



Assessing Perpetrator Responses to Confrontation: Associations with a DARVO-SF and Posttrauma Symptoms in Two Different Populations

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ABSTRACT

DARVO (Deny, Attack, Reverse Victim and Offender) is a common tactic used by perpetrators of interpersonal violence to deflect blame and responsibility. Individuals' exposure to perpetrator DARVO has previously been measured using the 72-item DARVO Questionnaire (DARVO-LF;). We aimed to identify and validate a short-form version of the original 72-item DARVO Questionnaire. We also sought to expand on DARVO-related knowledge by testing DARVO's associations with trauma symptoms, confrontation type, gender, and marginalized identities. Participants were recruited from online research participation platform Prolific (N = 319) and from a large public university in the American West (N = 261). An exploratory factor analysis identified an 18-item version of the DARVO Questionnaire (DARVO-SF). The DARVO-SF had high internal reliability and was highly correlated with the DARVO-LF. In support of our predictions, analyses revealed the DARVO-SF predicted trauma symptoms after controlling for trauma history. DARVO exposure varied by confrontation type and was higher in confrontations about emotional and psychological mistreatment. Contrary to expectations, we did not find any associations between DARVO exposure and gender or marginalized identities. Overall, the current study identifies a substantially improved DARVO measure and provides novel insight into individuals' experience of this tactic.

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DARVO, an acronym that stands for Deny, Attack, Reverse Victim and Offender roles, was first conceptualized by Freyd (1997) to describe how perpetrators, especially those who commit sexual offenses, react when held accountable or confronted for their behavior. Freyd observed that, in addition to denying any wrongdoing, sex offenders attempt to undermine their victims' credibility and generate confusion over the offenders' culpability by levying personal attacks against their victims. By accusing their victims of acting unjustly, perpetrators thereby position themselves as the "real" victim,

effectively reversing the roles of victim and offender. The narrative created by DARVO discredits abuse victims by painting them as ill-intentioned and untrustworthy and upholds perpetrators as innocent victims defending themselves from malicious and false allegations. This strategy can be effective. Research has confirmed that DARVO shifts perceptions of victims and perpetrators in favor of the perpetrators (Harsey & Freyd, 2020). In some cases, perpetrators may weaponize DARVO by suing their victims for defamation in civil court (S. J. Harsey & Freyd, 2022). Some individuals who report their sexual victimization to authorities may also be suspected of making false accusations, leading victims to become the targets of investigations or even criminal charges themselves (S. Harsey & Freyd, 2022).

Assessments of perpetrator denial, attacks, and reversal of victim and offender roles

The original measure designed to directly evaluate DARVO is the 72-item DARVO-LF. This questionnaire was initially developed by Harsey et al. (2017) to capture a broad range of possible DARVO responses that a victim could report having heard from a perpetrator during a confrontation. In the DARVO-LF, the elements of DARVO - denial, victim attacks, and victimperpetrator role reversals – are each measured using a series of 18 statements. As an example, one of the 18 denial statements from the DARVO-LF states, "Whatever you're saying happened wasn't my fault." Participants then indicate whether the person they confronted had said something similar to the statements during the confrontation. In addition to the DARVO elements, the DARVO-LF also contains 18 items representing apologetic and contrite statements. Harsey et al. (2017) used the DARVO-LF to evaluate the frequency of DARVO experienced during confrontations and found that nearly 72% of individuals surveyed had experienced DARVO during their confrontations. These confrontations encompassed a variety of wrongdoings, including perceived mistreatment, betrayals in romantic relationships, and abuse. Although originally observed among sex offenders, this finding suggest DARVO is used in contexts beyond sexual abuse. Moreover, hearing DARVO during the confrontation was positively associated with self-blame participants felt about the wrongdoing that sparked the confrontation. The three elements of DARVO were also found to be commonly used in conjunction during participants' confrontations; it was more typical for the individuals confronted by participants to use all three DARVO elements than it was for them to individually use denial, attacks, or role reversals.

In the second study to employ the DARVO-LF, Rosenthal and Freyd (2022) quantified the DARVO that campus sexual assault victims received from their assailants; analyses indicated that 51% of the victims in the study experienced DARVO from their perpetrators following a sexual assault. Doubt and selfblame were prominent in the narratives given by the victims who received DARVO responses from their perpetrators, suggesting that DARVO is a particularly confusing and hurtful response.

Few studies have examined associations between DARVO and other validated scales. In Harsey et al. (2017), feelings of self-blame were evaluated only using a single item while Rosenthal and Freyd (2022) did not correlate the DARVO-LF with any other measures. More recently, Harsey et al. (2024) found positive associations between individuals' use of DARVO during confrontations and their acceptance of rape myths and perpetration of sexual harassment. Altogether, however, empirical findings about DARVO and its correlates remain limited. Another notable limitation of research using the DARVO-LF is that it has only sampled from college student populations with limited diversity in identities (i.e., in both samples, over 65% of participants who responded to the DARVO-LF were white heterosexual undergrads). Consequently, there is a need to expand research on DARVO, especially with respect to individuals with marginalized identities. In line with the original conceptualization of DARVO as a distressing response some individuals receive following abuse (Freyd, 1997), it is particularly important to evaluate DARVO in the context of interpersonal trauma, such as trauma symptoms and trauma history.

The length of the DARVO-LF might make its inclusion difficult in some studies that could expand the current research on DARVO. A survey containing a battery of many other measures, for instance, may be unable to accommodate an additional questionnaire with 72 items due to constraints related to time (e.g., a 72-item scale might place survey completion time over an acceptable limit). This questionnaire might also be difficult to include in some surveys that contain many other lengthy scales. In cases like these, the 72item DARVO-LF might be undesirable for some researchers as surveys containing longer scales are at greater risk of participant response fatigue (Galesic & Bosnjak, 2009; Rolstad et al., 2011). A briefer, more economical DARVO measure would address these issues and allow for the measurement of DARVO in studies with such constraints. Moreover, some participants may benefit from responding to fewer items asking about potentially distressing experiences. As such, a short-form version of the DARVO Questionnaire would increase its usability in survey research and therefore broaden the research on DARVO.

The current study

The primary goal of the current study is to create a robust short-form version of the DARVO scale (DARVO-SF). A shortened DARVO scale would allow for the scale to be included among surveys where a longer 72-item scale is not possible or practical. As a standard practice, the first aim of the study was to create the DARVO-SF and ensure the new scale correlated with the original DARVO measure (Aim 1).

Following the identification of a short-form version of the DARVO-LF, a secondary aim of the current study is to test the relationship between DARVO exposure and psychological distress related to trauma in both an undergraduate and general population sample (Aim 2). Our first hypothesis for this aim predicted that DARVO exposure would be associated with greater victim distress after controlling for trauma history. We also aimed to test type of confrontation (categorized by incident that led to the confrontation) in association with the DARVO-SF and psychological distress. This led to our second hypothesis of this aim, which predicted more serious (and potentially more traumatizing) incidents of interpersonal harm would be related to more self-reported DARVO exposure during the confrontation.

Lastly, we sought to assess the role of marginalized identities in individuals' experiences of DARVO (Aim 3). Perpetrators tend to use DARVO disproportionately against women (Harsey et al., 2017), which suggests DARVO exposure might be associated with marginalized identities in general. Therefore, our hypothesis for this aim posited that participants with marginalized racial, sexual, or gender identities would report experiencing higher levels of DARVO during a confrontation.

Materials and methods

Participants

We collected online survey data, sampling from two different populations. We recruited participants from the general population through the online data collection platform called Prolific. Prolific is used for various types of online research, including psychological research. It includes options to recruit from multiple countries, and researchers are able to implement inclusion and exclusion criteria for their desired recruited sample. Participants for the current study were required to be ages 18 or older and live in the United States at the time of their participation. No other criteria were imposed during recruitment. Prospective participants were informed that the survey would ask them about "experiences confronting someone who committed a wrongdoing to you." Prolific participants (N = 389) were informed the approximate completion time for this survey would be 10 minutes. Payment was consistent with Prolific's participant compensation standards. Participant data were excluded from data analysis under two conditions: 1) when DARVO measure items had a response rate of 75% or less, or 2) when at least one of three attention check questions (e.g., I will select "2" if I am paying attention) was answered incorrectly. Of the 389 participants in the general population sample, 69 participants were excluded from data analysis based on these two conditions. The

sample used for data analysis comprised 63% (n = 203) Caucasian/White European/White participants and 49% (n = 157) men. Sixty-two (19%) participants self-identified with a marginalized identity by responding "Yes" to the following item: "I identify as a marginalized person. Please think of any social groups (e.g., racial, ethnic, sexuality, religion, disabilities, etc.) you identify with that you feel places you in a position of marginal importance, influence, or power." The mean age for participants was 34.7 years old (range: 18–85, SD = 13.2). Of the sample, 124 (39%) participants reported a history of physical abuse or trauma, 102 (32%) participants reported a history of sexual abuse or trauma, and 227 (71%) participants reported a history of psychological trauma. See Table 1 for more demographic information and frequency of confrontation category.

We also recruited college students from the human subjects pool of a large public university in the American West. Participants were not aware of the

Table 1. Prolific full dataset: participant characteristics.

		Prolific Participants		Student Participants
Variable	N	M/Percentage	N	M/Percentage
1. Gender	323		216	
Man	159	48.9	76	29.1
Woman	154	47.4	179	68.6
Genderqueer/non-conforming	7	2.2	0	_
Transman	2	0.6	0	_
A gender not listed	1	0.3	2	0.8
Non-binary	0	_	2	0.8
No response	0	_	2	0.8
Transwoman	0	_	0	_
2. Race	325		261	
Caucasian/White European	207	63.7	183	70.1
Asian	43	13.2	27	10.3
Black/African American	32	9.8	5	1.9
Multiracial	19	5.8	0	_
Hispanic/Latino American	14	4.3	28	10.7
A race/ethnicity not listed	7	2.2	5	1.9
American Indian/Alaska Native	2	0.6	1	0.4
Middle Eastern	1	0.3	1	0.4
Native Hawaiian/Pacific Islander	0	_	8	3.1
Prefer not to answer	0	_	3	1.1
3. Sexual Orientation	321			
Heterosexual	256	78.8		
Bisexual	36	11.1		
Lesbian	12	3.7		
Gay	8	2.5		
Asexual	6	1.8		
Oueer	2	0.6		
A sexual orientation not listed	1	0.3		
4. Confrontation Type	320		261	
Physical attack	26	8.1	7	2.7
Forced sexual contact	5	1.6	14	5.4
Emotional/psychological mistreatment	63	19.7	37	14.2
Relationship conflict	101	31.6	80	30.7
Excluded/ignored by family/friend	25	7.8	37	14.2
Secret exposed by family/friend	11	3.4	13	5.0
Disrespected/mistreated by family/friend	70	21.9	57	21.8
Disrespected/mistreated by acquaintance	19	5.9	16	6.1

study's purpose until they read the informed consent form, thus minimizing self-selection into the study. Participants (N = 354) were compensated with course credit. Of the 354 total participants, 93 participants either did not provide sufficient responses to the DARVO measure or did not correctly answer the one attention check question included in the survey. Thus, 261 undergraduates were included in analyses for the college sample in this study. The college sample comprised 70% (n = 183) Caucasian participants, 69% (n = 179) women, and 27% (n = 70) self-identified with a marginalized racial identity. The mean age for participants was 19.7 years old (range: 18-35, SD = 2.26). Of the data sample, 43 (16%) participants reported a history of physical abuse or trauma, 79 (30%) participants reported a history of sexual abuse or trauma, and 144 (55%) participants reported a history of psychological trauma (see Table 1).

Procedure

The university's Office of Research Compliance Services (Institutional Review Board) approved this research. Participants accessed the online survey either through the university human subjects pool or through the Prolific website. Those who chose to participate clicked a link that directed them to the online survey via Qualtrics survey software. After consenting to participate, participants completed the online survey, and were provided debrief information including national mental health resources, researcher contact information, and contact information for the university Office of Research Compliance Services. Once participants completed the survey, they were compensated appropriately. This study was pre-registered, which can be accessed here: https://osf.io/mwtnv/?view_only=6309b9cc07e74b3e8154ed03b77eeda1. Data are available from the lead author upon reasonable request.

Measures

Participants in this study responded to a variety of measures assessing experiences with confrontations and emotional distress. In addition to the measures described below, participants also reported standard demographic information and were presented with three attention check questions to assess for data quality.

Trauma history

Experiences of interpersonal trauma were assessed using the Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006), which was modified for this study. Three items were chosen from the original 12 items. These three items specifically asked about direct experiences with interpersonal trauma. The other 9 BBTS items focus on experiences of

natural disasters, non-interpersonal traumas (such as a car accident), and witnessing interpersonal trauma. The three BBTS items included in the current study are:

- (1) "You were deliberately attacked by another person so severely as to result in marks, bruises, burns, blood, broken bones, or broken teeth."
- (2) "You were made to have some form of sexual contact by another person, such as touching or penetration."
- (3) "You were emotionally or psychologically mistreated by another person over a significant portion of time."

Response options for these three items were *Never*, *One or two times*, and *More* than that. Internal reliability was not calculated for this measure because it consists of single indicators of externally experienced events that do not combine to measure an underlying construct; thus, internal reliability is an inappropriate analysis of these measures (Bollen & Lennox, 1991; Netland, 2001).

Experiences with confrontation

Participants were asked about their confrontation experiences with friends or family through a five-item measure modified from Harsey et al. (2017) (listed below). These items were chosen and created based on findings from Harsey et al. (2017), which listed relationship betrayals, perceived mistreatment, social exclusion, having a secret betrayed, and being mistreated or disrespected as the most common reasons for confrontations. These five items were presented in a checklist format, and participants were instructed to check the box next to any of the listed confrontations they have experienced.

- (1) I have confronted a romantic partner about relationship conflict (Examples: being cheated on, being lied to, etc.)
- (2) I have confronted a friend or family member about being excluded or ignored by them.
- (3) I have confronted a friend or family member about having a secret exposed by them.
- (4) I have confronted a friend or family member about being disrespected or mistreated by them.
- (5) I have confronted an acquaintance about being disrespected or mistreated by them.

DARVO

Prior to completing the DARVO measure, participants were asked to select a confrontation they initiated from a list of eight options. The confrontation options were based on the three BBTS items (e.g., "I confronted someone who forced me to have sexual contact") and five items of the Experiences with Confrontations measure (e.g., "I confronted a friend or family member about being excluded or ignored by them"). A ninth option, "I did not confront anyone in any of these situations," was provided as well. Participants who indicated they did not experience one of the eight confrontations continued to the next page of the survey without responding to the DARVO items. The participants who selected one of the eight confrontation items were instructed to respond to the original 72-item DARVO (DARVO-LF) measure for the particular confrontation they selected. The DARVO-LF includes 18 items in each of the subscales: Deny, Attack, Reverse Victim and Offender, and Apology. Examples of items on the DARVO-LF include, "Whatever you're saying happened isn't my fault" (Deny), "You're a liar" (Attack), and "I'm the real victim here" (Reverse Victim and Offender). For each item, participants indicated the degree of similarity between the item's statement and what they were told during their confrontations. Responses were on a 5-point Likert scale ($0 = Not \ at \ all \ like \ this; \ 1 = Somewhat \ like \ this; \ 2 = Moderately \ like \ this; \ 3$ = Very much like this; 4 = Almost exactly like this). Although participants answered the Apology subscale, this subscale was not included in this study's analyses. We consider the domain of apologies to warrant its own inquiry. The DARVO questionnaire was scored by calculating an overall average score that included the Deny, Attack, and Reverse Victim and Offender items. Average scores for each subscale were also calculated. Internal reliability in the current study for the DARVO-LF measure was $\alpha = .97$ in the general population sample and $\alpha = .97$ in the college sample.

Trauma symptoms

To evaluate psychological distress, participants reported trauma-related mental health symptoms using the 40-item Trauma Symptom Checklist – 40 (TSC-40; Briere & Runtz, 1989). This measure consists of 6 subscales: Anxiety, Depression, Dissociation, Sexual Abuse Trauma Index, Sexual Problems, and Sleep Disturbance. Response options were on a 4-point Likert scale (0 = Never, 3 = Often). For the purposes of the current study, only a total summed score for the entire measure was calculated. Internal reliability in this study was $\alpha = .95$ in the general population sample and $\alpha = .91$ in the college sample.

Data analysis plan

Aim 1

To address the first aim of the study, which was to create a DARVO-SF measure, we split the general population sample randomly in half while ensuring comparability between the two subsamples regarding binary gender. One half of this sample was used to conduct an exploratory factor analysis (n = 160). In the exploratory factor analysis, our goal was to

compile the items from the DARVO-LF that loaded onto a single factor at a strength of r = .40 or higher (Guadagnoli & Velicer, 1988; Stevens, 1992). We ran this factor analysis with a fixed factor of one because our aim was to create a measure that represented the overall concept of DARVO. Conducting the analysis with a factor of one allowed us to see which items across the three categories (Deny, Attack, and Reverse Victim and Offender) would load most heavily onto a "DARVO" factor. For example, there may be more Attack items than Deny items that load most heavily on to the single factor. Our analysis plan allowed for the possibility that the DARVO-SF would consist of an asymmetrical distribution from subscale items. This is common in psychological measures, (e.g., TSC-40), in which subscales consist of different numbers of items. The second half of this sample (i.e., "hold out data") was used to assess the performance of the DARVO-SF in a non-exploratory sample (n = 160).

Aim 2

To address the second aim of the study, we conducted descriptive, correlational, and regression analyses to test the relationships between the original DARVO measure, DARVO-SF, types of confrontations, and psychological distress. These analyses were conducted in a semi-exploratory manner in the exploratory general population. Our hypotheses and the results from the exploratory dataset informed the analyses for the hold out dataset and college sample. For example, the original DARVO measure was only included in the exploratory dataset analyses. When participants' trauma histories were included as a variable, we used a cumulative BBTS score, which recorded how many different types of interpersonal trauma participants have experienced (Gamache Martin et al., 2013).

Hierarchical regressions were conducted to test the hypothesis that greater DARVO exposure would be associated with higher endorsement of traumasymptoms, after controlling for trauma history. Due to small cell sizes for the eight different types of confrontations (see Table 1), descriptive statistics were conducted to test the hypothesis that confrontations regarding more serious incidents of interpersonal aggression (i.e., forced sexual contact being more serious than being disrespected by an acquaintance) would be positively associated with more DARVO exposure.

As a part of Aim 2, we conducted post-hoc analyses to explore the association between experiences of DARVO and type of betrayal/confrontation. Particularly, we were interested in the potential relationship between DARVO and experiences of unwanted sexual contact. To test this research question, we used all available data (i.e., combined community exploratory dataset, community holdout dataset, and college dataset) to conduct two posthoc analyses. We combined the three samples because the DARVO-SF had been working similarly in the community and college samples. First, we



conducted an ANOVA to examine possible group differences for all eight types of betrayal. Second, we conducted a t-test to determine if DARVO was reported more with unwanted sexual contact experiences compared to all other betrayal experiences measured in this study.

Aim 3

To address the third aim of the study, we conducted t-test and ANOVAs to analyze associations between marginalized group identity (e.g., marginalized gender, racial, or sexual orientation identities) with experiences of DARVO during confrontation using the DARVO-SF. Unfortunately, due to the small number of participants who identified as a gender that was not "woman" or "man" these analyses were conducted using a binary gender variable (man/ woman). Report of these non-binary gender identities comprised 3.1% (n =10) of the Prolific participants and 2.4% (n = 6) of the College participants (see Table 1). Participants who reported gender diverse identities were included in all other analyses. Racial and sexual orientation marginalization was defined as participant self-identification with a race other than Caucasian/White European and/or a sexual orientation other than heterosexual. Again, our hypotheses and the results from the exploratory dataset informed the analyses for the hold out dataset and college sample.

Results

Aim 1: DARVO-SF development

To address the first aim of this study, which was to create a short form of the DARVO measure, we conducted an exploratory factor analysis with one fixed factor. This exploratory factor analysis was completed with the "exploratory" half of the community sample. Results from the exploratory factor analysis successfully provided 18 items to comprise the DARVO-SF. Our initial threshold for item inclusion was r = .40 or higher, with the goal of including 18 items in the DARVO-SF. However, 52 of the total 54 items had a loading value of r = .40 or higher. Thus, we compiled the 18 items that loaded most strongly onto the one factor. The DARVO-SF consists of 3 Deny items, 8 Attack items, and 7 Reverse Victim and Offender items. All 18 items load onto the factor at r = .65or higher. See Table 2 for the complete DARVO-SF.

Performance of DARVO-SF measure

Our hypothesis that the original DARVO measure and DARVO-SF would be strongly and positively correlated was supported in the exploratory, hold out, and college samples at or above a correlation coefficient of 0.96 and a significance level of p < .001. The internal reliability for the DARVO-SF was at or above 0.93 for the three samples.



Table 2. DARVO-SF items.

DARVO-LF Item #	DARVO-SF ITEM	Subscale	Loadings
23	"Whatever you're saying happened isn't my fault."	DENY	0.70
58	"That never happened"	DENY	0.68
72	"You're remembering it incorrectly"	DENY	0.67
7	"You're just trying to make me look bad"	ATTACK	0.74
17	"You're acting crazy"	ATTACK	0.73
44	"You're a liar"	ATTACK	0.72
61	"You're acting delusional"	ATTACK	0.72
1	"No one would believe you if you said anything about it"	ATTACK	0.67
60	"You need help"	ATTACK	0.67
9	"You're just trying to manipulate me"	ATTACK	0.66
6	"You regret what you did and now you're blaming me"	ATTACK	0.65
71	"I can't believe you're trying to make this my fault"	REVERSE	0.71
38	"I'm the real victim here"	REVERSE	0.70
4	"I am the one who suffered the most from it"	REVERSE	0.68
33	"You're not being fair to me"	REVERSE	0.68
11	"You should be apologizing to me"	REVERSE	0.66
32	"Why are you punishing me?"	REVERSE	0.66
40	"You treated me worse than I ever treated you"	REVERSE	0.66

Note. DARVO-SF items are organized in the table by subscale and then by factor loading.

Aim 2: associations between DARVO-SF, types of confrontations, & traumarelated symptoms

Due to the high correlation between the DARVO-LF and DARVO-SF in all three samples, as reported above, only results with the DARVO-SF are reported. Results are organized by hypothesis to illustrate the similarities in results across the three samples.

DARVO-SF, cumulative trauma history, & victim distress

Our first hypothesis predicted that, after controlling for trauma history, greater DARVO exposure would be associated with higher endorsement of trauma-related symptoms. To test this hypothesis, we conducted three hierarchical regressions with cumulative BBTS in the first step, DARVO in the second step, and trauma symptoms as the outcome. Adjusted R^2 is reported. All three regression models were statistically significant.

In the community exploratory sample, cumulative trauma histories alone accounted for 20% of the variance in the trauma symptom scores (β = 10.92, p < .001). When DARVO experiences were added to model, it accounted for an additional 5.6% of the variance, above and beyond trauma histories (β = 6.62, p = .001, R^2 = .26, F(2, 134) = 24.41, p < .001).

In the community hold out sample, cumulative trauma histories alone accounted for 14% of the variance in trauma symptom scores (β = 6.26, p < .001). When DARVO experiences were added to the model, it accounted for an additional 4.7% of the variance, above and beyond trauma histories (β = 5.70, p = .003, R^2 = .19, F(2, 134) = 17.06, p < .001).

In the college sample, cumulative trauma histories alone accounted for 22% of the variance in trauma symptom scores (β = 9.33, p < .001). When DARVO



experiences were added to the model, it accounted for an additional 7.4% of the variance, above and beyond cumulative trauma histories ($\beta = 6.48$, p < .0031 $R^2 = .29$, F(2, 224) = 48.02, p < .001).

DARVO within different types of confrontations

Our second hypothesis, which predicted that confrontations regarding more serious incidents of interpersonal aggression would be related to greater DARVO exposure, received limited support. An ANOVA model testing the association between DARVO and the eight-category confrontation type variable was significant in the combined dataset, which suggests DARVO is associated with certain types of confrontations/betrayals more than others (F (7, 536) = 2.68, p = .01, η^2 = 0.03). Tukey post-hoc analyses showed that participants who experienced confrontation about emotional and psychological mistreatment reported more DARVO (M = 1.91, SD = 0.89) than those who had a confrontation about being excluded or ignored by a family member or friend (M = 1.48, SD = 0.62; see Figure 1).

A t-test exploring the relationship between DARVO and unwanted sexual contact experiences found no significant difference in DARVO experiences between participants who reported confronting someone about an unwanted sexual experience (M = 2.00, SD = 1.03) and those who confronted someone about other betrayals (M = 1.70, SD = 0.82), t(17.75) = -1.24, p = .23, d = 0.37, 95% CI [-0.82,0.21]. The cell size for participants who reported confronting someone about an unwanted sexual experience is small, however. Across both

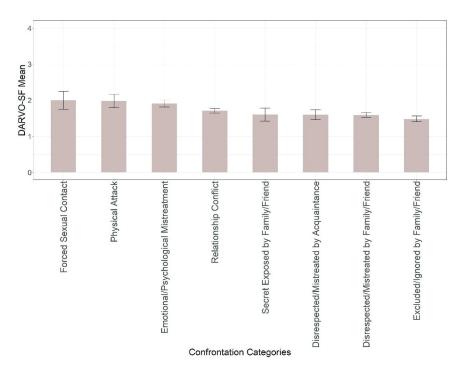


Figure 1. Experiences with DARVO in each confrontation categories: combined dataset.

community and college samples, a total of 19 individuals reported confronting someone over forced sexual contact. This could explain why, in Figure 1, mean DARVO scores appear highest for forced sexual contact (n = 19) and physical attack (n = 33), but no statistical effects were found for these two categories. Thus, these inferential results should be considered preliminary and future research could expand on this. The same analyses were conducted on a combined dataset that did not include the community exploratory dataset due to the exploratory nature of that dataset. Results were similar to the findings reported here.

Aim 3: DARVO and marginalized identities

Our third hypothesis predicted that participants with marginalized identities (e.g., marginalized gender, racial, or sexual identities) would report experiencing higher levels of DARVO during a confrontation. As described in the Data Analysis Plan, participants who self-identified as a gender that was not "woman" or "man" were excluded from these specific analyses due to the small number of participants who identified in this way. Participants who reported gender diverse identities were included in analyses for all other study aims.

In the community exploratory sample, women (M = 1.83, SD = 0.92) and men (M = 1.59, SD = 0.80) did not report different levels of DARVO exposure, t(142.16) = 1.71, p = .09, d = 0.28, 95% CI [-0.04,0.53]. Experiences of DARVO were not significantly different for participants who self-identified with a marginalized group compared to participants who did not identify with a marginalized group.

In the both the community hold out sample and the college sample, we did not find significant differences in DARVO experiences based on marginalization status.

Discussion

The primary aim of the current study was to identify and evaluate a short-form version of the original 72-item DARVO Questionnaire (Harsey et al., 2017). An exploratory factor analysis resulted in an 18-item version of the scale (DARVO-SF). This new measure produced excellent statistical properties, such as a strong correlation with the original DARVO-LF questionnaire and high internal reliability. Containing three Deny items, eight Attack items, and seven Reverse Victim and Offender items, the DARVO-SF offers researchers a brief and effective measure of DARVO experienced by victims. The results of the exploratory factor analysis also provide further support for the DARVO is a unitary concept (Freyd, 1997). Items representing each of the three components of DARVO loaded highly onto a single factor, indicating that denials, attacks, and reversals of victim and offender statistically map onto the same underlying construct. This finding is in line with Harsey et al. (2017), who

identified correlations between the three subscales of the DARVO-LF (Harsey et al., 2017), as well as with previous research finding correlations between perpetrators' use of denial, victim-blaming, and adoption of a victimized role (Schneider & Wright, 2001; Scott & Straus, 2007).

In addition to identifying the DARVO-SF, the current study also tested several predictions relating to DARVO's associations with other variables. We predicted that greater exposure to DARVO during a confrontation would be associated with more victim distress, operationalized as trauma symptomology, after controlling for trauma history. Analyses supported this hypothesis in both the community and university samples, indicating that individuals who experienced more DARVO during a confrontation reported higher levels of trauma symptoms not explained by previous trauma exposure. This reflects other research that finds unsupportive and victim-blaming responses predict worse psychological outcomes like elevated levels of depression, anxiety, PTSD, and general trauma symptoms (Dworkin et al., 2019; Ullman, 2021). We also predicted that participants would report higher levels of DARVO exposure when confrontations were about more serious incidents. Analyses revealed that DARVO exposure varied by type of confrontation, but the only significant mean difference that emerged between confrontation type indicated greater DARVO exposure for confrontations about emotional and psychological mistreatment than for confrontations about being excluded or ignored by a family member or friend. Moreover, the effect size for this difference was small. Analyses largely did not support our hypothesis predicting that participants with marginalized identities would report more DARVO. Across all three samples, participants with marginalized identities generally did not report experiencing any more (or less) DARVO than participants without marginalized identities. More research is needed to adequately explore this issue as marginalized or privileged identities of the person confronted were not measured in the current study – this question therefore cannot be tested presently but may serve as an interesting research question in forthcoming studies.

In contrast to previous research finding that women experienced greater DARVO levels than men (Harsey et al., 2017), we did not find gender differences in DARVO exposure between men and women. Although women did report marginally more DARVO exposure than men in the exploratory community sample, this analysis did not reach statistical significance. It is not clear why the current study did not find gender differences in DARVO exposure. It is possible that it simply reflects a real-world phenomenon (i.e., that women and men tend to experience equivalent amounts of DARVO). Compared to Harsey's et al. (2017) study, the present study included hundreds more participants and may therefore offer more accurate analyses regarding DARVO exposure and gender. Alternatively, it may be possible that the DARVO-SF, used in the present study's analyses relating to gender, is less sensitive to detecting differences in men and women's DARVO exposure.



Limitations and future directions

Although the current study has many strengths, there are several limitations worth discussing. The university sample was relatively homogeneous with respect to participants' racial identity, age, and gender, which potentially constrains the generalizability of findings based on this sample. The limits of this sample may partially explain why no group differences emerged in DARVO exposure between university students with marginalized identities and those without. Certain marginalized identities were still lacking in the community sample as well (e.g., individuals identifying outside the gender binary of woman/man). Future research investigating how people with marginalized identities experience DARVO would benefit from recruiting a primarily nonwhite, non-heterosexual, and non-cisgender sample of participants. Additionally, there is more to learn about DARVO exposure during confrontations about more serious or harmful incidents of interpersonal aggression (e.g., forced sexual contact being more serious than being disrespected by an acquaintance). Due to the small cell sizes and the preliminary nature of these specific analyses, we are limited in the conclusions we can draw about the relationship between types of confrontations and DARVO exposure. Finally, the current study's correlational design limits the extent to which we can draw conclusions about DARVO's effect on individuals' wellbeing. A longitudinal design may enable researchers to draw stronger conclusions regarding the impact of DARVO on psychological wellbeing.

Since research on DARVO is still growing, there are many other research questions on DARVO exposure that research should address. In addition to the suggestions for future research already discussed, studies could use qualitative methods to gather in-depth information regarding the psychological experience of receiving DARVO responses. Building on work by Rosenthal and Freyd (2022), focus groups or interviews with victims who have been the target of DARVO would produce rich narratives about the ways in which DARVO impacts victims. Quantitatively, the DARVO-SF offers researchers the chance to measure DARVO alongside a battery of other scales; this means that future research could investigate DARVO exposure's relationships with a wide variety of variables that have not yet been examined, such as subsequent trauma disclosure practices and revictimization.

Conclusions

The 18-item DARVO-SF is a brief, statistically reliable measure of DARVO exposure. The DARVO-SF is a significantly more economical – but no less precise - measure of DARVO than the original 72-item DARVO Questionnaire (Harsey et al., 2017). The DARVO-SF allows researchers to efficiently evaluate participants' DARVO exposure in only a few minutes, making it more suitable for studies containing many other scales and measures or studies with considerable limitations in time or survey length. Along with presenting the DARVO-SF, the current study also expands the empirical research on DARVO. Exposure to DARVO is associated with heightened trauma symptoms, suggesting that this perpetrator response may play a role in poorer victim outcomes. DARVO is a potentially retraumatizing experience for victims. Researchers and clinicians should consider DARVO exposure to be a risk factor for more pronounced trauma symptoms when evaluating victims' wellbeing.

Authors contributions

The authors made the following contributions. Melissa L. Barnes: Conceptualization, Data Analysis, Writing - Original Draft Preparation, Writing - Review & Editing; Sarah J. Harsey: Writing - Original Draft Preparation, Writing - Review & Editing; Author 3: Data Analysis, Writing - Review & Editing; Jennifer J. Freyd: Conceptualization, Writing -Review & Editing

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