

# The relationship between interpersonal sensitivity and relational aggression with the mediating role of resilience in married people with multiple sclerosis

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## ABSTRACT

**Purpose.** This study aimed to investigate the relationship between interpersonal sensitivity and relational aggression with the mediating role of resilience in married people with multiple sclerosis (MS).

**Materials and methods.** This research was a cross-sectional analytical correlation study. In this study, 234 people with MS were selected by convenience sampling method and responded to the research questionnaires. In order to collect data, the couple relationship aggression and victimization scale (CRAVIS), interpersonal sensitivity scale (IPSM), and resilience scale (CD-RISC) were used.

**Results.** The results showed that the proposed model has good processing ( $\chi^2/df=1.29$ , CFI=.98, RMSEA=.03). Path analysis results showed that interpersonal sensitivity didn't have a significant direct effect on communicative aggression ( $\beta=.132$ ,  $p=.096$ ); But interpersonal sensitivity has a negative and significant effect on resilience ( $\beta=-.803$ ,  $p=.001$ ) and resilience has a negative and significant effect ( $\beta=-.575$ ,  $p=.001$ ) on communicative aggression. Based on this, it can be said that resilience plays a full mediating role between interpersonal sensitivity and relational aggression ( $\beta=.461$ ,  $p=.001$ ).

**Conclusion.** Overall, it can be concluded that interpersonal sensitivity, due to its negative on resilience, can increase aggressive behaviors in people who suffer from MS, based on this, the implementation of educational and therapeutic interventions for the Improvement of interpersonal sensitivity and resilience is suggested.

**Keywords:** interpersonal sensitivity, aggression, resilience, multiple sclerosis

## INTRODUCTION

Multiple sclerosis (MS), the most common neurological disability, is an autoimmune disorder that affects the central nervous system (CNS) [1] and often leads to severe physical and cognitive disabilities as well as neurological problems in young adults. This disease causes neurological dysfunctions such as autonomic and sensorimotor deficits, vision disorders, ataxia, fatigue, thinking problems and emotional problem [2]. Nearly half of people with MS report problems with personal communication due to chronic pain [3]. MS often begins in early adulthood, when many long-term relationships have been established. Previous studies have

shown that the burden of the physical and psychological impacts of MS can profoundly affect couples and their relationships over time [4]. Also, an overview of studies shows that when the disease relapses, most have very strong aggressive symptoms [5].

Aggression is defined as the intention to harm another person through force or domination [6]. Research has shown that aggressive people have deficits in social problem solving and emotional regulation [7], and also encounter many problems in relation to peers and important people in their lives [8]. Over the past two decades, researchers have developed a broader concept of aggression that includes non-physical acts that damage an individu-

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al's social standing within the peer group and that is called relational aggression [9].

Aggression in intimate relationships can take many forms. Implicit relational aggression refers to harming one's spouse by manipulating one's social relationships, including spreading rumors, withdrawing love and affection as well as provoke jealousy [10]. Crick's research [11] suggests that relational aggression is a type of aggression that involves attempting to harm others through manipulation and damaging relationships [12]. Relational aggression damages or threatens social status, reputation, or relationships through social manipulation tools such as threats to leave friendships, ignoring relationships, and exclusion group [13]. Depending on its function, relational aggression can be divided into proactive, planned, targeted relational aggression (e.g., spreading rumors to make yourself famous more), and reactive aggression which is impulsive and done out of anger, usually in retaliation for a Perceived insult is done, divided [14]. Relational aggression remains important in adulthood and produces negative correlates including anxiety, depression, loneliness, stress, academic burnout, alcohol abuse, impulse control poor energy, anger dysfunction, eating disorders and peer rejection [15].

Interpersonal sensitivity is a condition that leads to misperceptions of other people's behavior, such as others not taking them seriously or treating them in a way they would approve of. Therefore, they intentionally avoid social interactions in environments where other people are present [16]. Environmental changes and challenges in interpersonal relationships influence these people's internal and external changes, such as psychological distress and trait aggression. Often, these individuals are at risk of long-term adverse consequences, such as lower academic performance [17] and persistent physical and mental health problems such as depression, anxiety, and depression. nervousness, tension and aggression [18]. Studies have shown that excessive interpersonal sensitivity can lead to a tendency toward violence and cruelty [19].

Resilience is the ability to bounce back and return to a state of emergency in the face of terrible, lifelong conditions [20]. This structure helps people successfully adapt to adverse living conditions [21]. Resilience has a dynamic nature, its intensity always varying [22]. Adaptive resilience involves active growth, adaptation, and achieving balance after experiencing problems. Therefore, resilience is successful adaptation when humans are faced with stresses and problems. This definition of resilience represents structural triggers and dynamics that require complex interactions between risk factors and protectors. Early theories of resilience emphasized traits associated with the positive consequences of

wandering, aggression, and unhappiness in life [23]. Clinical psychologists have recently examined models of recovery in situations of disability, disaster, depression, aggression, and pain. The results of these studies demonstrate the positive, constructive and protective effects of resilience in successful adaptation and increased adaptability to stressful conditions [24].

Psychological resilience with forgiveness [25], perceived social support, self-understanding and interpersonal conflict resolution skills [26], self-confidence [27] and relationships positive peer [28], may be a sensitive interpersonal scale. there is a positive correlation; Although it is negatively correlated with social anxiety and loneliness [26], hopelessness, life-threatening behaviors and lack of social connection [29]. Resilience is considered the ability to achieve performance recovery, positive behavioral outcomes, and even positive social change in the face of health crises [30]. Based on the conceptual knowledge of the articles, resilience is a unique source and positive psychological quality [31]. Researchers suggest that young people's internal resources contribute to lower levels of interpersonal sensitivity [32]. In general, it is found that there is a conceptual relationship between psychological resilience and interpersonal sensitivity.

Relational aggression is an important problem in interpersonal relationships, which has been linked to interpersonal sensitivity and resilience based on previous research, but when considering the context, there has been no research examining this issue in terms of structural equation modeling. Based on this, the aim of the present study was to investigate the relationship between interpersonal sensitivity and relational aggression with the mediating role of resilience in married people with multiple sclerosis. It is believed that the results of this study will be fruitful to better understand the relationship between these variables and apply the results to clinical situations.

## METHOD

This is a cross-sectional analytical correlation study. The statistical population of this study included people with MS in Guilan province in 2022. In this study, 234 people were selected according to the convenience sampling method and answered the research questions. The recommended minimum sample size for a path analysis study was 200 people, which was increased to 234 people for greater certainty. People participate in online surveys via virtual social networks and answer questions. Consent and interest in participating in the study, ability to read and write fluently, absence of other autoimmune diseases, absence of severe mobility or vision

problems, and age between 18 to 55 years were considered is the admission criteria. Additionally, refusal to cooperate was considered an exit criterion. All subjects participated in this study with full informed consent. All subjects were also guaranteed confidentiality. Furthermore, all individuals participated in this study voluntarily and with full knowledge of the study objectives. For data analysis, SPSS and Amos software version 24 were used.

**Tools**

**1- Couple Relationship Aggression and Victimization Scale (CRAViS):** This instrument is used to measure relational aggression. This scale was created by Nelson and Carroll [33] and consists of 12 questions. There are 6 questions to measure emotional withdrawal (questions 1 to 6) and 6 questions to measure social image destruction (questions 7 to 12). This scale is rated on a 7-point Likert scale from (1 = completely false to 7 =

completely true). The score range for this scale is from 12 to 84. Carroll and colleagues [33] reported that the Cronbach's alpha coefficient for this scale was 0.93. This scale was standardized by Khazaei et al. [34] in Iran. Two factors (emotional withdrawal and deterioration of social image) were confirmed in the Iranian sample.

**2- Interpersonal Sensitivity Scale (IPSM):** The Interpersonal Sensitivity Questionnaire was devised by Boyce and Parker [15]

to measure basic aspects of the concept of interpersonal sensitivity. This questionnaire includes 36 questions, including 5 subscales, answered on a 4-point Likert scale. These five factors include interpersonal perception, need for approval, separation anxiety, shyness, and the fragility of one's inner self. Studies of the IPSM have shown good psychometric evidence, such that internal consistency, retest reliability, and high convergent and divergent validity have been reported. Boyce and Parker [15] reported a retest reliability coefficient of 0.85 for the total score and coefficients ranging from 0.55 to 0.76 for its subscales. In Iran, the reliability of the Interpersonal Sensitivity Scale obtained using the Cronbach's alpha method was 0.8 and its validity was also confirmed [35].

**3- Connor and Davidson Resilience scale (CD-RISC):** Connor and Davidson [36] designed a resilience scale to measure stress management ability. This resilience scale includes 25 items rated on a Likert scale (completely false = 0, rarely true = 1, sometimes true = 2, often

true = 3, and always true = 4) and a total points form the scale point. The lowest score is 0 and the highest score is 100. Higher scores on this scale represent higher levels of resilience. The results of preliminary studies regarding the psychometric properties of this scale confirm its reliability and validity. In a study conducted by Seyed Reza Poorseyed [37], the Cronbach's alpha coefficient of the resilience scale was 0.92, indicating internal consistency between items and high correlation of questions in this scale and thus the reliability of this scale. This tool is very convenient.

**RESULTS**

In this study, 234 people with MS (176 women) with a mean and standard deviation of age of 37.88±9.34 years participated in this study. Table 1 presents the descriptive findings and Pearson correlation coefficients between the main variables.

**TABLE 1.** Descriptive findings and Pearson correlation coefficients

Variables	Mean	SD	Skewness	Kurtosis	1	2
1- CRAViS	43.99	10.78	-.356	-.496	1	
2- IPSM	103.70	19.14	1.016	1.147	.595**	1
3- CD-RISC	58.97	19.50	-.350	-.121	-.661**	-.778**

*Note: CRAViS = Couples Relational Aggression and Victimization Scale; IPSM = The Interpersonal Sensitivity Measurement; CD-RISC Connor-Davidson Resilience Scale; SD= Std. Deviation; \*\*. Correlation is significant at the 0.01 level (2-tailed).*

Since the values of the skewness and kurtosis indices are within ±2, the data are normally distributed. The results of Pearson's correlation coefficient test showed that relational aggression had a positive and significant relationship with interpersonal sensitivity (r=0.595), but on the other hand, relational aggression had negative and significant relationship with resilience (r=-0.661); There is also a negative relationship between resilience and interpersonal sensitivity (r=-.778) (P<0.05). In order to investigate the mediating role of resilience in the relationship between interpersonal sensitivity and communicative aggression, structural equation modeling was used. Before their implementation, the amount of autocorrelation in the residuals was reported as favorable using Durbin-Watson's test (1.78). Additionally, there was no multicollinearity (collinearity) of the predictor variables. The fit indices were presented for structural equation modeling; The results showed that the proposed model has a good fit ( $\chi^2/df=1.29$ , CFI=.98, RMSEA=.03). Also, the path coefficients are presented in Figure 1 and Table 2.

As seen in Figure 1, interpersonal sensitivity with the mediation of resilience explains a total of 47% of the variance of relational aggression.

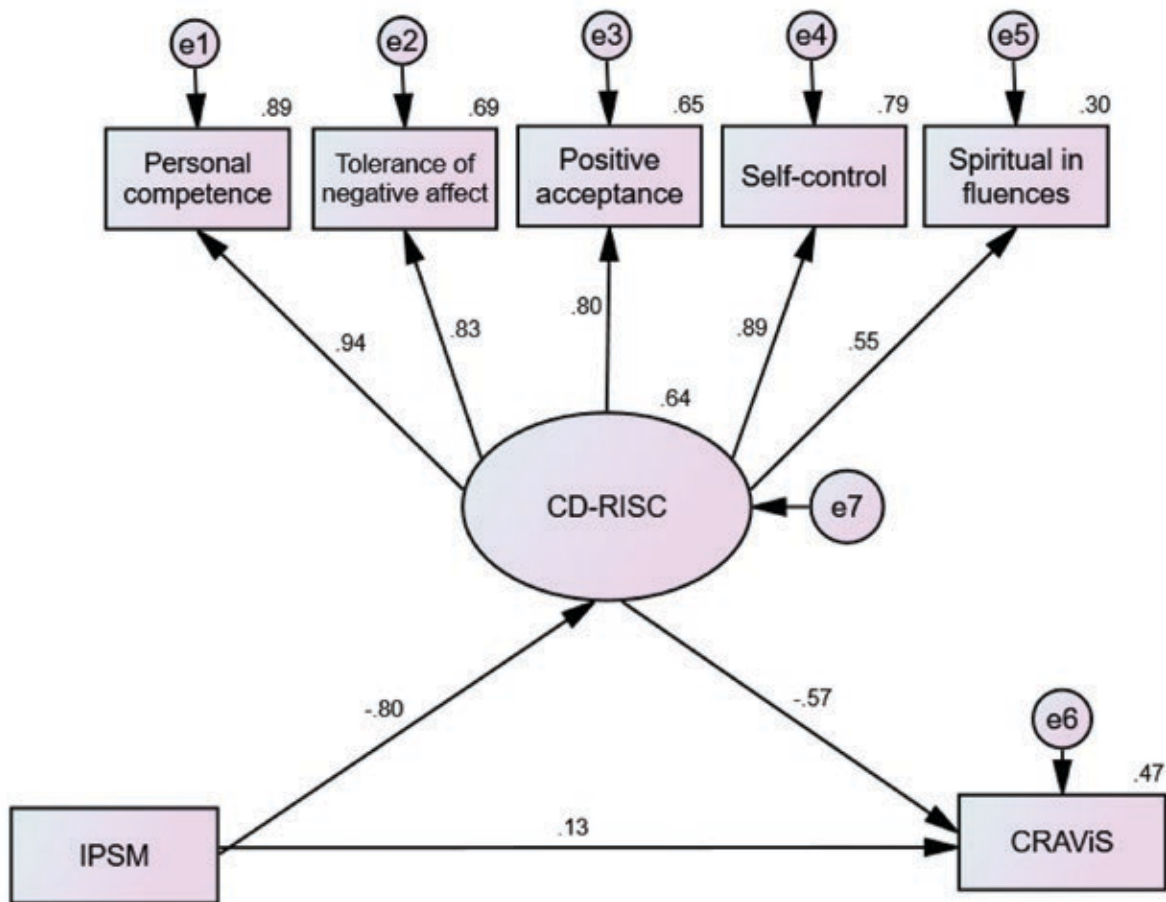


FIGURE 1. Relationship model of interpersonal sensitivity and communication aggression with the mediating role of resilience

TABLE 2. Estimate of the direct and indirect effects

Standardized direct effect				
Path	Estimate	CR	p-value	
IPSM → CD-RISC	-.803	-18.048	.001	
IPSM → CRAViS	.134	1.553	.096	
CD-RISC → CRAViS	-.575	-6.439	.001	
Standardized indirect effect				
Path	Estimate	95% CI of the difference		p-value
		Lower bounds	Upper bounds	
IPSM → CD-RISC → CRAViS	.461	.303	.612	.001

Path analysis results showed that interpersonal sensitivity doesn't have a significant direct effect on communicative aggression ( $\beta = 0.132$ ,  $p = 0.096$ ); But interpersonal sensitivity has a negative and significant effect on resilience ( $\beta = -.803$ ,  $p = .001$ ) and resilience has a negative and significant effect ( $\beta = -.575$ ,  $p = .001$ ) for aggressive communication. Based on this, it can be said that resilience plays a full mediating role between interpersonal sensitivity and relational aggression ( $\beta = .461$ ,  $p = .001$ ).

## DISCUSSION AND CONCLUSION

This study was conducted with the aim of investigating the relationship between interpersonal sensitiv-

ity and relational aggression with the mediating role of resilience in married individuals with multiple sclerosis. The results showed that interpersonal sensitivity does not have a significant effect directly on relational aggression; But the analysis of the linear relationship showed that there is a positive relationship between interpersonal sensitivity and aggression, in other words, an increase in interpersonal sensitivity is associated with an increase in aggression. The current results are consistent with research (16, 18, 17). To explain, it can be said that interpersonal sensitivity increases the likelihood of behaviors such as relational aggression leading to unpleasant experiences. Hypersensitivity to interpersonal interactions is one of the psychological features of the prepsychotic phase that can lead to aggression. Interpersonal sensitivity produces negative emotional states that contribute to long-term deficits in social functioning. Another result shows that interpersonal sensitivity has a negative impact on resilience, in fact, an increase in interpersonal sensitivity is associated with a decrease in resilience. The present results are consistent with studies (30, 26,

29). To explain, it can be said that interpersonal sensitivity reduces people's ability to cope with stress, which people with interpersonal sensitivity are concerned, and resilience is considered as a positive social change in the face of a health crisis if interpersonal sensitivity causes negative social changes. Another result showed that resilience is negatively related to aggression; in fact, increased resilience is associated with reduced aggression. The present results are consistent with studies (13, 26, 24). To explain, it can be said that since psychological resilience is positively correlated with perceived social support and interpersonal conflict resolution skills, it reduces aggressive behaviors relationships that damage or threaten social status, reputation, or relationships through tools of social manipulation, such as threatening to leave friendships, ignoring relationships, and depriving oneself from the group, shows the positive, constructive, and protective effects of resilience in successful adaptation and increased ability to adapt to stressful situations, which is a sub-branch of covert relational aggression.

Another result suggests that resilience plays a mediating role between interpersonal sensitivity

and relational aggression; In fact, interpersonal sensitivity can influence a person's level of resilience and thus provide a basis for aggression. Interpersonal sensitivity is actually a barrier to the development of resilience, because resilience implies the existence of flexibility and self-recovery in the face of stressful situations and difficulties, while high interpersonal sensitivity can cause a person to over-involve emotions and short-term outcomes of events and prevent effective coping with stressful situations. Sampling availability and use of an online survey form are important limitations of this study. Based on this, attention to these limitations in future studies is suggested; furthermore, this study was conducted using a cross-sectional method, on the basis of which a cause-and-effect relationship cannot be established. In a real-life context, it has been suggested that to improve interpersonal relationships and reduce aggression in people with MS, appropriate educational and therapeutic interventions aimed at improving interpersonal sensitivity and resilience.

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