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Dyadic Adjustment as a Mediator of the Relationship between Attachment, Attributional Style, and Violence in Male Batterers

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***Abstract*—**This study examines the mediating effects of male dyadic adjustment on the relationships between attachment and attributional styles, and both psychological and physical husband violence. Based on data from 68 married violent men recruited through community organizations that work with violent men, regression analyses showed that husbands' dyadic adjustment mediates the associations between avoidant attachment and attributional style, and psychological aggression, but not physical violence. Scientific and clinical implications are discussed

***Keywords*—**Attachment, attributions, dyadic adjustment, marital violence.

I. Introduction

MARITAL violence and especially husband violence has become a growing concern in American and Canadian society. According to Statistics Canada, among women currently or previously married, 30% have experienced at least one act of physical or sexual violence from an intimate partner [1]. Intimate violence particularly affects young women: 12% of women aged 18 to 24 reported at least one incident of marital violence over a one-year period, which correspond to four times the national average [1].

Husband violence still appears to be under reported. Women are more likely to report violent incidents to the police when the abuse occurs after a separation; 44% of women assaulted by a previous partner seek police assistance [2]. As for intimate abuse in current relationships, occurrence of victimization was brought to the attention of the police in only 26% of cases involving women [2].

The consequences of marital violence toward women are numerous. Statistics Canada reports that 45% of women who experienced intimate abuse had suffered injury, and 43% had required medical attention [3]. Women who had succeeded in leaving their abusive relationship experienced a 23% loss in family income whereas for men separation was associated with a 10% gain [4]. Furthermore, women who have been abused as children or adults are potentially more at risk to develop health problems such as injury, chronic pain, anxiety, and depression. They are also more likely to smoke, or use drugs or alcohol [5].

Because of the wide-ranging impact of marital violence towards women, numerous studies have been conducted in an attempt to enhance our knowledge of this social problem. The considerable research work performed has led to a better awareness of the different variables that potentially account for the use of force by a male partner in a couple relationship [6].

However, the goal of building a complete and coherent perspective on spousal abuse remains elusive. Some dimensions of marital violence have not yet been extensively explored. This is true of psychological aggression in particular, which, as Black *et al.* [6] point out in their review of risk factors for husband violence, has been less explored than physical aggression and remains poorly understood. This is particularly unfortunate in light of the suggestion by some researchers that psychological aggression is a forerunner of physical violence [7],[8].

Moreover, there is a lack of synthesis research that makes sense of the numerous and sometimes complex relationships that are present between the different variables associated with spousal abuse. Given the current understanding of the problem, it may be relevant to determine which interactions between those variables potentially provide a better explanation for male partner abuse [9].

Attachment and attributions are two of the variables that have been included in studies of marital violence that examined relationships among multiple variables. Attachment has been considered a mediator or moderator of the relationships of several predictors to violence. For instance, Mauricio and Gormley [10] found that attachment style was a significant moderator of the association between need for dominance and frequency of the use of violence in a sample of sixty men who had abused their spouses. In a study of 69 African American men arrested for partner abuse, Rankin, Saunders, and Williams [11] tested hopelessness and depression as mediators of attachment, social support, and sense of belonging to explain partner abuse, but did not find a significant mediation effect. Lafontaine and Lussier [12] found that experience and expression of anger in couples explained the association between insecure attachment and

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intimate violence, and recommended the inclusion of attachment in future efforts to identify other mediator effects.

Research suggests that attributions may also be involved in moderation or mediation relationships to violence. Tonizzo, Howells, Day, Reidpath, and Froyland [13] found that physically violent men were more likely than their non-violent counterparts to attribute the negative behavior of their partners to unchangeable, intentional, selfishly motivated, and blameworthy causes. This effect disappeared when controlling for marital satisfaction, a finding that is consistent with a complete mediation role for marital satisfaction. Byrne and Arias [14] identified a moderating effect of causal and responsibility attributions for negative partner behavior on the relationship between marital satisfaction and aggression among wives but not among husbands.

Attachment and attributions appear to be components of personality, which generally tend to vary little over time. Styron and Janoff-Bulman [15] showed that childhood attachment is a good predictor of adult attachment. Furthermore, several studies have cast attachment style, and more specifically preoccupied attachment patterns, as a stable personality characteristic associated with husband violence [9],[16]. As for attributions, it has been suggested that they reflect a relatively durable personal characteristic that contributes to the nature of the couple relationship [17].

Pinpointing mediators of relationships between stable characteristics and negative outcomes gives information that can be used in the clinical context to provide differential treatment. To give one example, it is well known that gender is a risk factor for the development of phobic avoidance, females being at a greater risk. Schmidt and Koselka [18] found that anxiety sensitivity mediated gender differences in phobic avoidance. This led them to posit that females may require more extensive exposure to internal sensations, because it reduces anxiety sensitivity.

To the extent that attachment and attributional style in martially violent men are somewhat stable, it may be more challenging to act on them to reduce aggression. Few studies have looked at whether the effects of attachment and attributional style on violence are themselves mediated by another variable that is possibly more easily influenced. The existing body of work surrounding dyadic adjustment indicates that it may play such a mediating role. First, dyadic adjustment has been linked to attributions [19]-[21]. Secondly, it is related to attachment [22]-[24]. Furthermore, associations have been found between dyadic adjustment and violence [25]-[26]. Taken together, these observations suggest that dyadic adjustment may mediate the relationship between attachment and attributions, and violence.

Furthermore, research conducted on typologies of male batterers gives us reason to suspect that, in these mediating relationships, distinct kinds of problematic attachment patterns relate differently to violence. In Holtzworth-Munroe's [27] review and synthesis of typology work, she proposed three clusters of violent husbands, two of which are most likely encountered in clinical populations. Violent men in each of those categories seem to exhibit dissimilar patterns of attachment. The first type, termed dysphoric-borderline batterer, shows patterns of dependence, jealousy and suspicion. The second cluster, termed "generally violent-antisocial", is made up of disengaged male partners. It appears that these types of violent personalities, who exhibit distinct attachment patterns, engage in contrasting forms of spousal abuse. According to Stith, Jester and Bird [28], men in the first category engage primarily in emotional abuse, while those in the second exhibit extensive physical violence but little emotional abuse. It would thus be interesting to investigate whether the types of attachment might differentially predict violent behavior through the intervening variable of dyadic adjustment. Observations of the first type of male batterer suggest that anxious attachment might interact differently with dyadic adjustment and translate into psychological aggression, while the more avoidant attachment observed in the second type could be linked to acts of physical aggression.

Research on typologies also gives cues as to how a dyadic adjustment-mediated path between an attributional style that tends to blame the partner and both physical and psychological violence might be uncovered. The study by Gondolf [29], which identified clusters that closely match those of Holtzworth-Munroe [27], suggests that both types of male batterers tend to blame their partner for marital violence. Thus, attributional style may interact similarly with dyadic adjustment to predict both psychological and physical violence.

In the present study, we sought to determine if dyadic adjustment mediates the relationship between attachment characteristics and attributional style, and physical and psychological husband violence. We hypothesized that anxious attachment would be linked to psychological aggression towards female intimate partners through dyadic adjustment and that avoidant attachment would relate to physical aggression towards female intimate partners through dyadic adjustment. Furthermore, we hypothesized that an attributional style that tends to blame the partner would relate to diminished dyadic adjustment, which itself would be associated with elevated psychological and physical husband violence.

II. METHOD

1) Participants

Our sample was composed of men recruited through a Canadian community organization that works with violent men in the Montreal area, Après-Coup. Among the men that sought help with this organization during the time of our study, 223 French-speaking men agreed to meet with the research team in order to learn more about the study and be briefed on the confidentiality issues involved; 68 clients (30.5%) came to the interview, gave their written consent to participate in the study, and filled out the various research questionnaires.

Participants' ages ranged from 18 to 58 years old and the average age was 34 years old. Education levels ranged from 3 to 18 years, with an average of 11 years (to high school level). Rounded annual income in Canadian dollars ranged from $5,000 to $75,000, and the average income was approximately

$25,000. Sixty percent of respondents (N=41) were still living with their partner at the time they completed the questionnaires. The men had from 0 to 4 children, with an average of 1.51 children.

2) Measures

Adult Romantic Attachment. A 36-item scale that can be divided into two 18-item subscales measuring two attachment dimensions: anxious attachment style and avoidant attachment style. The original questionnaire by Brennan, Clark, and Shaver [30] was translated and validated in French by Lafontaine and Lussier [31]. Items were rated on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Alpha coefficients are satisfactory in the translated version (.86 for the anxiety scale and .87 for the avoidance scale), and are comparable to the original English version (.91 and .94 respectively).

Dyadic Adjustment Scale: An abbreviated and validated 16-item French version [32] of the original English questionnaire by Spanier [33]. The total score represents the measurement of dyadic adjustment. Five items dealing with agreement between partners in different areas were rated on a 6-point scale ranging from 1 (strongly agree) to 6 (strongly disagree). Four items about attitude and behavior regarding their romantic relationship were rated on a 6-point scale ranging from 1 (always) to 6 (never). One item dealing with common interests outside the home was rated on a 5-point scale ranging from 1 (in all) to 4 (in nothing). Items about the frequency of positive couple interactions were rated on a 6-point scale ranging from 1 (always) to 6 (never). There was one yes/no question on disagreement about manifestations of one's love. Lastly, one item about the degree of happiness in the romantic relationship was rated on a 7-point scale ranging from 1 (extremely unhappy) to 7 (perfectly happy). The alpha coefficient of the total score for the short version of the scale is very similar to the one obtained with the original version (α= .96) [32].

Attributions. Abbreviated 6-item version of the French translation of the Attribution Questionnaire by Dutton [34]. This questionnaire was used to measure causal, responsibility, and blame attributions made toward oneself or one's partner to explain violence in romantic relationships. Each item was rated on a 7-point scale. The first three items investigate attributions regarding causes of violence in the couple. Two items explore attributions of responsibility of violent acts toward one's intimate partner and one question deals with blaming attribution for the use of violence in the marital context. Validation of that questionnaire has not yet been completed, but the alpha coefficient computed in our sample of violent husbands was satisfactory (α=. 75).

Psychological and physical violence. Two subscales of a French version of the Revised Conflict Tactics Scale (CTS-2), originally developed by Straus and colleagues [35] and translated and validated by Lafontaine and Lussier [12], were used as outcome measures to evaluate two different types of violent behavior. All items were rated according to the frequency of certain behaviors over the past year in eight different categories, ranging from "none" to "21 or more times". Range midpoints of 0, 0, 1, 2, 4, 8, 15 and 25 were used for the encoding of scores. For the French version, the alpha coefficient is .71 for the psychological violence scale and it is .78 for the physical violence scale. Alpha coefficients for the English version scales are respectively .79 and .86.

Psychological violence. An 8-item subscale that measures verbal and non-verbal destructive male behaviors. These behaviors could be directly aimed at the partner or could be aimed at various objects, with the objective being to intimidate the partner and/or ventilate anger.

Physical violence. A 12-item subscale that measures threatening male behaviors or actions. These behaviors are aimed at the partner's body.

III. RESULTS

Table 1 shows the means and standard deviations of the study variables.

TABLE I
DESCRIPTIVE STATISTICS FOR STUDY VARIABLES

Variable	Mean	S.D.
Psychological aggression	5.60	4.0
Physical aggression	0.93	1.6
Dyadic adjustment	46.5	11.9
Avoidant attachment	2.99	1.13
Anxious attachment	4.10	1.18
Attributional style	16.9	6.6

Correlations between the variables and scale reliabilities computed from our data are presented in Table II. Psychological violence occurred about 45 times per year (nearly once a week) on the average, and physical violence occurred approximately 11 times a year (almost once a month) in our sample. These figures are respectively six times and three times higher than general population scores [12],[35].

TABLE II
PEARSON PRODUCT-MOMENT CORRELATIONS

	PsyA	PhyA	DA	AvA	AnA	AS
Psychological Aggression (PsyA)	(.72)					
Physical Aggression (PhyA)	.51**	(.81)				
Dyadic Adjustment (DA)	-.47**	-.25*	(.88)			
Avoidant Attachment (AvA)	.38**	.40**	-.74**	(.88)		
Anxious Attachment (AnA)	.04	-.18	-.14	.06	(.89)	
Attributional	.03	-.06	-.34**	.28*	.07	(.75)

Style (AS)

*p<.05. **p<.01.

This study sought to address two main questions. Our first goal was to establish whether dyadic adjustment plays a mediating role in the relation between attachment and husband psychological and physical aggression. Our second aim was to examine whether dyadic adjustment also plays a mediating role in the relationship between attributional style and husband psychological and physical violence.

Although they are not directly involved in our analysis of mediation relationships, Pearson product-moment correlations shed light on the relationships between dyadic adjustment, attachment characteristics, and attributional style. Dyadic adjustment had a strong negative link to avoidant attachment ($r = -.74$, $p < .05$), but, surprisingly, was not significantly correlated to anxious attachment. Examining the distribution of anxious attachment scores revealed that they were mostly elevated: very few of them were at the lower extremity of the scale. This restriction of variance may explain this particular absence of observed correlation. Dyadic adjustment was, however, significantly and negatively associated with an attributional style of tending to blame the partner ($r = -.34$, $p < .01$).

Dyadic adjustment also showed a relationship to both forms of violence that were assessed. Results indicate that dyadic adjustment was negatively related to both psychological and physical violence ($r = -.47$, $p < .01$ for psychological violence; $r = -.25$, $p < .05$ for physical violence). As for the other predictors, violence correlated significantly with avoidant attachment ($r = .38$, $p < .01$ for psychological violence; $r = .40$, $p < .01$ for physical violence), but not with anxious attachment or attributional style.

We subsequently examined whether dyadic adjustment mediates the relationships that exist between attribution and attachment measures as predictors of psychological and physical aggression. For each of the mediations tested, we performed two regression analyses [36]. The first used the model $Y = b_1 + t'X + bM + e_1$ where X is the predictor, Y is the measure of violence, M is the dyadic adjustment score, b_1 is the intercept, and e_1 is the error term. The computed coefficient t' thus represents the relation between the predictor and violence adjusted for the effect of dyadic adjustment, and coefficient b represents the relation between dyadic adjustment and violence adjusted for the effect of the predictor. The second regression analysis used the model $M = b_2 + a X + e_2$ where X and M are again the predictor and the dyadic adjustment scores, respectively, and b_2 and e_2 are the intercept and error term, respectively. Coefficient a thus represents the relation between the predictor and dyadic adjustment.

Table III shows the relevant values computed for psychological violence as the dependent variable and Table IV for physical violence as the dependent variables. The Sobel first-order test equation [37] was used to determine whether there was a significant mediation effect.

TABLE III
CONTRIBUTIONS OF ANXIOUS ATTACHMENT, AVOIDANT ATTACHMENT, ATTRIBUTIONAL STYLE, AND DYADIC ADJUSTMENT IN PREDICTING HUSBAND PSYCHOLOGICAL VIOLENCE

Predictor	B	SE_B	$a\beta$
Model 1			
Avoidant Attachment	.0283	.14	
Dyadic Adjustment	-.0372**	.013	
Model 2			
Avoidant Attachment	-7.67**	.92	
			.285**
Model 1			
Anxious Attachment	-.289	.16	
Dyadic Adjustment	-.0399**	.012	
Model 2			
Anxious Attachment	1.52	3.1	
Model 1			
Attributional Style	-.0252	.017	
Dyadic Adjustment	-.0415**	.009	
Model 2			
Attributional Style	-.549*	.23	
			.0228*

* $p < .05$. ** $p < .01$.

TABLE IV
CONTRIBUTIONS OF ANXIOUS ATTACHMENT, AVOIDANT ATTACHMENT, ATTRIBUTIONAL STYLE, AND DYADIC ADJUSTMENT IN PREDICTING HUSBAND PHYSICAL VIOLENCE

Predictor	B	SE_B	a
Model 1			
Avoidant Attachment	.0572	.067	
Dyadic Adjustment	-.00668	.006	
Model 2			
Avoidant Attachment	-7.673**	.919	
			.0512
Model 1			
Anxious Attachment	-.0290	.043	
Dyadic Adjustment	-.0109*	.004	
Model 2			
Anxious Attachment	-1.58	1.26	
			.0172
Model 1			
Attributional Style	-.00710	.008	
Dyadic Adjustment	-.0115**	.004	
Model 2			
Attributional Style	-.549*	.225	
			.0063

None of the mediation paths were significant at the .05 level.

Significant mediation effects were identified for psychological violence. Results indicate that dyadic adjustment significantly mediated the relationship between avoidant attachment and psychological violence ($z = 2.71$, $p < .01$). Dyadic adjustment also significantly mediated the link between attributional style and psychological violence ($z = 2.16$, $p < .05$). In both cases the mediation was complete, as the predictor's coefficient was non significant when dyadic adjustment was present in the model. The mediating role of dyadic adjustment was, however, not found to be significant for physical violence as the dependent variable, although the mediation relationship between attributional style and physical violence was marginally significant ($z = 1.86$, $p = .06$).

IV. DISCUSSION

We investigated whether dyadic adjustment mediated the links between various stable predictors of violence against female partners (anxious attachment, avoidant attachment, and attributional style) and physical and psychological aggression. The literature relevant to this study led us to expect that dyadic adjustment would mediate the relationship between anxious attachment and psychological violence. We hypothesized that dyadic adjustment would also intervene as a mediator in the association between avoidant attachment and psychological violence. Additionally, we expected dyadic adjustment to mediate the relationship between attributions and both physical and psychological violence.

Before examining our mediation hypotheses in light of the results obtained in this study, we will discuss the overall correlations that were uncovered between the variables examined. All of the results were consistent with associations reported in the literature, though not all of the effects were significant. In particular, anxious attachment did not correlate significantly with any of the other variables. Also, attributional style was not linked to the violence measures. We should note that the results supporting direct associations between these variables were derived from samples incorporating non clinical and sometimes clinical populations of husbands, whereas our sample was composed entirely of a clinical population. For this reason, our findings suggest that attributional style and anxious attachment predict the occurrence or absence of male partner violence but not the degree of violence in male partners.

As we had hypothesized, it appears that dyadic adjustment does play a mediating role between the relatively stable characteristics of abusive husbands and levels of violence. Although the results do not coincide exactly with what we had expected, two of the six mediation paths that we tested proved significant.

Our first hypothesis was that avoidant attachment would be linked to physical violence through dyadic adjustment. It was not confirmed, possibility owing to the limited correlation found between dyadic adjustment and physical violence. A potential explanation for this limited correlation would be the presence of an interaction effect in the relationship between dyadic adjustment and physical violence, which would mask the relationship. Indeed, a recent research published by our team found a moderation effect of both anger repression and felt intensity of anger on the relationships between various subscales of dyadic adjustment and physical violence, which could account for the lack of significance in this mediation analysis [38]. Our results suggest, however, that avoidant attachment is actually related to the psychological form of husband violence through dyadic adjustment. Moreover, the relationship appears to be completely mediated by dyadic adjustment. Thus, men who are less emotionally engaged in their marital relationship tend to be poorly adjusted in that relationship; this condition is in turn associated with more acts of psychological violence. At first glance, this result may seem counterintuitive, because one might expect that disengagement on the part of men would disrupt their dyadic adjustment and make them tend to withdraw from communicating with their partner. However, it is possible that another mechanism intervenes in the process and makes the outcome more plausible. For instance, a man who is avoidant in his marital relationship may become less adjusted to his partner, which may trigger criticism from his spouse to which the husband may react using abusive verbal communication patterns.

Another hypothesis was that anxious attachment would be linked to husband psychological violence through dyadic adjustment. This prediction was not borne out by our results; both of the mediation paths we tested starting from anxious attachment proved to be nonsignificant. This is hardly surprising considering that anxious attachment was uncorrelated to the other study variables in our sample. As indicated above, this may reflect the fact that anxious attachment differentiates between violent and non-violent husbands but loses much of its predictive power when considering a clinical population of violent husbands. It might also imply that the link we drew between anxious attachment and the "dysphoric-borderline" type of batterer is complicated by the presence, among husbands with higher anxious attachment, of men belonging to another cluster of batterers, such as "family-only" batterers, who generally have satisfactory marital relationships and possibly good dyadic adjustment [9] and may act to counter the trend. Yet another possibility is that the effect size for the relationships we were trying to detect is small, and that the power of our analysis was not high enough to find statistically significant relationships.

Our last hypothesis stated that dyadic adjustment would mediate the relationship between the focus of the husbands' attributions for violence problems and both psychological and physical abuse. This hypothesis was partially supported by our results: mediation was significant for psychological violence, and almost significant for physical violence (further studies will be necessary to clarify the status of the latter relationship). This finding is consistent with the work of Tonizzo *et al.* [13], who reported that the differences in attributional style between violent and non-violent husbands were accounted for by dyadic adjustment. Interestingly, in the mediated paths, dyadic adjustment decreased as attributions shifted towards the female partner and violence increased, but the overall relationships between attributions and violence were not significant. Thus there is evidence of a suppression

effect [39]. Suppression effects (also known as negative confounding) are present when the direct and mediated effects of an independent variable on a dependent variable have opposite signs. In this case, another (negative) effect from partner-blaming attributions for violence appears to compensate for the mediated effect. It could be surmised that, despite the hurtful impact that they have on dyadic adjustment, attributions directed towards the female partner may at the same time be associated with males having a stronger sense that they are competent husbands. This feeling might heighten the likeliness that the husband would favour other conflict resolution strategies over aggression.

Our findings potentially have implications for clinical work with violent husbands. To the extent that problematic aattachment and attribution patterns are personal characteristics that are less amenable to change, the mediation paths identified may help pinpoint how their deleterious impact on marital violence might be reduced. We discuss two ways in which such outcomes might be attained. First, knowing that the frequency and severity of acts of violence are accounted for by the mediating role of dyadic adjustment, it might be worthwhile to focus therapy efforts on improving dyadic adjustment. Second, it may be worth investigating whether dyadic adjustment is itself indirectly related to violence, in which case a viable research avenue might be to direct attention to the additional intermediating variable. The results obtained suggest that the above strategies may be more effective in attenuating levels of psychological violence rather than physical aggression.

Although this study enhances our understanding of marital violence, a number of limitations should be acknowledged. First, our data is generated from self-reports, which may exhibit bias. The inclusion of observational measures or third-party reports in addition to self-reports might help provide a more comprehensive picture of husband violence [9]. A second potential limitation stems from the relatively modest size of our sample; because of this, some relationships may not be statistically significant. A large-scale investigation might provide a clearer picture; in particular it would help clarify the somewhat ambiguous mediation relationship between attributions, dyadic adjustment, and physical violence. It would be interesting to include members of the non-clinical population as well, in order to determine if the results could be generalized to these normal populations.

This study has raised several questions which would be interesting to address in future work. First, it would be desirable to further examine the relationship between avoidant attachment, dyadic adjustment, and violence in light of the conjecture we have offered regarding the potential presence of marital interactions as an intervening variable. Second, the suppression effect we observed with husbands' attributional style regarding marital violence hints at the potential intricacy of its relationship to violence, which warrants additional investigation. Finally, devising intervention strategies that take these findings into account, i.e. as outlined above, might simultaneously improve intervention prospects and potentially provide further support to the findings presented here.

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