

Reported Frequencies of and Initial Psychometric Properties of Measures of Childhood and Current Peer Victimization in a Sample of American Adults

Emily. Lund^{1*}, Kayli. Seagraves¹, Katie. Thomas²

¹ Department of Educational Studies in Psychology, Research Methodology and Counseling, University of Alabama, Tuscaloosa, Alabama, United States

² Clement J. Zablocki VA Medical Center, Milwaukee, Wisconsin, United States

* Corresponding author email address: emlund@ua.edu

Article Info

Article type:

Original Research

How to cite this article:

Lund, E., Seagraves, K., & Thomas, K. (2027). Reported Frequencies of and Initial Psychometric Properties of Measures of Childhood and Current Peer Victimization in a Sample of American Adults. *Journal of Assessment and Research in Applied Counseling*, 8(3), 1-13.
<http://dx.doi.org/10.61838/kman.jarac.4603>



© 2027 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

Objective: In the present study, we examined the internal consistency, factor structure, and response patterns of two measures of peer victimization a sample of 899 American adults. One measure, the Retrospective Childhood Victimization Scale (RCVPS; (Boulton, 2013)) examines retrospective childhood peer victimization while the other scale, the Pacific Rim Bullying questionnaire (PRB; (Konishi et al., 2009)) measures current peer victimization.

Methods and Materials: Initial factor structure was derived using exploratory factor analysis (EFA); internal consistency and response frequencies were also calculated.

Findings: The RCPVS demonstrated excellent internal consistency, and the PRB demonstrated adequate internal consistency. Both measures fit two-factor models in which physical victimization (and, in the case of the PRB, property theft or damage) loaded into one factor whereas relational and verbal victimization loaded into another factor. Participants also more frequently endorsed experiencing relational and verbal victimization on both measures, indicating that physical victimization may be a somewhat distinct construct that occurs less commonly than other types of interpersonal victimization.

Conclusion: These results lay the groundwork for future psychometric analysis of these measures in adult samples, including confirmatory factor analysis. Relational and verbal peer victimization are more common across the lifespan than either physical victimization or property destruction. Additionally, relational and verbal victimization tend to co-occur. Clinicians should therefore assess for relational and verbal victimization, especially if a client independently reports experiencing one or another. Clinicians should also assess for exposure to physical and property victimization separately.

Keywords: peer victimization, interpersonal violence, retrospective peer victimization, adults, psychometrics

1. Introduction

Peer and interpersonal victimization have been increasingly recognized as a serious health and social issue. Although peer victimization has been traditionally treated as an issue confined to childhood and adolescence, a growing body of literature indicates that the behaviors and consequences of peer victimization extend into adulthood, continuing into post-secondary education (Lund & Ross, 2017) and the workplace (Samnani & Singh, 2012). In a systemic review of peer victimization among college students, Lund and Ross (2017) found that 20-25% of students, on average, reporting experiencing peer victimization in college, although there was a high degree of variance in reported prevalence across studies (Lund & Ross, 2017). Similarly, in a meta-analysis of workplace peer victimization, Nielsen and colleagues (2010) found mean prevalence rates of around 15-25% in non-Scandinavian samples (mean rates were lower—5-10%—in Scandinavian samples), again with of high degree of variance across studies (Nielsen et al., 2010).

Researchers have also found that adults continue to experience harassment from peers outside of that experienced in the context of work and post-secondary education (Katz-Wise & Hyde, 2012). They report experiencing behaviors such as threats, property, damage, and verbal and physical harassment (Katz-Wise & Hyde, 2012). Although these experiences are more commonly reported by adults from marginalized groups, such as those who are sexual minorities (Katz-Wise & Hyde, 2012), have disabilities (Hughes et al., 2012; Lund, 2021), or are members of marginalized racial or ethnic groups (Comas-Díaz et al., 2019), and those with multiple marginalized identities (Katz-Wise & Hyde, 2012), adults from dominant groups also report experiencing these behaviors, albeit generally less frequently. Thus, peer victimization appears to be an issue that continues into adulthood.

In addition to the general experience of adult peer victimization, the experience of victimization can also be chronic across the lifespan. For example, researchers who have conducted both longitudinal (Wolke et al., 2013) and retrospective (Boulton, 2013; Zou et al., 2013) studies have found that peer victimization may have long-term impacts on physical, psychological, and social well-being. Meta-analyses with children and adolescents have linked peer victimization with depression and anxiety (Hawker & Boulton, 2000) and suicidality (Brunstein et al., 2010), again both retrospectively and longitudinally. Furthermore, the

negative psychological effects of victimization may compound across the lifespan, with individuals who experience victimization in both childhood and adulthood being at greater risk for negative psychological outcomes (Riedl et al., 2019). Because conducting longitudinal studies from childhood to adulthood is very costly and challenging, it is therefore critical that researchers have measures that allow them to retrospectively assess adults' experiences of interpersonal victimization in childhood (Barrios et al., 2015; Lund, 2021).

Despite the general acknowledgement of the importance of studying peer victimization, there is considerable variance and disagreement among researchers on how it should be measured (Nielsen et al., 2010; Ross et al., 2017). Some researchers adhere to a strict definition of peer victimization that requires intent to harm, a power imbalance, and repetition (Olweus, 1995; Swearer et al., 2012), whereas others use a broader definition that focuses simply on the behaviors that one has experienced as harmful (Nielsen et al., 2010; Ross et al., 2017) and are not concerned with perpetrator intent. Most measures of peer victimization have been only evaluated on students (Boulton, 2013; Swearer et al., 2012) or in the context of the workplace (Nielsen et al., 2010), creating a dearth of psychometric data on these measures in general adult populations.

Purpose of the Present Study

Given the need for more information on the psychometric properties of measures of retrospective and current interpersonal victimization in adults, the purpose of the present study was to examine the factor structure and internal constancy of two of these measures in a sample of American adults. Specifically, we examined the properties of the Retrospective Child Peer Victimization Scale (RCPVS; (Boulton, 2013)), a measure of retrospective peer victimization, and the victimization portion of the Pacific Rim Bullying (PRB; (Konishi et al., 2009)) questionnaire, a measure of current (past two months) interpersonal victimization in our adult sample. In addition to examining the factor structure, inter-item correlations, and internal consistency of each measure, we also report the number and percentage of participants reporting each type of victimization and the mean scores on each individual item on both measures.

2. Methods and Materials

Recruitment procedures

Participants were recruited as part of a larger study of violence victimization, identity, and mental health. Participants were recruited via Amazon Mechanical Turk (MTurk) in October and November 2016. MTurk is an online participant recruitment system in which participants are paid small amounts (called “micro-compensation”) for completing advertised tasks (Buhrmester et al., 2011; Mason, 2016). Participants were paid \$.50 USD for completing the survey. In order to participate, participants had to: a) be age 18 or older, b) be living in the United States (as filtered by MTurk), and c) correctly answer five questions regarding their rights as participants. All data were anonymously collected on a secure, university-based Qualtrics server, and responses were never linked to identifying information at any time. All procedures and recruitment materials were approved by a university institutional review board (IRB) prior to data collection.

MTurk has consistently been shown to be a source of valid and reliable data (Bogart et al., 2018; Buhrmester et al., 2011; Lund et al., 2016; Thomas et al., 2015) and to produce generally more demographically diverse samples than traditional college student sampling methods (Buhrmester et al., 2011). In addition, researchers who use MTurk are advised to use “validity checks” to help guard against random clicking and automated bots (Bogart et al., 2018). We did this in two ways. First, as described above, potential participants were required to answer five comprehension questions related to their rights as participants before beginning the survey; this screened out potential participants who were bots or people just “clicking through” surveys without paying attention to the content. Second, we employed an “attention check” item located in the middle of

the survey. The item was phrased as follows: “To account for random clicking, please select “Agree” as your answer to this item.” As noted below, we used failure to answer this item correctly as a way to screen participants out of our sample.

Participants

The initial sample size before data cleaning was 1,080 participants. Of those, 130 did not reach the attention check item, which was embedded midway through the survey. Of the 950 participants who did complete the attention check item, 936 participants passed it (i.e., gave the response required). From those 936, two additional participants were removed for likely inaccurate age data (recorded ages of “2” and “7”). Finally, participants were removed if they did not answer one or more items on the RBQ ($n=28$), PRB ($n=7$), or both ($n=2$). This resulted in a final sample size of 899 for analyses.

The sample represented all 50 states and Puerto Rico and was 78.4% White, non-Hispanic. The mean age was 36.65 ($n=898$, $SD=12.16$, range=18-79). The majority of participants identified as female (63.7%), with 35.6% identifying as male, 0.3% not stating their gender, and 0.3% identifying outside of gender binary. Most participants (85.0%) identified as heterosexual, with 8.5% identifying as bisexual, 4.6% identifying as gay or lesbian, and 1.1% identifying as asexual. More than half (55.6%) of participants worked full-time, with 14.9% working part-time and 5.6% being full-time students. Over half (58.4%) were engaged, married, or living with a partner. About one-fifth (19.0%) identified as having a disability or disabilities. Full demographic information is available in Table 1.

Table 1

Participant demographics

Variable	Percent (<i>n</i>)
Gender	
Male	35.6% (320)
Female	63.7% (573)
Other	0.3% (3)
Not stated	0.3% (3)
Race/ethnicity	
African-American/Black	8.5% (76)
Arab/Middle Eastern	0.2% (2)
Asian/Pacific Islander	6.0% (54)
Hispanic/Latino	4.7% (42)
Native American/ Alaskan Native	1.7% (15)

White/Caucasian	82.2% (793)
Other/not stated	1.8% (17)
White, non-Hispanic only	78.3% (704)
Sexual Orientation	
Asexual	1.1% (10)
Bisexual	8.5% (76)
Gay/lesbian/homosexual	4.6% (41)
Straight/heterosexual	85.5% (764)
Other	0.6% (7)
No response	0.2% (2)
Disability	
Yes	19.0% (171)
No	78.1% (702)
Do not wish to say	2.9% (26)
Highest Level of Education	
Below high school	0.7%
High school diploma or equivalent	10.2% (92)
Some college	28.4% (255)
Associate's degree	10.3% (93)
Bachelor's degree	36.8% (331)
Master's degree	10.6% (95)
Doctorate	2.4% (2)
Other/no response	0.5% (5)
Employment Status	
Unemployed, seeking work	7.2% (65)
Unemployed, not seeking work	3.6% (32)
Homemaker/stay-at-home parent	9.1% (82)
Retired	3.6% (32)
Working full-time	55.6% (500)
Working part-time	14.9% (134)
Full-time student	5.6% (50)
No response	0.4% (4)
Relationship Status	
Single	24.5% (220)
Dating	11.8% (106)
Living with Partner	13.1% (118)
Engaged	3.8% (34)
Married	40.5% (364)
Separated	1.0% (9)
Divorced	4.1% (37)
Widowed	1.1% (10)
No response	0.1% (1)

Measures

Retrospective Childhood Peer Victimization Scale.

The Retrospective Childhood Peer Victimization Scale (RCPVS), described in Boulton (2013), was used to measure retrospective childhood peer victimization in the present study (Boulton, 2013). The RCPVS begins with prompting question, "During your childhood, how often did other kids do this to you in a deliberately hurtful way?" When

developing the scale, Boulton (2013) conceptualized the items on the RCPVS as addressing physical, verbal, relational, and exclusionary aggression during childhood, with three items per concept; the specific items and their original conceptual categorizations are listed in Table 2 (Boulton, 2013). Each item is scored on a five-point scale from 0 to 4, with "never" and "most of the time" used as anchors. Initial use of the measure in a sample of 360

university students in the United Kingdom demonstrated good test-retest reliability ($r = .78-.84$ (Boulton, 2013)). Boulton (2013) also reported that the presumed subscales for different types of victimization showed high levels of inter-item correlation ($r = .77-.92$) in a larger sample of 582 university students, although no actual testing of the factor structure was conducted (Boulton, 2013). Lund and Ross (2021) reported excellent internal consistency for the total scale in a small sample of 58 college students with disabilities (Lund & Ross, 2016).

Pacific Rim Bullying questionnaire. The Pacific Rim Bullying questionnaire (PRB; (Konishi et al., 2009)) was originally developed to assess peer victimization in children and adolescents (Konishi et al., 2009) and was used in the present study to assess current interpersonal victimization. The peer victimization portion of PRB consists of six items that assesses the frequency of cyber, physical, verbal, and relational victimization as well as property damage, theft, and joking physical victimization over the past two months; specific item text is available in Table 4. The following stem is used for all six victimization items: “In the past 2 months, how often have other students been mean or negative towards you by...” For the purposes of the present study, this stem was modified to “In the past 2 months, how often have other people been mean or negative towards you by...” Participants rate each item from 1-4 (“never,” “once or twice,” “once or twice a week,” “several times a week”) (Swearer et al., 2012). Total victimization scores can be calculated by summing together the scores for all six items (Lund et al., 2021).

The victimization items of PRB have demonstrated adequate reliability in samples of secondary students ($\alpha = .77-.79$) and in one small sample of 58 college students ($\alpha = .83$) but its psychometric properties as a measure of peer and interpersonal victimization in adults has not been established yet. Additionally, there is some controversy over the use of the “joking” physical aggression item (Lund, 2021; Lund et al., 2016; Swearer et al., 2012), as traditional definitions of bullying require intent to do harm (Olweus, 1995). However, researchers have questioned the validity of this requirement, both in terms of peer victimization (deLara, 2012; Ross et al., 2017) and interpersonal victimization in general (Lund, 2021), which raises questions regarding the relation of that item to the other five items in the measure (Lund et al., 2016; Swearer et al., 2012).

Data Analysis

Scores and internal consistency. First, we calculated mean scores and standard deviations for the individual items

on each measure as well as the total sum scores for each measure. Because peer victimization measures are often dichotomized (i.e., experienced peer victimization/did not experience peer victimization) in research (Katz-Wise & Hyde, 2012; Lund & Ross, 2017), we also reported the number and percentage of participants reporting any victimization on both the total measures and on each individual item. Internal consistency (Cronbach’s α) was also assessed for both the total measures and any subscales that resulted from factor analysis. Dichotomous and descriptive analyses were also reported for any subscales that resulted from our exploratory factor analysis.

Factor analysis. Because no prior factor analysis with adults had been conducted for either measure, we elected to conduct separate exploratory factor analyses (EFAs) for each measure. Prior to conducting the EFAs, we assessed the suitability of the items in each measure for factor analysis. To do this, we examined inter-item correlations between all items in a given measure. We also used the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Barlett’s Test of Sphericity, both of which use inter-item correlation to assess a group of items’ suitability for factor analysis. In accordance with standard practices in EFA, we set cutoff scores above .6 for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and p values of below .05 for Barlett’s Test of Sphericity as indicators that the items in each measure were suitable for factor analysis (Cerny & Kaiser, 1977; Snedecor & Cochran, 1989).

Once suitability for factor analysis was established, we conducted separate EFAs for each measure using principal axis factor analysis and oblimin factor rotation. Eigenvalues of 1 were used as a preliminary cutoff in determining factor structure. Eigen value analysis was supplemented with visual analysis of scree plots. When visual scree plot analysis and eigen values yielded two potentially viable factor structures, we examined both possible factor structures and selected the one that best fit the data based on a combination of both statistical data (i.e., eigen factor values, factor-loading patterns) and conceptual fit. We used oblimin rotation with Kaiser normalization for the EFAs, as oblique rotations can be more suitable for social science research where factors are assumed to be environmentally related (Sürücü et al., 2022).

3. Findings and Results

Retrospective Childhood Peer Victimization Scale

Total scores and individual item scores. The mean for the total sum score of all 12 items was 17.64 ($SD=10.99$), with scores covering the entire possible range (0-48). Means on individual items ranged from .58 to 2.11, with only one

item with a mean below 1.0 (“kicked”) and only one item with a mean above 2.0 (“teased in a mean way”). Means and standard deviations for all items can be seen in Table 2 below.

Table 2

Descriptive statistics for the Retrospective Childhood Peer Victimization Scale

Item	Original category	Number endorsing any	Percent endorsing any	Mean	Standard deviation
Hit	Physical	563	62.6%	1.00	0.999
Kicked	Physical	460	40.0%	0.58	0.861
Pushed	Physical	606	67.4%	1.16	1.07
Teased in a mean way	Verbal	802	89.2%	2.11	1.23
Called nasty names	Verbal	713	79.3%	1.73	1.29
Verbally insulted	Verbal	752	83.6%	1.88	1.28
Left out on purpose	Social exclusion	725	80.6%	1.81	1.32
Not asked to join in	Social exclusion	753	83.8%	1.93	1.32
Ignored	Social exclusion	749	83.2%	1.82	1.28
Damaged my friendships	Relational	699	66.6%	1.23	1.15
Tried to make other people dislike me	Relational	685	65.1%	1.30	1.25
Spoilt my relationships	Relational	641	60.2%	1.09	1.16
Total measure		855	95.1%	17.64	10.99

Overall, 844 (95.1%) endorsed at least one retrospective peer victimization item. Endorsement rates for each individual item ranged from 40.0%-89.2%; only one item (“kicked”) was endorsed by fewer than 60% of participants; excluding that item, percent endorsement ranged from 62.9%-89.2%. The number and percentage of participants who endorsed each item can be seen in Table 2.

Internal consistency and inter-item correlations. The internal consistency of the 12-item RCPVS was .937, putting it in the “excellent” range (George & Mallery, 2003). All items on the RCPVS were significantly correlated with each other (all p-values < .001). Correlations for individual item pairs ranged from $r = .348$ to $r = .867$. The full correlation table can be seen in Table 3.

Table 3

Inter-item correlations for the Retrospective Childhood Peer Victimization Scale

	Hit	Kicked	Pushed	Teased in a mean way	Called nasty names	Verbally insulted	Left out on purpose	Not asked to join in	Ignored	Damaged my friendships	Tried to make other people dislike me	Spoilt my relationships
Hit	-	.690	.734	.463	.506	.469	.415	.366	.348	.350	.357	.397
Kicked	.690	-	.630	.396	.441	.417	.349	.315	.315	.347	.351	.376
Pushed	.734	.630	-	.545	.553	.527	.423	.397	.388	.374	.402	.402
Teased in a mean way	.463	.396	.545	-	.790	.800	.685	.681	.641	.480	.577	.514
Called nasty names	.506	.441	.553	.790	-	.847	.649	.620	.594	.513	.605	.568
Verbally insulted	.469	.417	.527	.800	.847	-	.698	.668	.646	.522	.619	.581
Left out on purpose	.415	.349	.423	.685	.649	.698	-	.867	.772	.566	.623	.599
Not asked to join in	.366	.315	.397	.681	.620	.668	.867	-	.813	.525	.595	.562
Ignored	.348	.315	.388	.641	.594	.646	.772	.813	-	.536	.583	.569
Damaged my friendships	.350	.347	.374	.480	.513	.522	.566	.525	.536	-	.642	.745
Tried to make other people dislike me	.357	.351	.402	.577	.605	.619	.623	.595	.583	.642	-	.735
Spoilt my relationship	.397	.376	.402	.514	.568	.581	.599	.562	.569	.745	.735	-

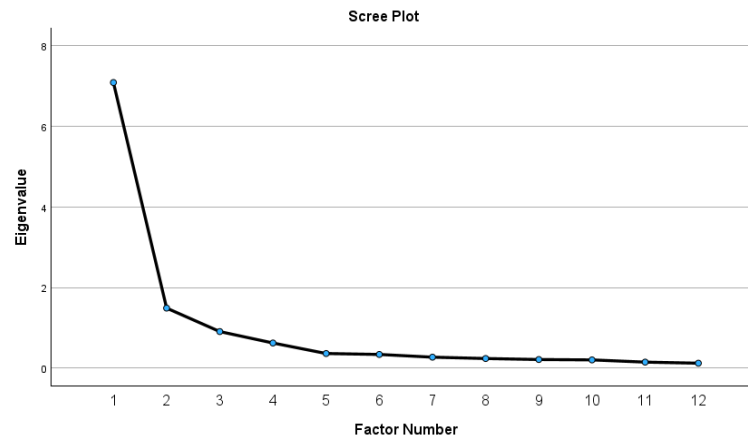
Note. All correlations $p \leq .001$

Exploratory factor analysis. The RCPVS met the criteria for EFA; the KMO was .917 and Barlett’s test of sphericity was significant ($p<.000$). The EFA resulted in two factors with eigen values above 1.0 that explained a combined 71.48% of the variance in scores. Visual analysis

of the scree plot also confirmed this two-factor structure (Figure 1), with the “joint” of the arm clearly occurring at the second factor. Furthermore, the rotated factor structure demonstrated a clear pattern of two factors.

Figure 1

Scree plot for the Retrospective Childhood Peer Victimization Scale.



Factor loadings for all items on the RCPVS can be seen in Table 4. When exploring these loading patterns, we saw that nine of the 12 items all loaded strongly on one factor (.746-.874). The exception were the three items related to physical victimization (i.e., “hit,” “kicked,” “pushed”), which all loaded strongly (.759-.836) on a second factor. We named the first factor “non-physical victimization” and the second factor “physical victimization.” Cross-loading of one

item on both factors generally was not observed; the item with the greatest potential cross-loading was “called nasty names.” This item loaded at .621 on the physical victimization factor and .803 on the non-physical victimization; this loading pattern still demonstrated a strong and clear “preference” for loading on the non-physical victimization factor; thus, the two-factor structure was retained.

Table 4

Final Rotated Factor Loading for the Retrospective Childhood Peer Victimization Scale

Item	Factor 1 (Non-physical Victimization)	Factor 2 (physical victimization)
Hit	.482	.871
Kicked	.433	.759
Pushed	.530	.836
Teased in a mean way	.804	.573
Called nasty names	.803	.621
Verbally insulted	.837	.587
Left out on purpose	.874	.442
Not asked to join in	.857	.396
Ignored	.821	.388
Damaged my friendships	.690	.415
Tried to make other people dislike me	.766	.441
Spoilt my relationships	.746	.458

Descriptive statistics and internal consistencies for non-physical and physical victimization factors. The internal consistency for the new non-physical victimization factor was excellent ($\alpha = .941$). The mean score for the nine-item factor was 14.90 ($SD = 9.32$), with scores covering the full possible range of 0-36. Eight hundred and forty-one participants (94.7%) reported at least some non-physical victimization.

The internal consistency for the new physical victimization factor was very good ($\alpha = .864$) (George & Mallery, 2003). The mean score for the three-item factor was 2.74 ($SD = 2.61$), with scores covering the entire possible

range of 0-12. Seven hundred and forty-six (71.9%) participants reported at least some physical victimization.

Pacific Rim Bullying Questionnaire

Total scores and individual item scores. Scores ranged from 6-24, covering the full possible range of scores. The mean score was 8.06 ($SD = 2.75$). Mean scores on the individual items were also relatively low, although the range for each item covered the full range of possible scores (1-4). Mean scores for individual items ranged from 1.27-1.54; mean scores and standard deviations for each item can be seen in Table 5.

Table 5

Descriptive statistics for the Pacific Rim Bullying Questionnaire

Item text	Victimization category	Number endorsing any	Percent endorsing any	Mean	Standard deviation
Pushing, hitting, kicking, or hurting you in other physical ways (jokingly)	Physical (joking)	172	20.1%	1.27	.608
Pushing, hitting, kicking, or hurting you in other physical ways (on purpose)	Physical (intentional)	84	9.3%	1.13	.460
Taking things from you or damaging your property	Property damage/theft	136	15.1%	1.19	.494
Teasing you, calling you names, threatening you verbally, or saying mean things to you ¹	Verbal	453	39.3%	1.54	.806
Excluding or ignoring you, spreading rumors or saying mean things about you to others, or getting others not to like you	Relational	450	38.9%	1.54	.803
Using computer, e-mail, or phone text messages	Cyber	356	20.5%	1.37	.686
Total PRB score		643	60.4%	8.06	2.75

¹Note. Due to a typographical error, this item read as follows in the present study "...teasing them, calling you names, threatening you verbally, or saying mean things to you?"

Two-fifths (60.4%; $n = 634$) of participants endorsed experiencing at least one item on the PRB in the past two months. The percentage of participants endorsing each item ranged from 9.3% to 39.3%. Only one item (intentional physical victimization) was endorsed by less than 10% of participants; excluding that item, the percentage of participants endorsing each item ranged from 15.1%-39.3%. The two most commonly endorsed items were verbal victimization (39.3%) and relational victimization (38.9%).

The number and percentage of participants endorsing each item can be seen in Table 5.

Internal consistency and inter-items correlations. The overall internal consistency of the measure was .789, putting it in the "acceptable" range (George & Mallery, 2003). All six items were significantly correlated with each other ($p > .001$), ranging from $r = .299$ to $r = .598$. Correlations are available in Table 6.

Table 6

Inter-item correlations for the Pacific Rim Bullying Questionnaire

	Physical victimization (joking)	Physical victimization (intentional)	Property damage / theft	Verbal victimization	Relational victimization	Cyber victimization
Physical victimization (joking)	-	.598	.418	.404	.315	.299
Physical victimization (intentional)	.598	-	.526	.390	.280	.325
Property damage / theft	.418	.526	-	.375	.371	.311
Verbal victimization	.404	.390	.375	-	.553	.469
Relational victimization	.315	.280	.371	.553	-	.406
Cyber victimization	.299	.325	.311	.469	.406	-

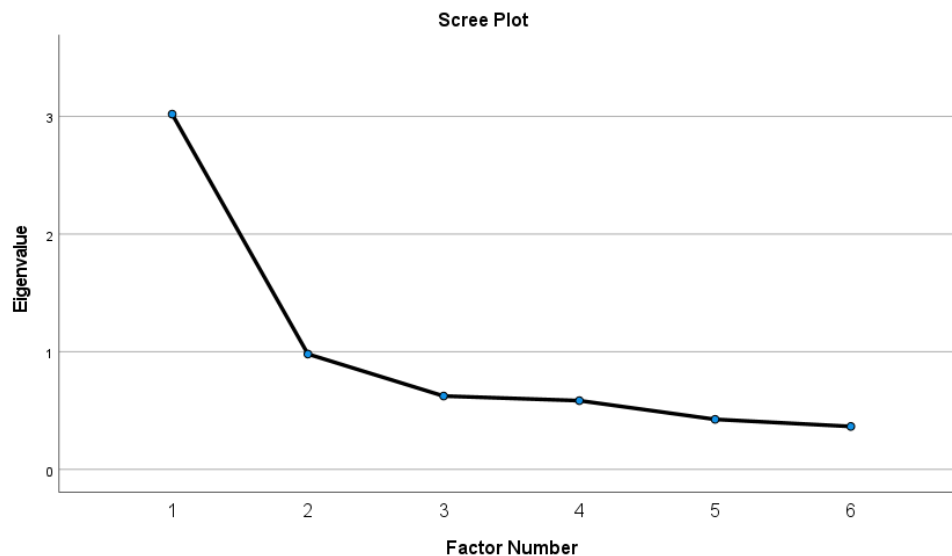
Note. All correlations $p \leq .001$

Factor structure. The PRB met the criteria for EFA; the KMO was .797 and Barlett's test of sphericity was significant ($p < .000$). The EFA initially suggested a single-factor structure that explained 50.33% of the variance. The scree plot (Figure 2) suggested a potential "hinge" at the

second factor, and the eigen value for the potential second factor was 0.981, placing it very near the standard cut-off of 1.0. However, an attempt to force a second factor with oblique rotation was unsuccessful, so a single factor solution was retained.

Figure 2

Scree plot for the Pacific Rim Bullying Questionnaire



Loading on the single factor was fairly consistent (.556-.680) across items. The items for "Excluding or ignoring you, spreading rumors or saying mean things about you to others, or getting others not to like you" (.597) and "Using

computer, e-mail, or phone text messages" (.556). The loadings for the other items ranged from .632-.680. Loadings for each item can be seen in Table 7.

Table 7

Pacific Rim Bullying Questionnaire final factor loading

	Factor 1
Physical victimization (joking)	.650
Physical victimization (intentional)	.680
Property damage / theft	.632
Verbal victimization	.695
Relational victimization	.597
Cyber victimization	.556

4. Discussion

In the present study, we sought to examine the psychometric properties of two measures of peer victimization in a sample of American adults. One of these measures, the RCPVS (Boulton, 2013), assessed retrospective peer victimization, while the other, the PRB (Konishi et al., 2009) assessed current (past two months) victimization. The RCPVS demonstrated good to excellent internal consistency, and the PRB demonstrated adequate internal consistency. In terms of factor structure, the RCPVS had a two-factor structure while the PRB had a one-factor structure. Although both measures assessed physical, verbal, and relational aggression, the PRB also assessed theft or property damage. This behavior was not assessed in the RCPVS, and researchers in future studies may wish to examine if adding items related to childhood theft or property destruction to the RCPVS results in those items also loading on the same factor as physical victimization.

Physical victimization was generally less frequently reported than other forms of victimization. The lower rates of physical victimization compared to verbal and relational victimization mirrors that seen in college student samples (Lund & Ross, 2017), adults with disabilities (Hughes et al., 2011), reports by school mental health professionals (Lund et al., 2018), and reports from adolescents (Wang et al., 2009). This difference may be attributed in part to the fact that physical aggression is generally viewed as more clearly transgressive than other forms of interpersonal aggression (Mason, 2016). Also, physical aggression may be more likely to be formally reported punished through legal or institutional means (Partridge & Affleck, 2017). Thus, perpetrators may view physical aggression as a riskier or higher-cost line to cross, compared to the more subjective and socially permissible behaviors of verbal or relational aggression, and thus perpetrators who engage in physical aggression may represent a different class—and relatively less common—class of perpetrator than those who do not.

Limitations and Suggestions for Future Research

The present study provides strong preliminary data on the factor structure and internal consistency of the RCPVS and PRB in a general adult sample. Researchers may wish to further examine the demographic, psychological, and health correlates of these measures in adults. Given that individuals from marginalized groups are more likely to experience victimization across the lifespan (e.g., (Comas-Díaz et al., 2019; Hughes et al., 2012; Hughes et al., 2011; Katz-Wise & Hyde, 2012)), it may be especially important to examine if and how patterns of both retrospective childhood and current peer victimization differ between those with specific types of marginalized identities (e.g., women, people with disabilities, people who identify as gender and sexual minorities, people who are members of marginalized racial and ethnic groups) and those from dominant cultural identities. Also, examining the intersections of multiple marginalized identities and victimization is also critical to understanding the sociodemographic realities of victimization (Forber-Pratt et al., 2020; Lund, 2021). Additionally, it is also important to continue to study the ways in which retrospective and current victimization relate to each other and jointly and separately impact mental health outcomes, given the existing evidence of strong links between various types of victimization and poorer mental health outcomes (e.g., (Barrios et al., 2015; Boulton, 2013; Brunstein et al., 2010; Riedl et al., 2019)).

This study also has some limitations that should be discussed. First, our sample is an online, American sample who knew via the informed consent process that they were engaging in a study that addressed both victimization experiences and mental health. It is possible that this may have potentially inflated the rates of victimization in our sample, although the evidence for this is somewhat mixed (Nielsen et al., 2010). Additionally, MTurk samples have sometimes been shown to have higher rates of clinical distress than other sampling methods (Shapiro et al., 2013), which may have resulted in elevated rates of victimization,

given the links between victimization and mental health discussed above.

Second, although we used multiple validity checks, it is possible that some of our respondents may have not been responding in a consistent, legitimate manner, although the strong internal consistency found in these analyses suggests against large-scale random responding, and these data were collected before the increased bot presence on MTurk (Ipsen et al., 2021; Lund et al., 2018). It is also possible that participants may have misreported or misremembered their victimization experiences, especially in childhood. Given the cross-sectional nature of this study, we were unable to collect test-retest reliability data, although Boulton (2013) did report strong test-retest reliability data in the initial study of the RCPVS.

Third, with regards to current victimization, we do not know the relationship of the perpetrator or perpetrators to the victims, and thus, it is possible that some of the victimization assessed may have also fallen under another construct, such as workplace victimization or intimate partner violence. Researchers in future studies may wish to ask respondents about the nature of their relationship to the perpetrator or perpetrators of each form of victimization in order to better understand if there is a relationship between the type of perpetrator and the type of consequences of victimization experienced.

Finally, an important limitation of the present study is that the factor structure analyses were limited to EFAs, not confirmatory factor analyses (CFAs). The use of EFAs allowed us to make important first steps in establishing a factor structure for these two measures in adult samples, as the factor of these measures in adults had not previously been examined. The factor structures suggested by the EFAs should next be confirmed or modified through the use of CFAs. In order to address this limitation and continue to move the research in this area forward, we intend to conduct CFAs on these measures using both the present sample and a separate large sample of American adults. We also encourage other researchers to continue investigating the psychometric properties of these and similar measures of peer and interpersonal victimization in diverse adult samples, including using different factor rotation models, such as oblique rotation, as they can yield slightly different results in accordance with their methodological tendencies (Sürücü et al., 2022).

5. Conclusion

The results of this study establish initial psychometric properties—namely, internal consistency and factor structure—of the RCPVS and PRB in a sample of American adults. Internal consistencies for both measures and any resultant subscales were found to be adequate or better, and both scales demonstrated a two-factor structure that differentiated physical victimization from non-physical victimization. These measures appear to be suitable for use in general adult populations.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contributed in this article.

Declaration

Generative AI was not used in the preparation of this manuscript.

References

- Barrios, Y. V., Gelaye, B., Zhong, Q., Nicolaidis, C., Rondon, M. B., Garcia, P. J., & Williams, M. A. (2015). Association of childhood physical and sexual abuse with intimate partner

- violence, poor general health and depressive symptoms among pregnant women. *PLoS One*, 10(1), e0116609. <https://doi.org/10.1371/journal.pone.0116609>
- Bogart, K. R., Rottenstein, A., Lund, E. M., & Bouchard, L. M. (2018). Disability self-identification in adults with chronic health conditions: Impairment and contextual influences. *Rehabilitation Psychology*, 62, 553-562. <https://doi.org/10.1037/rep0000132>
- Boulton, M. J. (2013). Associations between adults' recalled childhood bullying victimization, current social anxiety, coping, and self-blame: Evidence for moderation and indirect effects. *Anxiety, Stress & Coping: An International Journal*, 26(3), 270-292. <https://doi.org/10.1080/10615806.2012.662499>
- Brunstein, K. A., Sourander, A., & Gould, M. (2010). The association of suicide and bullying in childhood to young adulthood: a review of cross-sectional and longitudinal research findings. *Canadian Journal of Psychiatry*, 55(5), 282-288. <https://doi.org/10.1177/070674371005500503>
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality data? *Perspectives on Psychological Science*, 6(1), 3-5. <https://doi.org/10.1177/1745691610393980>
- Cerny, C. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47. https://doi.org/10.1207/s15327906mbr1201_3
- Comas-Díaz, L., Hall, G. N., & Neville, H. A. (2019). Racial trauma: Theory, research, and healing: Introduction to the special issue. *American Psychologist*, 74(1), 1-5. <https://doi.org/10.1037/amp0000442>
- deLara, E. W. (2012). Why adolescents don't disclose incidents of bullying and harassment. *Journal of School Violence*, 11, 288-305. <https://doi.org/10.1080/15388220.2012.705931>
- Forber-Pratt, A. J., Merrin, G. J., & Espelage, D. L. (2020). Exploring the intersections of disability, race, and gender on student outcomes in high school. *Remedial and Special Education*. <https://doi.org/10.1177/0741932520941201>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. Allyn & Bacon. <https://psycnet.apa.org/record/1998-07683-000>
- Hawker, D. S., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41(4), 441-455. <https://doi.org/10.1111/1469-7610.00629>
- Hughes, K., Bellis, M. A., Jones, L., Wood, S., Bates, G., Eckley, L., McCoy, E., & Officer, A. (2012). Prevalence and risk of violence against adults with disabilities: A systematic review and meta-analysis of observational studies. *The Lancet*, 379, 1621-1629. [https://doi.org/10.1016/S0140-6736\(11\)61851-5](https://doi.org/10.1016/S0140-6736(11)61851-5)
- Hughes, R. B., Lund, E. M., Gabrielli, J., Powers, L. E., & Curry, M. A. (2011). Prevalence of interpersonal violence against community-living adults with disabilities: A literature review. *Rehabilitation Psychology*, 56, 302-319. <https://doi.org/10.1037/a0025620>
- Ipsen, C., Kurth, N., & Hall, J. (2021). Evaluating MTurk as a recruitment tool for rural people with disabilities. *Disability and Health Journal*, 14(1), 100991. <https://doi.org/10.1016/j.dhjo.2020.100991>
- Katz-Wise, S. L., & Hyde, J. S. (2012). Victimization experiences of lesbian, gay, and bisexual individuals: A meta-analysis. *Journal of Sex Research*, 49(2-3), 142-167. <https://doi.org/10.1080/00224499.2011.637247>
- Konishi, C., Hymel, S., Zumbo, B. D., Li, Z., Taki, M., & Slee, P. (2009). Investigating the comparability of a self-report measure of childhood bullying across countries. *Canadian Journal of School Psychology*, 24, 82-92. <https://doi.org/10.1177/0829573509331614>
- Lund, E. M. (2021). Examining the potential applicability of the minority stress model for explaining suicidality in individuals with disabilities. *Rehabilitation Psychology*, 66(2), 183-191. <https://doi.org/10.1037/rep0000378>
- Lund, E. M., Corr, C., Kinavey, E., Mott, K., Chowdhury, D., Hammond, M., Thomas, K. B., & Schultz, J. C. (2021). Retrospective childhood disability-related abuse: A proof of concept study. *Journal of Interpersonal Violence*, 36(21-22), 10029-10053. <https://doi.org/10.1177/0886260519879240>
- Lund, E. M., Nadorff, M. R., Galbraith, K., & Thomas, K. B. (2018). Using Amazon Mechanical Turk to recruit participants with disabilities. <https://doi.org/10.4135/9781526437280>
- Lund, E. M., Nadorff, M. R., & Seader, K. (2016). The relationship between suicidality and disability when accounting for depressive symptomology. *Rehabilitation Counseling Bulletin*, 59, 185-188. <https://doi.org/10.1177/0034355215586388>
- Lund, E. M., & Ross, S. W. (2016). Peer victimization in students who are Deaf and hard of hearing: Exploring educational placement. *Journal of the American Deafness and Rehabilitation Association*, 50(2), 20-43. <https://nsuworks.nova.edu/jadara/vol50/iss2/1/>
- Lund, E. M., & Ross, S. W. (2017). Bullying perpetration, victimization, and demographic differences in college students: A review of the literature. *Trauma, Violence, & Abuse*, 17, 348-360. <https://doi.org/10.1177/1524838015620818>
- Mason, L. (2016). "But he didn't hit me": Living with a non-physical-battering sexual abuser. In *Perpetrators of Intimate Partner Sexual Violence* (pp. 113-125). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315693422-19/didn-hit-living-non-physical-battering-sexual-abuser-lindsey-mason>
- Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *Journal of Occupational and Organizational Psychology*, 83(4), 955-979. <https://doi.org/10.1348/096317909X481256>
- Olweus, D. (1995). Bullying or peer abuse at school: Facts and intervention. *Current Directions in Psychological Science*, 4, 196-200. <https://doi.org/10.1111/1467-8721.ep10772640>
- Partridge, B., & Affleck, J. (2017). Verbal abuse and physical assault in the emergency department: Rates of violence, perceptions of safety, and attitudes towards security. *Australasian Emergency Nursing Journal*, 20(3), 139-145. <https://doi.org/10.1016/j.aenj.2017.05.001>
- Riedl, D., Beck, T., Exenberger, S., Daniels, J., Dejaco, D., Unterberger, I., & Lampe, A. (2019). Violence from childhood to adulthood: The influence of child victimization and domestic violence on physical health in later life. *Journal of Psychosomatic Research*, 116, 68-74. <https://doi.org/10.1016/j.jpsychores.2018.11.019>
- Ross, S. W., Lund, E. M., Sabey, C. V., & Charlton, C. C. (2017). Students' perspectives on bullying. In *Bullying in the school: Perspectives from across campus* (pp. 23-47). Palgrave MacMillan. https://doi.org/10.1057/978-1-137-59298-9_2
- Samnani, A., & Singh, P. (2012). 20 years of workplace bullying research: A review of the antecedents and consequences of bullying in the workplace. *Aggression and Violent Behavior*, 17, 581-589. <https://doi.org/10.1016/j.avb.2012.08.004>
- Snedecor, G. W., & Cochran, W. G. (1989). *Statistical Methods*. Iowa State University Press.

<https://www.scirp.org/reference/referencespapers?referenceid=2300515>

- Sürücü, L., Yıkılmaz, İ., & Maşlakçı, A. (2022). Exploratory factor analysis (EFA) in quantitative researches and practical considerations. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 13(2), 947-965. <https://doi.org/10.31219/osf.io/fgd4e>
- Swearer, S. M., Wang, C., Maag, J. W., Siebecker, A. B., & Frerichs, L. J. (2012). Understanding the bullying dynamic among students in special and general education. *Journal of School Psychology*, 50(4), 503-520. <https://doi.org/10.1016/j.jsp.2012.04.001>
- Thomas, K. B., Lund, E. M., & Bradley, A. R. (2015). Composite trauma and mental health diagnosis as predictors of lifetime non-suicidal self-injury history in an adult online sample. *Journal of Aggression, Maltreatment, and Trauma*, 26, 623-635. <https://doi.org/10.1080/10926771.2015.1049766>
- Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health*, 45, 368-375. <https://doi.org/10.1016/j.jadohealth.2009.03.021>
- Wolke, D., Copeland, W. E., Angold, A., & Costello, E. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological Science*, 24(10), 1958-1970. <https://doi.org/10.1177/0956797613481608>
- Zou, C., Andersen, J. P., & Blosnich, J. R. (2013). The association between bullying and physical health among gay, lesbian, and bisexual individuals. *Journal of the American Psychiatric Nurses Association*, 19, 356-365. <https://doi.org/10.1177/1078390313510739>