

PAPER

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Effect of the Breakup Context on Unwanted Pursuit Behavior Perpetration Between Former Partners*

ABSTRACT: Former partners comprise the most important subgroup of stalkers. However, contextual factors related to the breakup are hardly examined to explain ex-partner pursuit. In a community sample of 194 separated persons, about one-fifth perpetrated at least one unwanted pursuit behavior in the past 2 weeks. Being female, lowly educated, and socially undesirable raised the number of perpetrated behaviors. Beyond these effects, the number of behaviors increased when the cause of the break was attributed to the ex-partner or external factors and when the ex was appraised as the breakup initiator. Breakup reasons, the ex-partner's lack in meeting family obligations and own infidelity, also related to pursuit behaviors albeit inferior to subjective attributions and appraisals of initiation. Finally, participants who felt more anxious or lonely negative showed more behaviors. The results enlighten that the breakup context gains further attention. Clinical treatment might benefit from fostering cognitive reconstructions and breakup adjustment.

KEYWORDS: forensic science, stalking, unwanted pursuit, breakup, separation, individual adjustment, initiator, locus of cause, reasons, count data

Stalking has become a widely studied topic during the last several decades. Drawing on the burgeoning literature, it appears that an important subgroup of all stalkers comprise former partners. More specifically, Spitzberg and Cupach's meta-analysis (1) has illustrated that about half of all stalking cases result from previous romantic relationships. Further, the risk of violent, persistent, and recurrent stalking is heightened in former partner stalking (for review, see [2]).

To date, different concepts have been used to refer to former partner harassment. For example, obsessive relational intrusion (3), unwanted pursuit behaviors (UPB; [4]), forcible interaction (5), breakup persistence (6), intrusive contact (7), and postbreakup female harassment (8) all denote the unwanted pursuit of a former intimate partner. It is important to remark that *unwanted pursuit* differs from *stalking*. Beyond the inconsistency in legal definitions of stalking, Spitzberg and Cupach (1) state that stalking generally entails "an (i) intentional (ii) pattern of repeated behaviors toward a person or persons, (iii) that are unwanted, and (iv) result in fear, or that a reasonable person (or jury) would view as fearful or threatening" (p. 66). Different from unwanted pursuit, stalking does not exclusively result from relational or intimacy motives. Furthermore, stalking requires multiple behaviors evoking threat or fear,

whereas the more widespread UPB tend to vary in severity (1). Although UPB might escalate to menacing or fear-inducing behaviors (which would be labeled stalking), they mainly have an annoying, pestering, or irritating impact, situated on the opposite end of the severity continuum (3). In line with this reasoning, some studies (e.g., [9]) have discriminated stalking from less severe forms of former partner harassment by means of legal stalking criteria. However, because the behaviors assessed in the current study mostly fail to meet the stalking threshold and because our assessment could not ascertain the presence of different legal stalking standards, we chose to speak about UPB throughout the course of this article. These UPB are defined as "activities that constitute ongoing and unwanted pursuit of a romantic relationship between individuals who are not currently involved in a consensual romantic relationship with each other" (4, p. 73).

Studies examining the occurrence of UPB perpetration in college student samples have revealed that a substantial percentage of all breakups result in one or more UPB. Figures vary from 40% in general college student samples after a breakup (10) to 99.2% in specific samples of noninitiators of the breakup (4). Hence, former partner pursuit can be seen as a rather common reaction occurring in an abnormal situation. Consequently, it is important to study the separation context to develop a more comprehensive theory of former partner unwanted pursuit. To date, explanatory studies have mainly focused on relationship characteristics (e.g., [4]) and on stable, individual differences as contributors of relational pursuit and stalking. The latter more specifically consist of historic factors (e.g., negative parental experiences; [11]), psychological characteristics (e.g., empathy; [12]), and demographic, clinical-psychiatric, and forensic factors (e.g., gender, axis I and II disorders, criminal involvement; [13]). The main goal of this study was to examine

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the effect of the breakup context on the perpetration of UPB. In this study, the breakup context refers to two often studied elements in the separation literature: postbreakup individual adjustment and characteristics of the breakup event. Different from previous studies using college student samples, a community sample of separated persons was used.

Postbreakup Individual Adjustment

Stress perspectives, such as the divorce-stress-adjustment-perspective developed by Amato (14), state that breaking up is a stressful transition with negative consequences on several life domains to which families have to adjust. It is clear that divorcing persons experience more psychological distress than married individuals (for review, see [14]). These psychological consequences are multidimensional in nature: in addition to rather *general* stress reactions, such as anxiety or depression, *separation-specific* reactions exist as well. The latter consist of feelings of loneliness, isolation, and negative affect owing to the loss of social networks or to difficulties in rebuilding social networks and participating in social activities. Separation also triggers attachment processes, including emotional and cognitive preoccupation with the ex-partner or the past intimate relationship (e.g., missing or constantly thinking about the ex-partner; [15]). These specific consequences (especially preoccupation) underlie pursuit as illustrated by clinical (16), theoretical (Relational Goal Pursuit theory; [17]), and empirical evidence (18). In addition to specific reactions, general stress reactions seem to affect the pursuit of the ex-partner. Previous studies showed that a higher degree of negative emotionality predicts more pursuit behaviors among ex-partners (18,19) and that relational stalkers suffer from mental health problems such as mood disorders (e.g., [20]).

Breakup Characteristics

In the separation literature, breakup characteristics are examined primarily to explain individual adjustment to separation. Well-studied breakup characteristics are cognitive appraisals of the separation—in particular, perceived reasons for the breakup, initiator status, and locus of cause of the breakup. These appraisals moderate the relationship between the divorce process and subsequent adjustment (for review, see [14]). Findings on the influence of breakup reasons have shown that poor adjustment is associated with appraising a demeaning or violent relationship, career or role conflicts, the respondent's substance abuse (21), and infidelity on the part of the respondent or the respondent's spouse (22) as reasons for the break. Regarding the role of initiator status, it is important to differentiate three types of initiation: self, ex-partner, or joint initiation of the break. Self-initiating the break has consistently been associated with a higher postbreakup psychological well-being (e.g., [22]). Finally, studies examining the effect of locus of cause generally acknowledge that the cause of the breakup can be attributed (i) internally (to the person him- or herself), (ii) to the relationship, and externally to (iii) the ex-partner or (iv) external factors (e.g., work conditions). According to Grych and Fincham (23), the effect of a specific causal attribution on individual adjustment is determined by the degree to which the attribution protects or enhances the person's self-image and by the extent to which the attribution makes it possible to gain control over the experience. Consequently, people who attribute causality to the relationship show high levels of well-being (22,24), whereas internal attributions negatively affect adjustment and growth. Attributing causality to the ex-partner has a less damaging effect, but is still positively

related with distress. Finally, perceiving external factors as having caused the break has strong negative effects on general adjustment, ex-partner attachment, and distress (22,25).

Whereas the relationship between breakup characteristics and postseparation adjustment has previously been studied, there is only limited evidence that these characteristics determine UPB. Both locus of cause and the reason for the break have never been examined in relation to UPB perpetration. Existing findings do only indirectly suggest that pursuit perpetration might be associated with reasons referring to suspected or actual infidelity (26), psychopathology or personality traits of the perpetrator (13,27), specific characteristics of the relationship (4,19), drug abuse, and physical or psychological abuse committed by the perpetrator before the break (e.g., [20,28]). Differently, initiator status is a well-documented predictor; several studies have pointed out that more UPB are perpetrated when the ex-partner initiated the break (e.g., [10]).

The Present Study

In sum, research has shown that UPB are often present when romantic partners separate. To date, explanatory research has largely focused on relationship characteristics and stable, individual factors. However, because of the significance of former partner pursuit, more attention should be paid to the role of the breakup context. According to the literature, the breakup context encompasses (i) individual adjustment to the breakup and (ii) appraisals of the breakup event. Although some researchers devoted attention to certain aspects of the break in the light of UPB perpetration (initiator status and postbreakup adjustment), several other aspects (locus of cause and reasons for the breakup) remain underexposed. With a more profound investigation, focusing on multiple components of the breakup context, we aimed to advance the current understanding of former partner UPB. Based on the existing evidence regarding the role of individual adjustment, we hypothesized that experiencing higher levels of continued former partner attachment, loneliness, and general negative affect, such as anxiety and depression, relates to higher levels of UPB perpetration (hypothesis 1). Of the breakup characteristics selected in this study, only initiator status has been extensively studied. In line with the existing evidence, noninitiators are expected to show more UPB compared to initiators and mutual decision makers (hypothesis 2). Because no previous study has explicitly focused on the role of locus of cause and reason for the breakup, these research questions are considered explorative. Because the focus is on the perpetrator's perspective, we included a metric for social desirability to control for self-presentation issues.

Methods

Participants and Procedure

The criteria for participating in this study were that participants needed to be divorced or separated from a previous romantic partner, with whom they had been married or (legally) cohabiting. Sampling was done in collaboration with five companies and 28 divorce professionals to reach a substantial number of separated persons. These companies and professionals distributed, among their personnel or clients, paper versions of the questionnaire package or the URL of the password-protected webpage where the questionnaire package could be completed. A description of the study and inclusion criteria always preceded the questionnaire package. We also solicited participation through newspaper and Internet advertisements referring to the webpage. Finally, we used a snowball sampling method by asking individuals who did not meet the

inclusion criteria or who did not want to participate to pass on the paper package or webpage address to eligible persons in their environment. These recruitment efforts resulted in a convenience sample consisting of 194 Flemish ex-partners. Data of 10 participants were removed from the data set, because values were missing for more than 25% of the total questionnaire package. Our final sample consisted of 184 individuals (63.6% women). The participants' ages ranged from 22 to 64 years ($M = 42.48$, $SD = 9.25$). The majority of people were highly educated: 60.4% of the sample reported college or university as highest education level. Most participants had been married to their ex-partner (78%) and had children with their former partner (92.1%). The average duration of the past romantic relationship was 14.12 years ($SD = 8.42$, range = 1–36) and of time since the breakup 5.73 years ($SD = 6.31$, range = 0–37). More than half of the sample (58.2%) was currently involved in a romantic relationship. The participants signed an informed consent before starting to complete the questions. Participation took place on a voluntary basis. After completing the anonymous questionnaire package, the participants sent it back to the researchers, either electronically or via a prepaid return envelope.

Measures

Descriptive Characteristics—Information describing the participant (e.g., gender, age, education level, current romantic relationship involvement) as well as the past romantic relationship (e.g., length of the relationship, time since the break) was questioned.

Initiator Status—The question “Who wanted the breakup most?” (1 = *I*, 2 = *ex-partner*, 3 = *both equally*) was used to identify the initiator of the breakup. Half of the participants (51%) reported having initiated the break themselves. The ex-partner initiated the break in 37% of the cases and both ex-partners in the remaining 12% of the sample.

Locus of Cause—Four questions assessed to what extent participants viewed themselves, their ex-partner, external factors or circumstances (e.g., third parties, living conditions), and their relationship as having caused the breakup (1 = *completely disagree* to 5 = *completely agree*). The first question reflected the degree of internal attribution of the reason for breaking up ($M = 2.33$, $SD = 1.10$), the second and third question the degree of external attribution to the ex-partner ($M = 3.69$, $SD = 1.07$) and external factors ($M = 2.81$, $SD = 1.46$), and the latter question the degree of attribution to the relationship ($M = 3.42$, $SD = 1.27$).

Perceived Reason(s)—Reason(s) for the breakup were asked using the same procedure as Amato and Previti (22). Participants were asked to report why they had separated through an open question. Two independent raters coded the responses. This coding consisted of rating the presence or absence of 18 categories of reasons described in Amato and Previti's study: infidelity, drinking or drug use, physical or mental abuse, incompatible, grew apart, personality problems, communication, immature, personal growth, no love, unhappy, not meeting obligations to family, work problems, financial problems, illness, interference from others, don't know, and other reasons. After training, the raters independently coded the answers. Next, they discussed discrepancies to reach consensus. From the reasons classified as *other*, we created *post hoc* two extra categories: (i) sexual orientation, defined as homosexuality or bisexuality of the participant or his/her partner, and (ii) mistrust, defined as one or both partner(s) lacking trust toward the other. Infidelity (52.6% of the sample) was further divided into infidelity on part of

the respondent or former partner. Of the final 21 categories of reasons, the most common reason was infidelity of the ex-partner (42.4%), followed by incompatibility (20.6%), grew apart (19.4%), personality problems (13.7%), physical or mental abuse (13.1%), no love (11.4%), not meeting family obligations (10.9%), and infidelity of the respondent (10.6%). The remaining categories of reasons reported by less than 10% were excluded from further analyses. The inter-rater reliability for incompatibility was moderate ($Kappa = 0.49$). Kappa values for the other categories reported by more than 10% ranged between 0.68 and 0.94, showing a substantial to almost perfect level of agreement (29).

Separation-Specific Individual Adjustment—The Psychological Adjustment to Separation Test (PAST; [15]) is a self-report measure to assess three key dimensions of adult separation adjustment problems: ex-partner attachment, lonely negativity, and co-parenting conflict. Using a procedure of forward and backward translations, we developed a Dutch version of the PAST, which was evaluated by the author of the scale. To investigate the role of individual functioning, we employed the scores on the first two subscales. All computed scale scores in this study were considered invalid for cases with more than 25% missing items on the (sub)scale. Participants had to rate each item for the past 2 weeks on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Ex-partner attachment (eight items) represents thoughts and feelings about the lost partner (e.g., “I constantly think about my former partner,” “I miss my former partner a lot”). Lonely negativity, referring to loneliness and negative affect because of the breakup, is measured using 11 items (e.g., “I find it difficult to enjoy myself,” “I feel like I'm on a constant emotional roller-coaster ride”). Sweeper and Halford (15) showed that the PAST is a promising instrument for assessing adult separation-specific adjustment problems as demonstrated by its satisfactory reliability (test-retest and internal reliability) and acceptable convergent and discriminant validity. In our sample, alpha reliabilities were high ($\alpha = 0.83$ for ex-partner attachment and $\alpha = 0.86$ for lonely negativity). Mean scores were somewhat below the median; $M = 15.91$ and $SD = 6.66$ for ex-partner attachment and $M = 23.22$ and $SD = 8.39$ for lonely negativity.

General Individual Adjustment—A Dutch translation (30) of the Beck Depression Inventory—second edition (BDI-II; [31]) was used to assess the presence and severity of depressive symptoms during the past 2 weeks. Each item (21 in total) consists of four expressions in terms of increasing intensity, followed by a numerical score ranging from 0 to 3. Higher total sum scores indicate the presence of severe depressive symptoms. In this sample, the severity of depressive symptoms was low ($M = 8.57$, $SD = 9.58$) and internal consistency high ($\alpha = 0.93$). The psychometric properties of the Dutch version are acceptable and comparable to those of the original BDI-II (30).

To assess the level of anxiety, we employed the state version of the Spielberger State-Trait Anxiety Inventory-form Y (STAI-form Y; [32]). Participants had to rate 20 items (e.g., “I feel at ease,” “I feel upset”) on a four-point Likert scale (1 = *not at all* to 4 = *very much so*). Total sum scores range between 20 and 80, with higher scores reflecting a higher intensity of state anxiety. The mean score ($M = 36.84$, $SD = 12.42$) in our sample suggested that participants were mildly anxious. Reliability and validity of the Dutch translation (33) are supported (34). The alpha reliability in this study was 0.96.

UPB Perpetration—We used the offender version of the UPB Inventory (UPBI; [35]) and translated the scale into Dutch. The translation procedure was identical to the procedure applied for

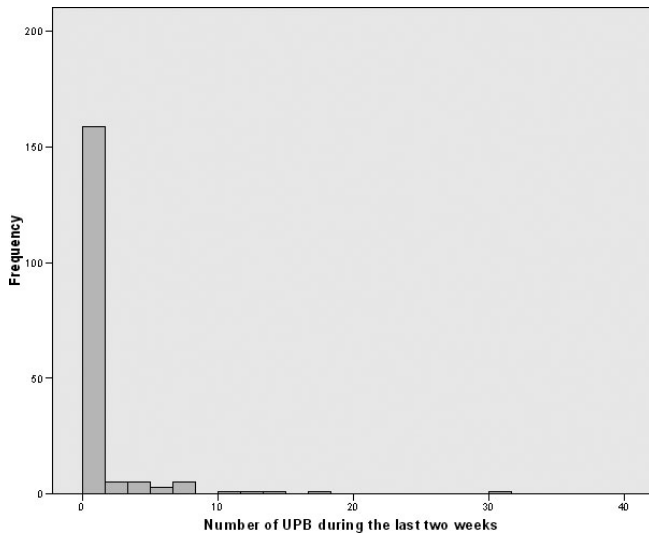


FIG. 1—Distribution of the total number of perpetrated unwanted pursuit behaviors in the past 2 weeks ($n = 182$). $M = 0.97$, $SD = 3.32$, $Skewness = 5.66$, $Kurtosis = 41.05$.

translating the PAST. Twenty-six items measure a wide range of pursuit behaviors: the first 13 items are described as mild acts (e.g., “Leave unwanted phone messages or hang-up calls,” “Give unwanted items in person”) and the latter 13 as severe acts (e.g., “Follow him/her,” “Physically injure him/her”). To obtain specific frequency ratings matching the time frame of the adjustment measures, we asked participants to indicate how often they showed the presented behaviors against their ex-partner during the last 2 weeks (1 = *one time*, 2 = *two times*, 3 = *three times*, 4 = *four times or more*). Participants could also indicate whether these behaviors ever occurred (5 = *not the last 2 weeks, but before*) or never (6 = *this never happened*). These two response options were recorded into zero. Cronbach’s alpha was 0.81 in Langhinrichsen-Rohling et al.’s study (4) and, similarly, 0.88 in this study.

Social Desirability—The Marlowe–Crowne Social Desirability Scale (SDS; [36]) was used to assess the tendency to respond in a socially desirable manner. The scale consists of 33 true–false items (e.g., “No matter who I’m talking to, I am always a good listener,” “I’m always willing to admit it when I make a mistake”). We adopted a Dutch format of Ballard’s 11-item short version (37), as recommended by Loo and Loewen (38). Nevertheless, the observed reliability was low ($\alpha = 0.57$). Overall, there was a rather strong tendency for socially desirable responses ($M = 7.34$, $SD = 2.15$).

Statistical Analyses

Analyses were conducted using SPSS 15.0 (IBM Corp., Somers, NY) and R 2.9.0. (R Foundation for Statistical Computing, Vienna, Austria). Figure 1 displays the nonnormal frequency distribution of the total number of perpetrated pursuit tactics in this study. In the 2 weeks preceding the assessment, 151 participants or 83% of the total sample showed no UPB toward their former partner. The remaining 17% reported engaging in at least one UPB. The overall frequencies ranged from 0 to 31 ($M = 0.97$, $SD = 3.32$). Table 1 shows that the registered behaviors mainly consisted of mild pursuit tactics (e.g., asking friends for information about the ex-partner, starting an unwanted conversation in person), whereas severe tactics were least reported (e.g., waiting outside the ex-partner’s home,

TABLE 1—Descriptives and frequencies of perpetrated unwanted pursuit behaviors in the past 2 weeks.

UPB	$M (SD)$	%
Unwanted phone messages or hang-up calls	0.09 (0.47)	4.4
Unwanted letters/e-mails/faxes/gifts	0.02 (0.17)	1.1
Unwanted phone conversation	0.08 (0.47)	4.4
Unwanted conversation in an internet chat room	0.01 (0.07)	0.6
Unwanted conversation in person	0.12 (0.62)	5.0
Give unwanted items in person	0.03 (0.32)	1.7
Ask friends for information about ex-partner	0.17 (0.71)	7.7
Contact family/friends without permission	0.08 (0.53)	2.7
Show up in places where he/she might be	0.09 (0.56)	3.3
Efforts to run into him/her ‘unexpectedly’	0.07 (0.44)	3.3
Unexpected home visits	0.01 (0.07)	0.5
Unexpected visits at school/work/public place	0.01 (0.11)	1.1
Wait outside home/work/school	0.00 (0.00)	0.0
Following	0.02 (0.30)	0.5
Making vague threats to ex-partner	0.01 (0.11)	1.1
Threaten info release that would be harmful	0.05 (0.37)	2.7
Threaten to harm/kill ex-partner	0.01 (0.07)	0.5
Threaten to harm/kill pets/someone close	0.01 (0.07)	0.5
Threaten with a weapon	0.01 (0.11)	1.1
Release harmful info	0.07 (0.48)	2.2
Steal items from ex-partner	0.02 (0.17)	1.1
Damage property from ex-partner	0.01 (0.07)	0.5
Harm pet/someone close	0.01 (0.07)	0.5
Physically injure him/her	0.00 (0.00)	0.0
Kidnap/hold ex-partner against his/her will	0.01 (0.07)	0.5
Force sexual contact after the breakup	0.00 (0.00)	0.0

school, or workplace, physically injuring the ex-partner and forcing sexual contact—not indicated by any of the participants).

To analyze the nonnormally distributed sum score, we employed regression models specially designed to analyze skewed distributed counts or rates. Despite the fact that ordinary linear regression produces biased results when analyzing this kind of data (because important assumptions are violated) and the fact that counts and rates are common in psychological research, regression models for count data are rarely used (e.g., [39]). Alternatively, infrequent counts are often transformed or dichotomized. Because both methods have disadvantages (e.g., limited interpretation of the results, loss of meaningful variation owing to recoding), count models are a more appropriate choice. Several count models have been developed, including Poisson regression, Negative Binomial regression (NB), Zero-Inflated Poisson regression (ZIP), and Zero-Inflated Negative Binomial regression (ZINB). To select the most appropriate model, the Vuong test (40) comparing non-nested models, the deviance test comparing nested models, and the significance test of the dispersion parameter are used (39,41,42). These tests indicate whether the data are zero-inflated (ZIP), overdispersed (i.e., variance larger than mean, NB), both zero-inflated and overdispersed (ZINB), or neither (Poisson).

Results

Preliminary Analyses and Count Model Selection

Before examining the effects of the predictors of interest, we explored the possible effects of social desirability and several descriptive characteristics (gender, age, education level, having a new partner, length of the past relationship, and time since the breakup) on UPB perpetration. This model was also used to determine which of the four count models provided the best fit with the distribution of the outcome variable. The NB model did not converge, suggesting that this model did not adequately represent the data. The deviance test comparing the ZIP and ZINB model showed

the data were overdispersed, $\chi^2(1, n = 159) = 13.80, p < 0.001$. The distribution was also zero-inflated according to the Vuong test comparing the Poisson and ZIP model, $V = 4.66, p < 0.001$. Finally, the insignificant dispersion parameter in the ZINB output ($\theta = 1.17, SE = 0.64, Z = 1.83, p > 0.05$) and the insignificant Vuong test comparing ZINB and ZIP ($V = 1.08, p > 0.05$) indicated that the extra dispersion parameter in the ZINB model not improved the fit to the data and that the overdispersion was mainly because of the preponderance of zeros (see also Fig. 1). As such, the ZIP model, which consists of two parts, was selected. The zero-inflation (logistic or dichotomous) part examines what predicts whether or not the behaviors occurred. The counts (continuous) part examines what predicts the frequency of the behaviors. The first part is a logistic regression model using a logit link function, and the second part is a Poisson model using a log link function. Instead of adopting a simple linear interpretation, regression coefficients need to be exponentiated (e^B) and are respectively called odds ratios (OR) and rate ratios (RR). When converted to percentages, $100 \times (e^B - 1)$, OR reflect the percentage change in the odds of perpetrating no UPB and RR reflect the percentage change in expected number of behaviors for every unit change in the predictor controlling for other predictors in the model (39,41,42).

When testing the effects of the control variables, none of the predictors significantly influenced the dichotomous outcome. The continuous outcome showed a marginally significant association with gender (RR = 1.69, $p < 0.10$) and a significant association with education level (RR = 0.43, $p < 0.001$) and social desirability (RR = 0.85, $p < 0.01$). Thus, the expected number of behaviors increased by 69% among women (compared to men) and decreased by 57% among people having a higher education level (college or university) compared to people having a less advanced level of education (primary or secondary school). For each unit increase in social desirability, the expected behaviors decreased by 15%.

Because of the large number of independent variables, the predictors of interest were preselected based on the results of 17 ZIP models partially testing each separate predictor when controlling for the effects of gender, education level, and social desirability (cf., partial correlations). The predictors of interest that were significant according to these partial tests were then integrated into (i) a model testing the influence of individual adjustment on UPB perpetration and (ii) two models testing the effects of breakup characteristics. Because the low number of nonzero counts diminished the power to detect effects in the counts part, it was more proper to test only small sets of predictors.

Does Postbreakup Individual Adjustment Influence UPB Perpetration?

As expected from hypothesis 1, four partial tests examining the effects of the adjustment scales showed an effect of lonely negativity (RR = 1.03, $p < 0.01$), depression (RR = 1.01, $p < 0.05$), and anxiety (RR = 1.01, $p < 0.05$) on the continuous outcome. The dichotomous outcome (no behaviors) was negatively associated with lonely negativity (OR = 0.93, $p < 0.01$), depression (OR = 0.92, $p < 0.001$), and anxiety (OR = 0.93, $p < 0.001$), but also former partner attachment (OR = 0.92, $p < 0.01$). The results of the ZIP model, assessing the integrated effects of the adjustment measures that were significant in the previous partial tests, are presented in Table 2. Apart from the control variables, only lonely negativity and state anxiety stood out as predictors. The expected number of behaviors rose by 5% for every unit increase in lonely negativity. Every unit increase in anxiety lowered the chance of perpetrating no pursuit behaviors by 6%.

TABLE 2—Summary of zero-inflated Poisson regression analysis for postbreakup individual adjustment in predicting unwanted pursuit behavior perpetration ($n = 178$).

Variables	B	SE B	RR	95% CI	
				RR lower	RR upper
Counts part					
Gender	0.72	0.20	2.06***	1.38	3.07
Education level	-0.61	0.18	0.55***	0.39	0.77
Social desirability	-0.16	0.04	0.85***	0.78	0.93
Lonely negativity	0.04	0.02	1.05**	1.01	1.07
Depression	-0.03	0.02	0.98	0.95	1.00
Anxiety	0.01	0.01	1.01	0.99	1.03
	B	SE B	OR	95% CI	
				OR lower	OR upper
Zero-inflation part					
Ex-partner attachment	-0.02	0.04	0.98	0.90	1.07
Lonely negativity	0.03	0.04	1.02	0.94	1.12
Depression	-0.04	0.04	0.96	0.89	1.04
Anxiety	-0.06	0.03	0.94*	0.89	0.99

Education level was recoded into two levels: primary or secondary school and college or university. Primary or secondary school and being male served as reference categories. The model was significantly better than the intercept-only model, $\chi^2(10, n = 178) = 89.73, p < 0.001$. Variance inflation factors (VIF) between 1.02 and 3.09 (< 10 ; [51]).

RR, rate ratios; OR, odds ratios; CI, confidence interval.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Do Breakup Characteristics Influence UPB Perpetration?

Thirteen partial tests independently examined the effects of initiator status, loci of cause, and reasons for the breakup. In line with hypothesis 2, ex-partner initiation (relative to self-initiation) was significantly associated with both the continuous and dichotomous outcome (RR = 2.02, $p < 0.001$; OR = 0.34, $p < 0.05$). Of the four loci of cause, attributing the cause of the breakup to the ex-partner or to external factors was positively associated with the expected frequency of UPB (respectively, RR = 1.37, $p < 0.001$; RR = 1.15, $p < 0.05$). Interestingly, of the reasons reported by at least 10% of the sample, a negative effect of infidelity on part of the respondent and a positive effect of not meeting obligations to the family emerged in the continuous part (respectively, RR = 0.38, $p < 0.05$; RR = 2.54, $p < 0.01$). Important to note is that about 90% of the people mentioning not meeting family obligations, referred to the ex-partner's lack.

Next, one model analyzed the effects of initiator status and both external loci of cause (Table 3), and one model tested the effects of both reasons (Table 4). All predictors in both integrated models remained significant. Ex-partner initiation (relative to self-initiation) related to a 62% increase in expected number of behaviors and to a 66% decrease in the chance of perpetrating no UPB. When joint initiation served as reference category, the effect of ex-partner initiation only remained for the dichotomous outcome (88%, OR = 0.12, $p = 0.05$). Further, every unit increase in blaming the ex-partner or external factors, respectively, related to 30% and 20% increase in the expected number of behaviors. Finally, the number of behaviors strongly increased (109%) when the reason for the breakup was not meeting family obligations (by the ex-partner). The reason own infidelity negatively related to the expected number of perpetrated behaviors (58%).

Interestingly, when *post hoc* testing a third model in which both reasons were added to the model containing initiator status and both loci of cause, the effects of the reasons disappeared (RR = 0.79, $p > 0.05$; RR = 1.18, $p > 0.05$). This observation suggested that subjective appraisals of who initiated the break and

TABLE 3—Summary of zero-inflated Poisson regression analysis for initiator status and locus of cause in predicting unwanted pursuit behavior perpetration (n = 176).

Variables	B	SE B	RR	95% CI RR lower	95% CI RR upper
Counts part					
Gender	0.72	0.22	2.05***	1.34	3.12
Education level	-0.67	0.19	0.51***	0.35	0.74
Social desirability	-0.20	0.05	0.82***	0.74	0.89
Initiator ex-partner	0.48	0.20	1.62*	1.09	2.41
Initiator both	1.07	0.58	2.92	0.94	9.06
Locus of cause	0.26	0.08	1.30**	1.10	1.53
ex-partner					
Locus of cause	0.18	0.07	1.20**	1.05	1.38
external factors					
	B	SE B	OR	95% CI OR lower	95% CI OR upper
Zero-inflation part					
Initiator ex-partner	-1.08	0.45	0.34*	0.14	0.82
Initiator both	1.02	1.09	2.77	0.33	23.34

Education level was recoded into two levels: primary or secondary school and college or university. Primary or secondary school, being male and self-initiation served as reference categories. The model significantly differed from the intercept-only model, $\chi^2(9, n = 176) = 97.29, p < 0.001$. Generalized variance inflation factors (GVIF, in case of categorical variables with more than two levels, see [52]) between 1.02 and 1.10.

RR, rate ratios; OR, odds ratios; CI, confidence interval.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 4—Summary of zero-inflated Poisson regression analysis for breakup reasons in predicting unwanted pursuit behavior perpetration (n = 167).

Variables	B	SE B	RR	95% CI RR lower	95% CI RR upper
Counts part					
Gender	0.80	0.20	2.22***	1.49	3.31
Education level	-0.55	0.20	0.58**	0.39	0.86
Social desirability	-0.17	0.05	0.84**	0.76	0.93
Infidelity participant	-0.87	0.39	0.42*	0.20	0.90
Not meeting family obligations	0.74	0.34	2.09*	1.07	4.08

Education level was recoded into two levels: primary or secondary school and college or university. Primary or secondary school, being male and the absence of infidelity and not meeting family obligations were used as reference categories. The model was significantly better than the intercept-only model, $\chi^2(5, n = 167) = 65.41, p < 0.001$. Variance inflation factors (VIF) between 1.00 and 1.05.

RR, rate ratios; OR, odds ratios; CI, confidence interval.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

what caused the break mediated the relationship between reasons and UPB perpetration.

Discussion

Main Findings

Knowing that former partners are one of the most vulnerable groups to become targets of UPB, this study focused on the explanatory value of the breakup context. Using an ecological valid community sample of ex-partners and advanced statistical regressions, the contribution of several properties of the breakup on UPB perpetration was tested.

A first important result of the present study shows that about one-fifth of the participants performed at least one pursuit behavior toward their former partner during the last 2 weeks. Mild pursuit

behaviors (e.g., unwanted in person conversations or asking friends for information about the ex-partner) occurred most often and thus can be considered as a common, perhaps standard, reaction following a breakup. This has been illustrated in previous studies on post-breakup UPB in college student samples, showing higher prevalence estimates compared to our study (e.g., [10]). Knowing that the average stalking case lasts for about 2 years (1), our measuring of recent occurrences of UPB in a sample with an elevated mean time since the breakup mainly explains the lower estimates found in this study. Furthermore, because the occurrence of pursuit tends to be higher in student samples (1), any comparison between such samples and our community sample is limited. Unfortunately, studies examining UPB in a community sample of separated persons are, to our knowledge, nonexistent.

When exploring the influence of descriptive characteristics and social desirability, we found that, in order of strength, being female, not having a higher education level, and less social desirable response tendencies positively impacted on the number of self-reported UPB. Our finding that women report higher levels of UPB is at first sight surprising compared to the existing knowledge that stalking perpetrators are mainly men (e.g., [43]). However, similar to the insignificant gender differences found in several UPB perpetration studies (e.g., [19]), two studies examining female stalkers illustrated that stalking is rather a gender-neutral behavior (44,45). In these studies, female stalkers resembled male perpetrators in many demographic characteristics, the presence of psychopathology, the intrusiveness, number and duration of the behaviors, and frequency of threats and violence. Female stalkers differed from male stalkers in that they were less likely to target strangers and were more often motivated by the desire to establish or attain intimacy (e.g., with an acquaintance or professional) rather than to maintain or restore intimacy with the victim (e.g., with a former partner). Men and women equally stalked intimate partners, were equally driven by a rejected type of motivation, and had a similar elevated risk of being violent when the victim was a prior sexual intimate. The question thus remains why women in our study enacted more behaviors. Prevailing cultural stereotypes such as the fact that male perpetrators' behaviors are considered to be more grave (46), and gender-specific perceptions such as the observation that male perpetrators tend to perceive the impact of their pursuit behavior as less negative (47) might have motivated the men in our sample to underreport UPB. This explanation could be credible taking the significant negative effect of self-presentation concerns into account. Finally, the observed effect of education level less equivocally joins research findings showing higher proportions of unemployment among stalkers (17) and a positive relationship between education level and the quality of the co-parental relationships (48).

This study was mainly interested in exploring the effects of post-breakup individual adjustment and characteristics of the breakup beyond the effects of the above control variables. Our results show that general feelings of anxiety differentiate between the absence and presence of pursuit behaviors and that separation-specific feelings of loneliness and negative affect impact on the frequency of perpetrated pursuit tactics. The sizes of the regression coefficients were rather small, what might have been owing to the fact that several persons in the sample were already separated for a longer time. These findings are in line with previous studies (e.g., [18,19]) and suggest that both general and separation-specific consequences of breaking up are valuable in understanding UPB perpetration. Nevertheless, mainly specific reactions, such as rumination or anger and jealousy (e.g., [18,49]), have been examined. Related, Dutton and Winstead (19) stated "If research focuses only on anger or jealousy as motives for UPB, there is a risk of overlooking the role that

feelings such as sadness, hurt, loneliness, or depression play in UPB and stalking” (p. 582). It should be noted that although anxiety, loneliness, and negative affect are common emotional consequences of breaking up (15), we could not, owing to the cross-sectional nature of our study, determine whether these affective states were situationally caused by the breakup or rather chronic affect states, present prior to the break and possibly part of a psychopathological disorder. Aside the role of breakup-related negative affect states (e.g., [18,19]), these chronic affect states could also explain the significant effect of anxiety, loneliness, and negative affect observed in this study. Previous studies namely pointed to the presence of chronic mood disorders in (relational) stalkers (e.g., [13,20]).

Our examination of breakup characteristics shows that the number of tactics as well as the probability of perpetrating one or more pursuit tactics strongly increases when the ex-partner initiated the break. This effect is highly plausible and similar to the results of previous studies (e.g., [10]). Also, attributing the cause of the breakup to the ex-partner and to external factors raised the frequency of perpetrated tactics in our sample. The size of the RRs indicated that the latter type of attribution less forcefully influenced the number of perpetrated tactics compared to appraising the ex-partner as the initiating and responsible party. Explanations referring to intermediary cognitions and emotions could foster the understanding of these effects. First, similar to the effect of being “dumped,” the effect of ex-partner locus of cause might be explained by the above-mentioned feelings of anger and jealousy. Second, the lack of control, which is thought to be associated with externally attributing the cause of the breakup (23) and ex-partner initiation of the break (22), could explain the observed positive relationship between external loci of cause, ex-partner initiation, and UPB perpetration. This explanation is likely when one considers the demonstrated effect of need for control in stalking perpetrators (e.g., [50]). Third, the effect of externally attributing the reason for the breakup might be understood by the associated belief that intrinsically there had been nothing wrong with the relationship. This belief, described as idealization in Cupach and Spitzberg’s Relational Goal Pursuit theory (17), is assumed to be a meaningful cognitive mechanism hindering acceptance of the break. Thus, generally speaking, although no previous study has examined the effects of causal attributions before, our results seem to fit or relate to the existing theories and findings.

A last important, explorative part of this research focused on examining the role of reasons for the breakup. Consistent with logical assumptions, own infidelity appeared as a protection factor for the number of perpetrated pursuit tactics, whereas the effect of ex-partner infidelity remained insignificant. Separating owing to the ex-partner’s lack in meeting family obligations resulted in elevated levels of ex-partner pursuit. Knowing that after a breakup, mutual responsibilities remain present between ex-partners (e.g., in case children are involved), this effect might signify that the perpetrator engages in unwanted communication, approaches of family or friends, etc., to mobilize or force the ex-partner to fulfill his/her prolonged responsibilities after the break. If this is the case, then it is possible that we registered unwanted behaviors that were not necessarily motivated by pursuing intimacy. *Post hoc* analyses suggest that the effects of reasons are mediated by initiator status and external loci of cause. Thus, not the real reasons but rather the subjective appraisals of the causation and initiation seem to influence one’s engagement in UPB tactics (see also [22]). The low occurrence of several categories of reasons (which were excluded from the analyses) and the fact that several categories mainly contained ex-partner-related problems, while an effect of participant-related problems was expected, are relevant explanations for the insignificance of the other categories of reasons.

Limitations, Strengths, and Implications

Several limitations in our study must be addressed. First of all the convenient nature of our sample resulted in an overrepresentation of participants separated for several years. Therefore, the current results cannot be generalized to the broader population of separated persons. This overrepresentation was probably due to the fact that people who had gotten over their breakup were more willing to participate. Despite this restriction, our study is one of the first examining UPB perpetration in a Flemish community sample of separated persons. This is a notable strength knowing that a great deal of research still focuses on victims and makes use of college student samples in English-speaking countries.

To avoid that our measurement of UPB perpetration would be tainted by memory biases (especially present in the nonrecently separated participants), we used a rather unusual reference period of 2 weeks. An advantage of this short time frame was its fit with the time frame of the nonretrospective predictors. On the other hand, this short time frame in combination with the modest sample size resulted in a low number of nonzero counts with implications for the power of the statistical analyses. Accordingly, we used count models that respected the true distribution of our dependent variable and protected the power by testing subsets of predictors. Nevertheless, future studies should strive for larger samples which will be fruitful to catch a higher number of pursuit tactics. Larger samples will also help to diminish the skewed distribution of several reasons that were now excluded from further analyses and to make a more detailed coding of the reasons possible (e.g., own vs. ex-partner infidelity).

Because of the above limitations and preliminary results (concerning locus of cause and reasons), generalizing the results of this study requires further verification. Future longitudinal research seems valuable to disentangle the directions of the effects and to shed light on the predictive value of the contextual factors significant in this study. A follow-up study could also distinguish chronic affect states from emotional consequences of breaking up and execute mediation and moderation analyses, which could validate the previously offered explanations on intermediary emotions and cognitions.

Conclusion

In sum, our results show that, even when separated for several years, perpetrating mild pursuit tactics against one’s former partner can be seen as a relatively common behavioral pattern. In addition to the effects of gender, education level, and social desirability, this study demonstrates that one’s psychological adjustment to the breakup and one’s appraisal of the initiation and causation of the break contribute to the perpetration of UPB between ex-partners. Considering that a profound investigation of the breakup context received less attention in research on UPB and stalking, this study provides new information on the underlying processes of former partner pursuit besides the well-established relational and individual determinants. Our results suggest that the breakup context merits further attention in theory and empirical research and imply that clinical treatment would benefit from fostering cognitive reconstructions and adjustment to the breakup.

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