pp. 742-756). New York/London: The Guilford

Lin, Y. R., Wu, M. H., Yang, C. I., Chen, T. H., Hsu, C. C., Chang, Y. C., & Chou, K. R. (2008). Evaluation of assertiveness training for psychiatric patients. *Journal of Clinical Nursing, 17* (250), 2875–2883. doi.10.1111/j.1365-2702.2008.02343.x.

MacIntyre, D., Carr, A., Lawlor, M., & Flattery, M. (2000). Development of the stay safe programme. *Child Abuse Review, 9* (3), 200-216.

Muthén, L.K., & Muthén, B.O. (1998-2010). *Mplus User's Guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.

Nelson, D. A., & Crick, N. R. (1999). Rose-colored glasses: Examining the social information-processing of prosocial young adolescents. *The Journal of Early Adolescence*, *19*, 17–38. doi.10.1177/0272431699019001002.

Overskeid, G. (2000). The slave of the passions: Experiencing problems and selecting solutions. *Review of General Psychology*, *4* (3), 284–309.

Pentz, M. A., & Kazdin, A. E. (1982). Assertion modeling and stimuli effects on assertive behavior and self-efficacy in adolescents. *Behavior Research and Therapy, 20* (4), 365-371.

Perry, D. G., Perry, L. C., & Rasmussen, P. (1986). Cognitive social learning mediators of aggression. *Child Developmentt*. *57* (3), 700-711.

Pettit, G. S., Dodge, K. A., & Brown, M. M. (1988). Early family experience, social problem solving patterns, and children's social competence. *Child Development, 59* (1), 107–120. doi.10.2307/1130393.

Pilati, R., & Laros, J. A. (2007). Modelos de equações estruturais em psicologia: conceitos e aplicações. *Psicologia: Teoria e Pesquisa*, *23* (2), 205–216. doi.10.1590/S0102-37722007000200011.

Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly*, *24* (1), 81–92.

Pössel, P., Seemann, S., Ahrens, S., & Hautzinger, M. (2006). Testing the causal mediation component of Dodge's social information processing model of social competence and depression. *Journal of Youth and Adolescence*, *35* (5), 849–858.

Rakos, R. F. (Ed.). (1991). *Assertive behavior: theory, research, and training*. London: Routledge.

Rakos, R. F. (2006). Asserting and confronting. In Owen, H. *Handbook of communication skills* (3rd ed.) (pp. 345-381). London and New York: Routledge

Rich, A. R., & Schroeder, H. E. (1976). Research issues in assertiveness training. *Psychological Bulletin, 83* (6), 1081–1096. doi.10.1037/h0078049.

Robinson, M. D., & Johnson, J. T. (1997). Is it emotion or is it stress? Gender stereotypes and the perception of subjective experience. *Sex Roles, 36* (3-4), 235–258. doi.10.1007/BF02766270.

Sarkova, M., Bacikova-Sleskova, M., Orosova, O., Geckova, A., Katreniakova, Z., Klein, D., van deun Heuvel, W., & van Dijk, J. P. (2013). Associations between assertiveness, psychological well-being, and self-esteem in adolescents. *Journal of Applied Social Psychology, 43* (1), 147–154. doi.10.1111/j.1559-1816.2012.00988.x.

Schmader, T., & Lickel, B. (2006). The approach and avoidance function of guilt and shame emotions: Comparing reactions to self-caused and other-caused wrongdoing. *Motivation and Emotion, 30* (1), 42–55. doi.org/10.1007/s11031-006-9006-0.

Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins, & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 527–561). New York: Guilford Press.

Schwarz, N. (1998). Warmer and more social: Recent developments in cognitive social psychology. *Annual Review of Sociology, 24*, 239–264.

Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting

Structural Equation Modeling and Confirmatory Factor Analysis Results: A Review. *The Journal of Educational Research*, *99*(6), 323–338.doi.10.3200/JOER.99.6.323-338.

Schroeder, H. E., Rakos, R. F., & Moe, J. (1983). The social perception of assertive behavior as a function of response class and gender. *Behavior Therapy*, *14*, 534–544.

Simon, R. W., & Nath, L. E. (2004). Gender and emotion in the United States: Do men and women differ in self-reports of feelings and expressive behavior? *American Journal of Sociology*, *109* (5), 1137–1176.

Slaby, R. G., & Guerra, N. G. (1988). Cognitive mediators of aggression in adolescent offenders: 1. Assessment. *Developmental Psychology, 24* (4), 580-588.

Solomon, L. J., Brehony, K. A., Rothblum, E. D., & Kelly, J. A. (1983). Corporate managers'reaction to assertive social skills exhibited by males and females. *Journal of Organizational Behavior Management*, *4* (3), 49–63. Retrieved from http://search.proquest.com/docview/199270073?accountid=43959

Spirito, A., Hartford, K., Overholser, J., & Halverson J. (1990). Social skills and depression in adolescent suicide attempters. *Adolescence, 25* (99). 543-552.

Stake, J. E., DeVille, C. J., & Pennell, C. L. (1983). The effects of assertive training on the performance self-esteem of adolescent girls. *Journal of Youth and Adolescence*, *12* (5), 435–442. doi.10.1007/BF02088725.

Stake, J. E., & Pearlman, J. (1980). Assertiveness training as an intervention technique for low performance self-esteem women. *Journal of Counseling Psychology, 27* (3), 276-281.

Storbeck, J., & Clore, G. L. (2005). With sadness comes accuracy; With happiness,

false memory: Mood and the false memory effect. *Psychological Science, 16* (10), 785–791.

Thayer, J. F., Rossy, L. A., Ruiz-Padial, E., & Johnsen, B. H. (2003). Gender differences in the relationship between emotional regulation and depressive symptoms. *Cognitive Therapy and Research, 27* (3), 349–364.

Trower, P. (1995). Adult social skills: state of the art and future directions. In O'Donohue, W. & Krasner, L. (Eds.). *Handbook of psychological skills training: clinical techniques and applications* (pp. 54–80). Boston, MA: Allyn and Bacon.

Trudeau, L., Lillehoj, C., Spoth, R., & Redmond, C. (2003). The role of assertiveness and decision making in early adolescent substance initiation: Mediating processes. *Journal of Research on Adolescence*, *13* (3), 301–328. doi.10.1111/1532-7795.1303003.

Vagos, P., Rijo, D., & Santos, I. (2013 submitted). *Assessing Social Information Processing in Adolescents: A participatory approach to item development*. University of Coimbra.

Vagos, P., Rijo, D., & Santos, I. (2015 in press). Scenes for Social Information Processing in Adolescence: Item and factor analytic procedures for psychometric appraisal. *Psychological Assessment.*

Vagos, P., Pereira, A, & Arrindell, W. A. (2014). Validação da versão reduzida da Escala de Comportamento Interpessoal para adolescentes portugueses. *Psicologia: Reflexão E Crítica*, *27* (3), 452–461. doi.10.1590/1678-7153.201427305.

Weinhardt, L. S., Carey, M. P., Carey, K. B., & Verdecias, R. N. (1998). Increasing

assertiveness skills to reduce HIV risk among women living with a severe and persistent mental illness. *Journal of Consulting and Clinical Psychology*, *66* (4), 680–684.

Wilson, L. K., & Gallois, C. (1985). Perceptions of assertive behavior: Sex combination, role appropriateness, and message type. *Sex Roles*, *12* (1-2), 125–141. doi.10.1007/BF00288042.

Winterowd, C., Beck, A. T., & Gruener, D. (Eds.). (2003). *Cognitive therapy with chronic pain patients*. New York: Springer.

Wise, K. L., Bundy, K. A., Bundy, E. A., & Wise, L. A. (1991). Social skills training for young adolescents. *Adolescence*, *26* (101), 233-241.