

Secondary Publication



Körner, Robert; Gauglitz, Iris K.

How Happy Are You With Your Relationship? : Validation of the German Couple Satisfaction Index-4

Date of secondary publication: 04.05.2026

Version of Record (Published Version), Article

Persistent identifier: urn:nbn:de:bvb:473-irb-114937x

Primary publication

Körner, Robert; Gauglitz, Iris K. (2026): How Happy Are You With Your Relationship? : Validation of the German Couple Satisfaction Index-4, in: Personal relationships : journal of the International Association for Relationship Research, Oxford: Wiley-Blackwell, Vol. 33, No. 2, e70066, pp. 1–19, doi: 10.1111/per.70066.

Legal Notice

This work is protected by copyright and/or the indication of a licence. You are free to use this work in any way permitted by the copyright and/or the licence that applies to your usage. For other uses, you must obtain permission from the rights-holders.

This document is made available under a Creative Commons license.



The license information is available online:

<https://creativecommons.org/licenses/by/4.0/legalcode>

ORIGINAL ARTICLE OPEN ACCESS

How Happy Are You With Your Relationship? Validation of the German Couple Satisfaction Index-4

Robert Körner | Iris K. Gauglitz

Department of Psychology, Otto-Friedrich-University of Bamberg, Bamberg, Germany

Correspondence: Robert Körner (robert.koerner@uni-bamberg.de)**Received:** 3 July 2025 | **Revised:** 12 November 2025 | **Accepted:** 16 April 2026**Keywords:** APIM | CFA | couples | CSI | measurement invariance | relationship satisfaction | romantic relationships**Schlüsselwörter:** Beziehungsforschung | CSI | APIM | Faktorenanalyse | romantische Beziehungen | Messinvarianz | Paare

ABSTRACT

Assessing relationship satisfaction—as an outcome, predictor, or control variable—is almost mandatory in studies on romantic relationships. This research was aimed at testing the psychometric properties of the German version of the Couple Satisfaction Index-4 (GCSI-4) by obtaining validity evidence based on internal structure, measurement invariance, and relationships with other variables. Data from five samples ($N_{\text{total}} = 1526$), including individuals and couples in romantic relationships of diverse sexual orientations, were analyzed. Across samples, we found excellent model fit in confirmatory factor analyses, high reliabilities, and good evidence for convergent and discriminant validity. Further, the scale scores were measurement invariant across gender and sexual orientation. Nomological validity was supported by examining intrapersonal and interpersonal links with 43 constructs, ranging from self-related dispositions, relational beliefs, love and well-being, influence and coercive decision-making, as well as relationship behaviors. Criterion validity was demonstrated through negative links with conflict frequency and intentions to engage in infidelity. Altogether, these findings support the good psychometric properties of the GCSI-4 and broaden the validity testing of the CSI in general. We encourage researchers to adopt the GCSI-4 as a reliable and valid instrument for assessing relationship satisfaction in German-speaking samples.

ZUSAMMENFASSUNG

Die Erfassung von Beziehungszufriedenheit als Kriterium, Prädiktor oder Kontrollvariable ist in Studien zu romantischen Beziehungen nahezu unerlässlich. Ziel dieser Untersuchung war es, die psychometrischen Eigenschaften der deutschen Version des Couple Satisfaction Index-4 (GCSI-4) zu testen. Daten aus fünf Stichproben ($N_{\text{total}} = 1526$), darunter Einzelpersonen in romantischen Beziehungen und Paare unterschiedlicher sexueller Orientierung, wurden analysiert. In allen Stichproben fanden wir eine sehr gute Modellgüte mittels konfirmatorischer Faktorenanalysen, hohe Reliabilitäten und Evidenz für konvergente und diskriminante Validität. Die Skalenwerte waren messinvariant bzgl. Geschlecht und sexueller Orientierung. Nomologische Validität wurde durch die Untersuchung intrapersoneller und interpersoneller Zusammenhänge mit 43 Konstrukten gestützt, die von selbstbezogenen Dispositionen, Beziehungsüberzeugungen, Liebe und Wohlbefinden, Einfluss und Dominanz bis hin zu Coping, Kommunikation und Konflikt reichen. Kriteriumsvalidität wurde durch negative Zusammenhänge mit Konflikthäufigkeit und der Absicht, untreu zu werden, gezeigt. Insgesamt bestätigen die Ergebnisse die guten psychometrischen Eigenschaften des GCSI-4 und erweitern die Validitätsprüfung des CSI im Allgemeinen. Wir empfehlen, den GCSI-4 als zuverlässiges und valides Instrument zur Erfassung der Beziehungszufriedenheit in deutschsprachigen Stichproben einzusetzen.

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2026 The Author(s). *Personal Relationships* published by Wiley Periodicals LLC on behalf of International Association for Relationship Research.

1 | Introduction

Relationship satisfaction is arguably one of the most central variables in relationship science and a focus for scholars, couple therapists, and policymakers. It is commonly understood as an individual's subjective evaluation of their romantic relationship (Bradbury et al. 2000; Funk and Rogge 2007). This evaluation does not reside in the relationship itself; rather, it reflects an individual's subjective attitude and feeling (Djundeve and Keizer 2024). Establishing and nurturing a positive, healthy, and meaningful romantic relationship is a central developmental task in adulthood (Berk 2018). Given its importance to people's lives, it is not surprising that relationship satisfaction has robust effects on well-being and health: Higher relationship satisfaction positively predicts subjective well-being and general life satisfaction, more than satisfaction with friends or at work (e.g., Glenn and Weaver 1981). Further, higher relationship satisfaction goes along with better health, such as lower mortality (e.g., Whisman et al. 2018).

For years, relationship scientists have focused on assessing relationship satisfaction (Bradbury et al. 2000; Djundeve and Keizer 2024). Due to the subjective nature of its evaluation, it could be argued that self-report measures are the most compelling approach. However, after an initial proliferation of different and sometimes unvalidated or single-item scales, one particular scale gained widespread recognition: The Couple Satisfaction Index (CSI; Funk and Rogge 2007). The CSI is a thoroughly developed instrument that has outperformed older relationship satisfaction scales such as the Dyadic Adjustment Scale and the Marital Adjustment Test. The authors of the original scale present a 4-, 16-, and 32-item version of the CSI. In less than 20 years since its publication, the CSI has garnered over 2700 citations (July 2025, Google Scholar).

The CSI has been validated in several languages, including Arabic (El Frenn et al. 2022), Chinese (Wang et al. 2024), Persian (Forouzesh Yekta et al. 2017), Portuguese (Lamela et al. 2020), Russian (Okhotnikov and Wood 2020), and Urdu (Rahat Bakhteyar et al. 2023). However, these studies, along with the original paper, relied on a single sample of sexual majority participants to examine the scale's psychometric properties. Moreover, several of these scale adaptation papers either did not test the scale's nomological validity (Wang et al. 2024) or only examined associations with one or two other constructs (e.g., Lamela et al. 2020). Consequently, a thorough psychometric examination of the CSI is still missing in languages other than English.

The present research aimed to test the psychometric properties of the four-item German version of the CSI (GCSI-4). Specifically, we analyzed and reported item statistics, internal structure, convergent and discriminant validity, measurement invariance, reliability, and nomological and criterion validity. The four-item version was chosen due to its excellent psychometric properties, which are comparable to or even better than those of other, longer relationship satisfaction scales (Funk and Rogge 2007). Further, a brief measure of relationship satisfaction is valuable in numerous research contexts, such as dyadic studies where study completion time is limited, panel studies, or daily diary studies. Surprisingly, there are no published

or validated instruments on relationship satisfaction in the German language (<https://zis.gesis.org/?lang=en>; <https://www.testarchiv.eu/en>), which highlights the urgent need for a validated tool. In addition, this study seeks to contribute to the body of research on the CSI by conducting the largest tests of its nomological validity to date and by thoroughly examining model fit and measurement invariance in different samples comprising individuals and couples with diverse sexual orientations.

2 | The Present Research

Our first goal was to examine the construct validity (structural, convergent, and discriminant validity, measurement invariance) and reliability of the GCSI-4. For this reason, we examined model fit through confirmatory factor analyses (CFAs), item statistics, and different internal consistency coefficients. We also examined the scale scores' convergent and discriminant validity, as well as the measurement invariance of the scale scores across gender and sexual orientation. Although the English CSI-4 has demonstrated metric measurement invariance across gender, tests for invariance across sexual orientation are lacking (Quinn-Nilas 2023).

Our second goal was to conduct the largest joint analysis to date of the nomological validity of the CSI, focusing specifically on the GCSI-4. We explored both intrapersonal and interpersonal associations. As romantic relationships are characterized by mutual influence, communal orientations, and strong interdependence (Clark and Mills 2012; Kenny et al. 2006), we expected that the interpersonal associations (i.e., partner effects) would be similar to the actor effects (because dyadic data were not available for all constructs, we formulated hypotheses about partner effects only for those variables with dyadic data). We tested these associations using correlations and Actor-Partner Interdependence Models (APIMs; Kenny et al. 2006) in relation to dozens of psychological and relationship-specific constructs, which fall under five overarching categories.

The first category comprises self-related dispositions. These are stable characteristics that a person brings into a relationship. They include variables relevant to self-concept, such as self-esteem, romantic self-efficacy, sense of humor, and subjective social status, as well as the dark triad traits (psychopathy, narcissism, and Machiavellianism). We expected that individuals scoring high on adaptive and desirable self-related variables (e.g., high self-esteem, confidence in one's ability to solve relationship issues, a good sense of humor, and perceiving oneself as high in status) would report higher relationship satisfaction than those scoring low on these traits (e.g., Erol and Orth 2014). Conversely, dark triad traits, characterized by antagonistic, egoistical, and self-centered behavior (Paulhus and Williams 2002), have been negatively linked to reports of relationship satisfaction from both actors and partners (Kardum et al. 2024). Thus, we expected to find negative links with actors' and partners' relationship satisfaction.

The second category comprises relational beliefs, including attachment, relational self-expansion, and confidence in one's partner's positive regard. Attachment anxiety and avoidance reflect negative internal working models of relationships and

have been negatively linked to actors' and partners' reports of relationship satisfaction (Candel and Turluc 2019). Thus, we assumed negative links. By contrast, viewing the partner as a source of new perspectives and identities (relational self-expansion; Carswell et al. 2021) and believing that the partner genuinely values oneself (confidence in the partner's positive regard; Murray et al. 1998) should be positively associated with actors' and partners' reports of relationship satisfaction.

The third category focuses on love and well-being and includes the variables of triangular love (intimacy, commitment, and passion), sexual satisfaction, and relationship quality. As these variables share some similarities with relationship satisfaction or are assumed to be strongly related to it (e.g., Kowal et al. 2024; Sprecher and Cate 2004), we expected positive links for actors. Further, relationship partners are typically similar in their relationship quality and related constructs (e.g., Gaunt 2006; Körner et al. 2024), which is why actors' love and well-being variables should also be positively related to their partners' satisfaction.

The fourth category addresses influence and coercive decision-making, including relationship power, relationship-specific dominance, and psychological aggression. Individuals who feel they can satisfy their needs and goals in the relationship by influencing their partner (high relationship power) are happier with their relationship, as are their partners (Körner and Schütz 2021). Thus, relationship power should be positively linked to actors' and partners' relationship satisfaction. In contrast, relationship-specific dominance, involving intimidation and coercion, has been found to be negatively related to actors' and partners' relationship quality (Körner et al. 2023, 2024). Therefore, we expected to find negative links to relationship satisfaction, which is similar to relationship quality. Relationship quality is a broader, multidimensional construct, which often includes satisfaction but also other evaluative relationship judgments like trust or commitment (Fletcher et al. 2000). Psychological aggression, characterized by yelling, threatening, and name-calling (Bushman and Huesmann 2010), is a form of dysfunctional behavior that we expected to be negatively related to both actors' and partners' relationship satisfaction.

The fifth category, which describes how couples handle threats and act and respond to emotions, is called relationship behaviors. It includes dyadic coping, humor styles, conflict resolution styles, forgiveness, and jealousy. Couples who manage stress together (dyadic coping), employ effective conflict resolution strategies (e.g., positive problem solving instead of withdrawal), and people using positive humor to deal with disagreement should be more content with their relationship (e.g., Bodenmann 2008; de Koning and Weiss 2002). We also tested and expected that people who reported using effective conflict resolution strategies would have more satisfied partners. Similarly, individuals who show reconciliation motivation and reduced resentment (i.e., higher forgiveness) after an offense committed by the partner tend to have higher relationship satisfaction (Aalgaard et al. 2016). Jealousy, which comprises cognitive, emotional, and behavioral facets, has been negatively linked to some aspects of relationship quality, though behavioral jealousy has shown few significant links (Brauer and Proyer 2024). Since jealousy

can damage relationships, but is also positively linked to commitment (e.g., Elphinston et al. 2013), we assumed that it would be either negatively or non-significantly related to relationship satisfaction.

Finally, our third goal was to test the criterion validity of the GCSI-4. Specifically, we assumed that the number of conflicts, as well as both actual and intended infidelity, would be negatively related to both the actor's and partner's relationship satisfaction. These tests provide a more objective assessment of relationship outcomes.

3 | Methods

Data, material, and syntax are available online at <https://osf.io/yhgwX>.

3.1 | Participants and Procedure

Data from five independent samples were chosen. Sample 1 ($N=167$) included individuals in romantic relationships of different sexual orientations and focused on self-related dispositions and core relationship variables. Sample 2 ($N=80$) included individuals in same-gender relationships who were asked about self-related dispositions, love and well-being, power, and jealousy. Sample 3 ($N=317$) involved heterosexual individuals in romantic relationships and focused mostly on humor and love. Sample 4 ($N=226$ couples) involved couples and targeted queer participants ($n=72$ couples), though many woman-man couples ($n=154$) participated as well. The measures in Sample 4 focused primarily on Dark Triad traits, aggression, and power. Sample 5 ($N=255$ couples) involved woman-man couples and assessed relational beliefs and conflict aspects primarily. Sample characteristics are displayed in Table 1, and the studied variables per category and sample are displayed in Table 2.

Only participants in romantic relationships of at least 1 month were allowed to participate. In all samples, we excluded participants with implausibly fast processing times (> 2 SD below average survey completion time) and used two additional exclusion criteria in some studies (see Table 1). Participants were recruited via email lists, word-of-mouth advertising, and social media. All participants were native German speakers living mostly in southern Germany. Couple members (Samples 4 and 5) completed the questionnaires independently of their partner and were matched via dyad-specific codes. In all studies, students could receive course credit for participating; others volunteered or had the opportunity to take part in a lottery for online vouchers (Samples 3–4). The materials and procedures were approved by the Institutional Review Board at the University of Bamberg.

We used G*Power to assess the achieved power for the nomological validity analyses from Samples 1–3 (correlation option). We had high statistical power (Sample 1: 0.9987, Sample 2: 0.94, Sample 3: virtually perfect) to detect the associations we found (average correlation between GCSI-4 and validity variables = 0.37_{Sample1} , 0.38_{Sample2} , 0.31_{Sample3}). Next, we assessed the achieved power for typical small to medium effect sizes with the sample sizes from Samples 4 and 5 when variables were

TABLE 1 | Sample characteristics.

Characteristic	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
<i>N</i> (after exclusions)	167	80	317	452 (226 couples)	510 (255 couples)
Exclusions ^a					
Too fast	3	0	2	5	3
Too many missing values	2	0	0	0	0
Partner data missing	—	—	—	34	128
Gender					
Women	139	50	172	238 (7 transgender)	255
Men	27	24	143	178 (5 transgender)	255
Non-binary	1	6	2	36 (26 transgender)	0
Age					
Women	24.08 (6.68)	25.26 (8.18)	25.19 (8.30)	26.65 (10.64)	30.79 (13.18)
(<i>M</i> , <i>SD</i> , <i>Md</i> , range)	(22; 18–58)	(22; 18–54)	(22; 18–58)	(23; 17–72)	(25; 17–84)
Men	25.22 (7.27)	35.21 (13.50)	26.87 (8.47)	27.78 (10.98)	32.15 (13.43)
(<i>M</i> , <i>SD</i> , <i>Md</i> , range)	(23; 18–48)	(32; 18–58)	(24; 18–59)	(24.5; 17–90)	(27; 18–87)
Sexual orientation					
Heterosexual	79.6%	0%	100%	70.6%	90.4%
Gay/lesbian	4.8%	100%	0%	21.0%	0%
Bisexual	15.6%	0%	0%	6.2%	8.2%
Pansexual	—	0%	0%	2.2%	1.6%
Education					
Lower secondary school	—	2.5%	1.6%	0.7%	1.4%
Intermediate secondary school	1.2%	2.5%	7.6%	2.9%	7.5%
High school diploma	70.7%	46.3%	51.4%	51.3%	38.4%
Completed vocational training	4.8%	18.8%	4.7%	6.1%	7.3%
University degree	22.8%	28.8%	34.6%	38.2%	43.8%
Relationship length					
Years	4.08 (5.39)	—	4.25 (5.87)	3.72 (5.23)	8.76 (11.75)
(<i>M</i> , <i>SD</i> , range)	(1 month to 40 years)		(2 months to 34 years)	(1 month to 37.5 years)	(1 month to 69 years)
Relationship status					
Married	7.2%	—	12.3%	8.8%	70.6%
Engaged	4.2%	—	—	—	3.1%
Serious relationship	88.6%	—	87.7%	91.2%	26.3%
Year of data collection	2024	2024	2024	2024	2025

Note: “—” Information not gathered in that study. No data on ethnicity and income were collected because recording such information in psychological research in Germany is generally discouraged or restricted due to data protection laws and ethical norms. Couples were classified as being in a “serious relationship” if they were in established ongoing relationships of a minimum duration of 1 month.

^aToo fast: implausibly fast processing times (> 2 SD below average survey completion time). Too many missing values: > 10% of missing item responses. These criteria are common practice in our research to ensure high data quality. Exclusions were made prior to data analysis.

TABLE 2 | Description of measures.

Construct	Scale	Subscales (used)	# items	(Instruction) sample item	Response scale	Samples (Rel)
Self-related dispositions						
Self-esteem	Rosenberg self-esteem scale (German version: von Collani and Herzberg 2003)	—	10	On the whole, I am satisfied with myself	1 (does not apply at all), 4 (applies fully)	1 (0.81)
	Single-item self-esteem scale (Robins et al. 2001; German version: Brailovskaia and Margraf 2020)	—	1	I have high self-esteem	1 (strongly disagree), 7 (strongly agree)	2
Romantic self-efficacy	Self-efficacy in romantic relationships scale (Riggio et al. 2011; German version: Naumann et al. 2025)	—	12	Romantic relationships are very difficult for me to deal with	1 (strongly disagree), 7 (strongly agree)	1 (0.88)
Sense of humor	Sense of humor scale—short form (German version: Heintz et al. 2022)			Humor:		
		Enjoyment	4	I enjoy funny sketches	1 (strongly disagree), 7 (strongly agree)	3 (0.55, 0.64, 0.78, 0.81, 0.77, 0.84)
		Laughter	3	I often laugh till I get tears in the eyes		
		Verbal	6	I often tell jokes		
		Everyday situations	6	I can see funny things in many activities		
		Laugh at self	5	I can laugh about myself		
		Stress	5	My humor is a good way to relieve stress		
Social status	MacArthur scale of social status scale (Adler et al. 2000; German version: Hoebel et al. 2015)	—	1	10-rung ladder: At the top (10) are the people who are the best off (most money, most education, best jobs). At the bottom (1) are the people who are the worst off (least money, least education, and worst jobs). Place an “X” on the rung that best represents where you think you stand on the ladder.	10-rung ladder	1, 2

(Continues)

TABLE 2 | (Continued)

Construct	Scale	Subscales (used)	# items	(Instruction) sample item	Response scale	Samples (Rel)
Dark triad	Dirty Dozen (Jonason and Webster 2010; German version: Küfner et al. 2015)	Psychopathy Narcissism Machiavellianism	4 4 4	I tend to be cynical I tend to want others to admire me I have use flattery to get my way	1 (strongly disagree), 7 (strongly agree)	4 (0.68, 0.83, 0.77)
Relational beliefs						
Attachment	Experience in close relationships scale (Wei et al. 2007; German version: Neumann et al. 2007)	Anxiety Avoidance	6 6	I need a lot of reassurance that I am loved by my partner I try to avoid getting too close to my partner	1 (strongly disagree), 7 (strongly agree)	1 (0.75, 0.83), 5 (0.64 ^W , 0.62 ^M , 0.79 ^W , 0.81 ^M)
Relational self-expansion	Relational self-expansion scale (Carswell et al. 2021)	—	6	How much has your partner expanded your knowledge?	1 (not much), 7 (very much)	5 (0.85 ^W /0.86 ^M)
Confidence in the partner's regard	Reflected appraisals scale (Murray et al. 1998)	—	8	I am confident that my partner will always love me	1 (strongly disagree), 7 (strongly agree)	5 (0.76 ^W /0.81 ^M)
Love and well-being						
Commitment	Investment model scale (Rusbult et al. 1998; German version: Grau et al. 2001)	Commitment	7	I am committed to maintaining our relationship	1 (strongly disagree), 7 (strongly agree)	1 (0.86), 2 (0.72), 5 (0.83 ^W /0.88 ^M)
Love	Triangular love scale—short form (Kowal et al. 2024; includes German validation)	Intimacy Passion Commitment	5 5 5	I value my partner greatly in my life My relationship with my partner is passionate I am certain of my love for my partner	1 (not at all), 5 (extremely)	3 (0.88, 0.79, 82)
Intimacy	—	—	1	How connected are you to your partner?	1 (never), 7 (always)	5
Sexual satisfaction	Multidimensional sexuality questionnaire (Snell et al. 1993; German version: Brenk-Franz and Strauß 2011)	Sexual satisfaction	5	I am very satisfied with my sexual relationship	1 (strongly disagree), 5 (strongly agree)	1 (0.93), 4 (0.85)

(Continues)

TABLE 2 | (Continued)

Construct	Scale	Subscales (used)	# items	(Instruction) sample item	Response scale	Samples (Rel)
Relationship quality	Short relationship questionnaire (German version: Kliem et al. 2012)	—	9	S/he criticizes me in a sarcastic manner	1 (<i>never/very seldom</i>), 4 (<i>very often</i>)	2 (0.79)
Influence and coercive decision-making						
Power	Personal sense of power scale (Anderson et al. 2012; German version: Körner et al. 2022)	—	6	(In my relationship with my partner) I can get him/her to listen to what I say	1 (<i>strongly disagree</i>), 7 (<i>strongly agree</i>)	1 (0.80), 2 (0.79), 3 (0.78), 4 (0.72)
Dominance	Relationship-specific dominance (German version: Körner et al. 2024)	—	3	Sometimes I intimidate my partner	1 (<i>strongly disagree</i>), 7 (<i>strongly agree</i>)	4 (0.64)
Psychological aggression	Revised conflict tactics scale (Straus et al. 1996; Straus 2004, includes German validation)	Psychological aggression	8	I threatened to hit or throw something at my partner	Frequencies (poly-perpetration scoring; see Straus and Douglas 2017)	4 (0.64)
Relationship behaviors						
Dyadic coping (DC)	Dyadic coping inventory (German version: Bodenmann 2008)	Stress communication	4	(How do you deal with stress) I show them that I feel burdened and that I'm feeling bad	1 (<i>very seldom</i>), 5 (<i>very often</i>)	3 (0.77, 0.66, 0.70, n/a, 0.67, total: 0.71)
		Supportive DC	5	I listen to them, give them space, and talk to them or encourage them		
		Negative DC	4	I don't take their stress seriously		
		Delegated DC	2	I grab them when they has too much to do to relieve them		
		Joint DC	5	We help each other to see the problem in a new light		

(Continues)

TABLE 2 | (Continued)

Construct	Scale	Subscales (used)	# items	(Instruction) sample item	Response scale	Samples (Rel)
Humor styles	Relational humor inventory (de Koning and Weiss 2002)	Positive humor	5	I believe that my partner appreciates my humorous remarks	1 (<i>strongly disagree</i>), 7 (<i>strongly agree</i>)	3 (0.78, 0.78, 0.81, n/a)
		Negative humor	3	Sometimes I make my partner the butt of a joke		
		Instrumental humor	8	I use humor to get out of a fight with my partner		
Conflict resolution styles	Conflict resolution styles inventory (German version: Herzberg and Sierau 2010)	Couple humor	2	My partner and I share a lot of "private jokes."		
		Conflict engagement	4	Attack or insult personally	How often do you show these behaviors when you and your partner disagree? 1 (<i>never</i>), 5 (<i>always</i>)	5 (0.81 ^W /0.84 ^M , 0.80 ^W /0.82 ^M , 0.81 ^W /0.82 ^M , 0.81 ^W /0.72 ^M)
		Positive problem solving	4	Focus on the problem at hand.		
		Withdrawal	4	Say nothing for a long time		
Forgiveness	Marital offense-specific forgiveness scale (German version: Haversath et al. 2017)	Compliance	4	Being too compliant		
		Benevolence	4	(Remember a conflict with your partner) I soon forgave her/him	1 (<i>strongly disagree</i>), 6 (<i>strongly agree</i>)	1 (0.75, 0.81)
		Resentment-Avoidance	6	Since my partner behaved that way, I get annoyed with her/him more easily		
Jealousy	Multidimensional jealousy scale-short form (Diotaiuti et al. 2022; Pfeiffer and Wong 1989; German version: Brauer and Proyer 2024)	Cognitive jealousy	5	(Frequency of thoughts about partner) I am worried that someone may be chasing after my partner	1 (<i>never/I'm very pleased/never</i>), 7 (<i>always/I'm very upsets/always</i>)	1 (0.85, 0.81, 0.73), 2 (0.82, 0.79, 0.69)
		Emotional jealousy	5	(Emotional reaction to situations) My partner hugs and kisses someone else		
		Behavioral jealousy	5	(Frequencies of behaviors) I question my partner about his or her telephone calls		

(Continues)

TABLE 2 | (Continued)

Construct	Scale	Subscales (used)	# items	(Instruction) sample item	Response scale	Samples (Rel)
Criterion validity	—	—	3	How often have you argued in the last month?	1 (<i>never</i>), 7 (<i>always</i>)	5 (0.85 ^W /0.89 ^M)
Number of conflicts	—	—	3	How often have you argued in the last month?	1 (<i>never</i>), 7 (<i>always</i>)	5 (0.85 ^W /0.89 ^M)
Infidelity	—	Actual	1	Have you cheated since the beginning of your relationship?	Yes/no	5
		Intended	1	How likely is it that you will cheat in the next 6 months?	1 (<i>very unlikely</i>), 5 (<i>very likely</i>)	

Note: Rel = Reliability (McDonald's Omega coefficients). For multidimensional scales, reliability values are reported separately for each dimension (in the same parentheses, in the same order as listed in the "Subscales" column) and for each sample (in separate parentheses). Rel of Sample 5: W = women's reliability score. M = men's reliability score.

correlated across partners, as in the present study ($\alpha=0.05$; mean correlation between errors = 0.57_{Sample4} , 0.53_{Sample5} ; mean correlation between actor and partner variables = 0.33_{Sample4} , 0.29_{Sample5} ; Ackerman et al. 2020). We had high statistical power (Sample 4: 0.996, Sample 5: 0.998) to detect small to medium actor effects of $\beta=0.20$ and high power (Sample 4: 0.93, Sample 5: 0.96) to detect small partner effects of $\beta=0.15$.

3.2 | Measures

The CSI-4 was adapted to German using a translation/back-translation procedure. First, three experts in relationship science and psychometrics collaborated to translate and refine the CSI-4 items to fit them to the German culture and language. Then, a bilingual speaker fluent in English and German translated the German items back into English. The three experts from the first round then reviewed the backtranslation. The item wording was mostly identical to the original CSI-4. The three experts discussed and implemented minor changes to some words when necessary. These procedures are in accordance with the Guidelines for Translating and Adapting Tests by the International Test Commission (2017). The German translation of the CSI-4, including the response scale, can be found online at <https://osf.io/yhgwx/files/g3jk8>. All validity testing measures are described in Table 2.

3.3 | Analytic Strategy

First, we examined item statistics (i.e., means, standard deviations, corrected item total correlations, Skewness, Kurtosis) for each sample. Then, we computed CFAs using the WLSMV estimator in *Mplus* 8 to assess model fit of the unidimensional GCSI-4. The residuals of the indicator variables were uncorrelated. The following cutoffs were chosen as markers of adequate model fit: RMSEA and SRMR ≤ 0.08 (Browne and Cudeck 1993; Kline 2011); CFI and TLI ≥ 0.90 (Marsh et al. 2004). We computed Cronbach's alpha and McDonald's omega total as reliability coefficients. Additionally, we tested for convergent validity by computing the average variance extracted (AVE), which is based on the squared standardized CFA loadings (and thus not available for Sample 2 because it was too small for CFAs). Convergent validity is supported if AVE > 0.50 (i.e., $> 50\%$ of the variance in the GCSI-4 scale scores is explained by the indicators instead of measurement error; Fornell and Larcker 1981).

Then, we conducted measurement invariance testing across gender (women [$n=255$]/men [$n=255$]; Sample 5) and sexual orientation (straight [$n=308$]/queer [$n=144$]; Sample 4) using multigroup CFA. The initial model was the configural model (same number of factors and item-factor assignments across groups). Then, we computed and compared more restrictive models against each other (Meredith 1993). For metric invariance, the factor loadings across two samples were constrained. Scalar invariance was examined by setting equality constraints on the item intercepts. Finally, for strict invariance, we imposed equality constraints on the residual variances. Using multigroup CFA (WLSMV estimator), we evaluated measurement invariance with respect to the invariance criteria of Chen (2007; $\Delta\text{CFI} \geq -0.01$, and $\Delta\text{RMSEA} \geq 0.015$).

TABLE 3 | Descriptive statistics, corrected item-total correlations, Skewness, Kurtosis, reliabilities (Cronbach's alpha, McDonald's Omega), and average variance extracted for the GCSI-4 across samples.

Item	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		
	<i>M</i> (SD)	<i>r</i> _{it}	<i>M</i> (SD)	<i>r</i> _{it}	<i>M</i> (SD)	<i>r</i> _{it}	<i>M</i> (SD)	<i>r</i> _{it}	<i>M</i> (SD)	<i>r</i> _{it}	
<i>N</i>	167		80		317		452		510		
1: Please indicate the degree of happiness, all things considered, of your relationship.	5.41 (1.15)	0.82	5.04 (1.28)	0.79	5.59 (1.13)	0.74	5.57 (1.08)	0.80	5.56 (1.24)	0.72	
2: I have a warm and comfortable relationship with my partner.	5.38 (0.93)	0.76	5.11 (1.20)	0.77	5.45 (0.82)	0.73	5.53 (0.78)	0.76	5.35 (0.97)	0.78	
3: How rewarding is your relationship with your partner?	4.80 (0.95)	0.79	5.21 (1.00)	0.86	5.11 (0.81)	0.80	5.20 (0.83)	0.81	5.11 (1.00)	0.79	
4: In general, how satisfied are you with your relationship?	4.94 (1.05)	0.82	4.88 (1.05)	0.80	5.19 (0.91)	0.80	5.31 (0.81)	0.73	5.08 (0.98)	0.83	
Skewness	Item 1	-1.13	-0.67	-0.96	-0.73	-1.33	Item 2	-1.78	-1.84	-1.71	-1.96
	Item 3	-1.21	-1.30	-1.27	-0.99	-1.17	Item 4	-0.98	-1.68	-1.32	-1.15
	Item 1	1.23	0.21	1.43	0.36	1.99	Item 2	3.78	3.66	3.71	4.59
	Item 3	2.13	2.44	3.39	1.04	1.24	Item 4	0.52	3.11	2.39	1.49
Reliability	α	ω	α	ω	α	ω	α	ω	α	ω	
	0.91	0.91	0.91	0.91	0.89	0.89	0.89	0.89	0.90	0.90	
AVE	0.80	—	—	0.78	0.80	0.79	—	—	—	—	

Note: AVE was not computed for Sample 2 because this sample was too small for CFA, which provides the coefficients for computing AVE. German items are available on line at <https://osf.io/g:3jk8>. Responses were given on scales ranging from 1 (*extremely unhappy*) to 7 (*perfect*) [Item 1], and 1 (*not at all true/not at all*) to 6 (*completely true/completely/completely*) [Items 2/3/4].

We examined nomological and criterion validity through Pearson correlations in Samples 1–3 and APIMs in Samples 4–5. We interpreted correlations of 0.10–0.30 as small, 0.30–0.50 as medium, and > 0.50 as large (Cohen 1988). For the APIMs with the woman-man couples, we modeled women's and men's validity variables (e.g., commitment) as simultaneous predictors of women's and men's relationship satisfaction. The APIM assesses actor effects (e.g., the association between women's commitment and women's relationship satisfaction) and partner effects (e.g., the association between women's commitment and men's relationship satisfaction), accounting for the interdependence in measures across women and men. We computed bootstrapped 95% confidence intervals ($k = 5000$ samples). Effect sizes Δ indexes the change in relationship satisfaction in SDs when the predictors change by 1 point (see Körner and Schütz 2021) separately for women and men ($\Delta_{W/M} = b/SD_{W/M}$). For each APIM, we compared the fit of a saturated model (in which all effects were freely estimated) against a model in which actor and partner effects were constrained to be equal across women and men. A non-significant ($p < 0.20$) Likelihood Ratio Test indicates the absence of gender differences (Kenny and Ledermann 2010). If actor or partner effects were still very similar, we computed equal-actor-different-partner and different-actor-equal-partner effects models and compared them with the saturated model through Likelihood Ratio Tests. All analyses were done using structural equation modeling with maximum likelihood (ML) estimation in *Mplus 8*.

For the APIMs with indistinguishable dyads (Sample 4, including both straight and queer couples), we accounted for the arbitrariness in the assignment of couple members by setting all corresponding paths, means, intercepts, and (residual) variances equal across partners (Olsen and Kenny 2006). That is, actor

effects were constrained to be identical across women, men, and non-binary participants, and the same constraint was applied to partner effects. Actor and partner effects were estimated as distinct from each other. As supplemental analyses, we also computed APIMs with only straight couples and only queer couples (see <https://osf.io/yhgwx/files/mt4g2>).

Finally, we tested the discriminant validity of the GCSI-4. This is supported if the square root of the GCSI-4's AVE is higher than any zero-order correlation between the GCSI-4 and the validity variables (Fornell-Larcker criterion; Fornell and Larcker 1981; Voorhees et al. 2016).

4 | Results

4.1 | Item Statistics, Construct Validity, and Reliability

The GCSI-4 items showed high endorsement rates (see Table 3), which is typical for relationship satisfaction (Djundeva and Keizer 2024; Funk and Rogge 2007). Further, the corrected item-total correlations ranged from 0.72 to 0.86, exceeding the typical cutoff value of 0.30 (Nunnally and Bernstein 1994). Skewness values were negative across items and samples, indicating that participants tended to score higher rather than lower. Kurtosis values ranged from 0.21 to 4.59 across items and samples, suggesting that response distributions were generally moderately peaked, with some deviations from normality in certain samples.

The expected unidimensional factor solution showed excellent fit indices across samples. Specifically, model fit was tested in

TABLE 4 | Tests of measurement invariance for gender (men/women; upper half; Sample 5) and sexual orientation (straight/queer; lower half; Sample 4).

	Fit indices				Model comparisons		
	Configural (I)	Metric (II)	Scalar (III)	Strict (IV)	Δ I versus II	Δ II versus III	Δ III versus IV
Gender^a							
χ^2 (df), <i>p</i> value	4.177 (4), 0.383	5.346 (7), 0.618	10.624 (10), 0.388	12.871 (14), 0.537	1.169	5.278	2.247
RMSEA	0.003	0.000	0.007	0.000	−0.003	0.007	−0.007
CFI	1.000	1.000	1.000	1.000	0.000	0.000	0.000
TLI	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Sexual orientation^b							
χ^2 (df), <i>p</i> value	2.655 (4), 0.617	8.199 (7), 0.315	11.133 (10), 0.347	18.151 (14), 0.200	5.544	2.934	7.018
RMSEA	0.000	0.008	0.007	0.013	0.008	−0.001	0.006
CFI	1.000	0.999	0.999	0.997	−0.001	0.000	−0.002
TLI	1.000	0.999	0.999	0.997	−0.002	0.000	−0.002

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; TLI, Tucker-Lewis index.

^aSample 5: women ($n = 255$)/men ($n = 255$).

^bSample 4: straight ($n = 308$)/queer ($n = 144$).

TABLE 5 | Nomological validity of the German CSI-4: Samples 1–3.

Dependent measure	Expected correlations	Observed correlation
Self-related dispositions		
Self-esteem	+	0.03 ^a /0.13 ^b
Romantic self-efficacy	+	0.52 ^{***a}
Sense of humor		
Enjoyment of humor	+	0.05 ^c
Laughter	+	0.17 ^{**c}
Verbal humor	+	−0.01 ^c
Finding humor in everyday situations	+	0.22 ^{***c}
Laugh at yourself	+	0.15 ^{**c}
Humor stress	+	0.09 ^c
Subjective social status	+	0.07 ^a /0.33 ^{**b}
Relational beliefs		
Attachment anxiety	−	−0.37 ^{***a}
Attachment avoidance	−	−0.70 ^{***a}
Love and well-being		
Commitment	+	0.58 ^{***a} /0.65 ^{***b} / 0.59 ^{***c}
Intimacy	+	0.76 ^{***c}
Passion	+	0.68 ^{***c}
Sexual satisfaction	+	0.52 ^{***a}
Relationship quality	+	0.70 ^{***b}
Influence and coercive decision-making		
Relationship power	+	0.53 ^{***a} /0.59 ^{***b} / 0.45 ^{***c}

^aSample 1 ($N = 167$).^bSample 2 ($N = 80$).^cSample 3 ($N = 317$).** $p < 0.01$. *** $p < 0.001$ (two-tailed).

Sample 1, $\chi^2(2) = 2.688$, $p = 0.261$; RMSEA = 0.045, 90% CI [0.000, 0.167], $p = 0.397$; CFI = 1.000; TLI = 0.999; SRMR = 0.007, and Sample 3, $\chi^2(2) = 1.505$, $p = 0.471$; RMSEA = 0.000, 90% CI [0.000, 0.102], $p = 0.692$; CFI = 1.000; TLI = 1.000; SRMR = 0.004. Sample 2 was not used due to its small sample size. Model fit was excellent for the two dyadic samples as well, $\chi^2(2) = 6.420$, $p = 0.040$; RMSEA = 0.070, 90% CI [0.013, 0.134], $p = 0.221$; CFI = 0.999; TLI = 0.998; SRMR = 0.006 (Sample 4), $\chi^2(2) = 5.784$, $p = 0.056$; RMSEA = 0.061, 90% CI [0.000, 0.122], $p = 0.294$; CFI = 0.999; TLI = 0.998; SRMR = 0.005 (Sample 5). Across the samples, all loadings ($0.83 \leq \lambda \leq 0.94$, $M(\lambda) = 0.89$) were significant ($ps < 0.001$).

Further, internal consistency coefficients were similar and high across the samples ($\alpha/\omega = 0.89–0.91$, see Table 3), which supports the scale's reliability. AVEs were ≥ 0.78 , supporting the scale's convergent validity. Finally, we found strict measurement invariance (i.e., equal dimensionality, loadings, intercepts, and

residual variances) across gender (Sample 5) and across sexual orientation (Sample 4; see Table 4).

4.2 | Nomological Validity

4.2.1 | Self-Related Dispositions

The link between the GCSI-4 and romantic self-efficacy was positive, as expected, and high (see Table 5). Whereas relationship satisfaction correlated weakly positively with self-esteem in Sample 2, comprising gay/lesbian participants, the link was almost zero in Sample 1. Similar results were found with subjective social status, though the associations with relationship satisfaction were somewhat larger. Most aspects of sense of humor (laughter, finding humor in everyday situations, laughing at oneself, and humor stress) were weakly positively associated with relationship satisfaction. Yet, enjoyment of humor and verbal humor did not show significant links. As expected, all dark triad traits were negatively linked to the actor's relationship satisfaction (see Table 6). However, only psychopathy and Machiavellianism were also negatively linked to the partner's relationship satisfaction.¹

4.2.2 | Relational Beliefs

As expected, attachment anxiety and avoidance were negatively linked to relationship satisfaction in Sample 1, which comprised individuals. The association for avoidance was nearly twice as strong as the association for anxiety (see Table 5). In Sample 5, which included woman-man couples, the results were similar. The actor effect of anxiety on relationship satisfaction was negative but not significant, whereas the actor effect of avoidance on relationship satisfaction was strongly negative (see Table 7). As expected, the partner effects of attachment anxiety and avoidance on relationship satisfaction were negative and significant. Relational self-expansion and confidence in the partner's positive regard were, as expected, positively linked to actors' and partners' relationship satisfaction (though women's relational self-expansion was not significantly associated with men's satisfaction).

4.2.3 | Love and Well-Being

Across four samples, commitment was consistently and strongly positively associated with relationship satisfaction (see Tables 5 and 7). Further, men's commitment was positively associated with women's relationship satisfaction. Intimacy, passion, and sexual satisfaction were also strongly and positively associated with relationship satisfaction for both actors and partners (see Tables 5–7). As expected, relationship quality was strongly and positively linked to the GCSI-4 in Sample 2 (see Table 5).

4.2.4 | Influence and Coercive Decision-Making

Across four samples, relationship power was strongly and positively linked to relationship satisfaction (see Tables 5 and 6). Relationship power was also positively linked to the partner's relationship satisfaction (see Table 6). Also, as expected, the actor's relationship-specific dominance and psychological aggression

TABLE 6 | Sample 4: results (unstandardized regression coefficients, bootstrapped 95% confidence intervals, *p* values for two-tailed Wald tests, effect sizes) of APIM analyses predicting relationship satisfaction from dark triad traits, sexual satisfaction, and power-related variables.

Predictors	Actor relationship satisfaction				Partner relationship satisfaction			
	<i>b</i>	95% CI	<i>p</i>	Δ	<i>b</i>	95% CI	<i>p</i>	Δ
Self-related dispositions								
Psychopathy [–]	–0.66	[–1.03, –0.34]	<0.001	–0.21	–0.31	[–0.60, –0.03]	0.029	–0.10
Narcissism [–]	–0.36	[–0.58, –0.14]	0.001	–0.12	–0.12	[–0.34, 0.09]	0.261	–0.04
Machiavellianism [–]	–0.40	[–0.68, –0.15]	0.003	–0.13	–0.33	[–0.58, –0.10]	0.007	–0.11
Love and well-being								
Sexual satisfaction [+]	1.61	[1.20, 2.01]	<0.001	0.52	0.53	[1.78, 0.86]	0.002	0.17
Influence and coercive decision-making								
Relationship power [+]	1.56	[1.19, 1.97]	<0.001	0.51	0.76	[0.46, 1.06]	<0.001	0.25
Dominance [–]	–0.66	[–0.97, –0.38]	<0.001	–0.21	–0.53	[–0.84, –0.25]	<0.001	–0.17
Psychological aggression [–]	–4.28	[–5.70, –2.90]	<0.001	–1.39	–2.60	[–4.10, –1.18]	0.001	–0.84

Note: Expected associations in square brackets. *N* = 226 couples. Bolded values reflect significant associations.

were negatively linked to the actor's and partner's relationship satisfaction.² The effect sizes for psychological aggression were among the strongest among all of the validity tests.

4.2.5 | Relationship Behaviors

Dyadic coping was robustly positively linked to relationship satisfaction (see Table 8). Positive and couple humor were positively associated with relationship satisfaction, whereas negative and instrumental humor showed non-significant links. Jealousy was non-significantly linked to relationship satisfaction (the correlations were small in size but negative). Yet, in the gay/lesbian sample, cognitive jealousy was strongly negatively linked to relationship satisfaction. As expected, forgiveness was positively linked to relationship satisfaction. Actor's conflict engagement, withdrawal, and compliance were negatively linked to both actor's and partner's relationship satisfaction (see Table 7). The actor's positive problem-solving was positively linked to the actor's satisfaction. Men's positive problem-solving was positively linked to women's satisfaction.

4.3 | Discriminant Validity

The lowest GCSI-4's AVE is 0.78 (Sample 3, see Table 3). The square root of 0.78 is 0.88 and higher than any zero-order correlation between the GCSI-4 and the validity constructs (the highest correlation is 0.76 with intimacy in Sample 3). Thus, the GCSI-4 demonstrated discriminant validity.

4.4 | Criterion Validity

The number of reported relationship conflicts was negatively linked to actors' and partners' relationship satisfaction (see

Table 9). To examine the actor and partner effects of infidelity, we excluded couples who indicated that they were in an open relationship (*n* = 8 couples), as questions about infidelity cannot be meaningfully applied to open relationships. The actor and partner effects of actual infidelity on relationship satisfaction were non-significant. However, the actor and partner effects of intended infidelity on relationship satisfaction were significantly negative.

5 | Discussion

This research was aimed at testing the psychometric properties of the scale scores from the German version of the CSI-4 (Funk and Rogge 2007). Across five samples, we found high corrected item-total correlations (Table 3), an excellent model fit in CFAs, support for convergent and discriminant validity, and high reliabilities. Moreover, the scale scores demonstrated strict measurement invariance across gender and sexual orientation (Table 4).

We also found good support for nomological validity by testing the associations of the GCSI-4 scores with 43 different constructs relevant to social and personality psychology. We examined both intrapersonal and interpersonal associations and replicated specific validity coefficients in up to four samples. Overall, among the correlations, actor effects, and partner effects, we found that 66 coefficients were in line with our hypotheses. Only nine coefficients did not show a significant association, and no coefficients were in the opposite direction of our hypotheses. Self-related dispositions showed the most non-significant links, though most variables were as expected, either positively or negatively, related to relationship satisfaction (particularly the dark triad traits; Tables 5 and 7). Since self-related dispositions, such as self-esteem or subjective social status, are general perceptions rather than relationship-specific,

TABLE 7 | Sample 5: results (unstandardized regression coefficients, bootstrapped 95% confidence intervals, *p* values for two-tailed Wald tests, effect sizes) of APIM analyses predicting relationship satisfaction from relational beliefs, love, and conflict resolution styles.

Predictors	Actor relationship satisfaction				Partner relationship satisfaction			
	<i>b</i>	95% CI	<i>p</i>	Δ	<i>b</i>	95% CI	<i>p</i>	Δ
Relational beliefs								
Attachment anxiety [–]	–0.19	[–0.47, 0.08]	0.170	–0.05 ^W –0.05 ^M	–0.39	[–0.70, –0.09]	0.011	–0.10 ^W –0.11 ^M
Attachment avoidance [–]	–2.61^W –2.07^M	[–3.08, –2.14] ^W [–2.50, –1.65] ^M	<0.001 ^W <0.001 ^M	–0.70 ^W –0.57 ^M	–0.96	[–1.31, –0.64]	<0.001	–0.26 ^W –0.27 ^M
Relational self-expansion [+]	1.65	[1.33, 1.97]	<0.001	0.44 ^W 0.46 ^M	0.34 ^W 0.79^M	[–0.07, 0.74] ^W [0.40, 1.17] ^M	0.092 ^W <0.001 ^M	0.09 ^W 0.22 ^M
Confidence in partner's regard [+]	1.64	[1.33, 1.97]	<0.001	0.44 ^W 0.45 ^M	1.22	[0.92, 1.53]	<0.001	0.33 ^W 0.34 ^M
Love and well-being								
Commitment [+]	2.84	[2.36, 3.31]	<0.001	0.76 ^W 0.79 ^M	0.12 ^W 1.03^M	[–0.49, 0.79] ^W [0.39, 1.66] ^M	0.723 ^W 0.002 ^M	0.03 ^W 0.29 ^M
Intimacy [+]	2.53	[2.20, 2.82]	<0.001	0.68 ^W 0.70 ^M	0.59	[0.26, 0.93]	0.001	0.16 ^W 0.16 ^M
Relationship behaviors (conflict resolution styles)								
Conflict engagement [–]	–1.52	[–2.06, –1.06]	<0.001	–0.41 ^W –0.42 ^M	–1.07	[–1.55, –0.62]	<0.001	–0.29 ^W –0.30 ^M
Positive problem solving [+]	2.12	[1.64, 2.64]	<0.001	0.57 ^W 0.59 ^M	0.34 ^W / 1.43^M	[–0.31, 0.99] ^W [0.78, 2.09] ^M	0.312 ^W <0.001 ^M	0.09 ^W 0.40 ^M
Withdrawal [–]	–1.34	[–1.80, –0.97]	<0.001	–0.36 ^W –0.37 ^M	–0.77	[–1.18, –0.38]	<0.001	–0.21 ^W –0.21 ^M
Compliance [–]	–1.49	[–1.92, –1.03]	<0.001	–0.40 ^W –0.41 ^M	–0.90	[–1.30, –0.48]	<0.001	–0.24 ^W –0.25 ^M

Note: Expected associations in square brackets. *N* = 255 couples. Bolded values reflect significant associations. Abbreviations: M, men's score; W, women's score.

it makes sense that their link to relationship satisfaction is weaker compared to variables from the other categories.

The variables in the categories of relational beliefs, love and well-being, and influence and coercive decision-making were strongly aligned with our hypotheses (Tables 5, 7, and 8). The variables summarized under relationship behaviors were also largely consistent with our hypotheses (Tables 6 and 8). Interestingly and in line with other research (Brauer et al. 2021), jealousy facets were weakly negatively linked to relationship satisfaction, though non-significantly. Yet, cognitive jealousy was strongly negatively linked to relationship satisfaction in Sample 2, which included gay/lesbian participants. This was not the case in Sample 1, which included mostly heterosexual participants (see also Brauer et al. 2021, for correlations of similar size). Apparently, cognitive jealousy is perceived or experienced differently by queer individuals than by straight participants, which may explain its strong negative association with relationship satisfaction in this group.

Overall, the strongest and most robust correlates of the GCSI-4 scores were commitment, intimacy, passion, relationship quality, relationship power, joint dyadic coping, sexual satisfaction, positive problem-solving, attachment avoidance, and psychological aggression. This replicates other research demonstrating robust links of relationship satisfaction with, for example, love and sexual satisfaction (Kowal et al. 2024; Sprecher and Cate 2004), power (Körner and Schütz 2021, 2025), or avoidance (Candel and Turliuc 2019). Importantly, analyses of discriminant validity indicate that relationship satisfaction, as assessed with the GCSI-4, is distinct from these other variables.

We also found support for criterion validity. When couple members reported more conflicts, both actors and partners were less happy with their relationship (Table 9). Also, intentions to engage in infidelity were negatively linked to both actors' and partners' relationship satisfaction. Thus, couples in which a member intends to be unfaithful in the future are characterized by lower relationship satisfaction for both members. However, actual

infidelity was not significantly linked to actors' and partners' relationship satisfaction, although the effect sizes were large. These non-significant results may be explained by the low incidence of actual infidelity (only 22 out of 494 participants reported to be unfaithful), which limited the variance and our ability to detect significant links. Yet, given the large and negative effect

sizes for actual infidelity, we interpret the overall evidence for the GCSI-4's criterion validity as good. Nevertheless, replication studies on the link between relationship satisfaction and actual infidelity are necessary.

These promising findings regarding the psychometric properties of the GCSI-4 support its use. The GCSI-4 may be of high utility in various contexts, whether as an outcome, predictor, or control variable: Researchers conducting dyadic studies or daily diary studies with limited survey completion time may wish to use this scale. Further, several large panels in German-speaking countries, such as pairfam, SOEP, FReDA, and DEAS, could benefit from this brief, validated measure of relationship satisfaction. In addition to providing support for using the CSI-4 in research with German-speaking participants, these findings also enrich our knowledge of the CSI-4 in general. This is the first research testing and demonstrating that the CSI-4 is measurement invariant across sexual orientation (straight/queer). Further, this research may represent the largest simultaneous test of the CSI-4's nomological validity, a factor often overlooked in other scale validation papers (e.g., Lamela et al. 2020; Wang et al. 2024).

TABLE 8 | Nomological validity of the German CSI-4: Samples 1–3.

Dependent measure	Expected correlations	Observed correlation
Relationship behaviors		
Relational humor		
Positive humor	+	0.39*** ^c
Negative humor	–	0.00 ^c
Instrumental humor		
Couple humor	+	0.43*** ^c
Dyadic coping		
Stress communication	+	0.31*** ^c
Supportive dyadic coping	+	0.35*** ^c
Negative dyadic coping	–	–0.35*** ^c
Delegated dyadic coping	+	0.17** ^c
Dyadic coping total	+	0.42*** ^c
Joint dyadic coping	+	0.57*** ^c
Jealousy		
Emotional jealousy	–/0	–0.07 ^a /–0.08 ^b
Cognitive jealousy	–/0	–0.07 ^a /–0.45*** ^b
Behavioral jealousy	–/0	–0.09 ^a /–0.11 ^b
Forgiveness		
Benevolence	+	0.49*** ^a
Resentment-avoidance	–	–0.49*** ^a

^aSample 1 ($N = 167$).

^bSample 2 ($N = 80$).

^cSample 3 ($N = 317$).

** $p < 0.01$. *** $p < 0.001$ (two-tailed).

5.1 | Constraints on Generality

Our conclusions pertain to the psychometric properties of the German CSI-4 when it is completed online by German-speaking adults in romantic relationships of at least 1 month's duration who primarily reside in southern Germany. We expect generalization to similar German-speaking, non-clinical samples recruited from universities and community sources who complete anonymous surveys in German. Generalization to older adults, long-term relationships, and other cultural contexts remains to be established. Direct replications should maintain the language, mode of administration, eligibility, and scoring.

5.2 | Limitations and Future Research Directions

Despite testing associations with dozens of core relationship variables, broader dispositions, and criterion variables, the present research did not analyze associations with observational data. Future validation studies could benefit from dyadic lab-based interaction studies to test the association between observed

TABLE 9 | Sample 5: results (unstandardized regression coefficients, bootstrapped 95% confidence intervals, p values for two-tailed Wald tests, effect sizes) of APIM analyses predicting relationship satisfaction from criterion variables.

Predictors	Actor relationship satisfaction				Partner relationship satisfaction			
	b	95% CI	p	Δ	b	95% CI	p	Δ
Number of conflicts [–]	–1.60	[–1.99, –1.22]	<0.001	–0.43 ^W –0.44 ^M	–0.38	[–0.77, –0.02]	0.045	–0.10 ^W –0.11 ^M
Actual infidelity [–]	–2.00	[0.28, –4.58]	0.110	–0.53 ^W –0.55 ^M	–1.77	[0.50, –4.35]	0.157	–0.47 ^W –0.49 ^M
Intended infidelity [–]	–1.31	[–2.19, –0.55]	0.002	–0.35 ^W –0.36 ^M	–1.70	[–2.41, –0.96]	<0.001	–0.46 ^W –0.47 ^M

Note: Expected associations in square brackets. $N = 255$ couples. Bolded values reflect significant associations. Abbreviations: M, men's score; W, women's score.

behaviors and the GCSI-4 scores. For example, do couples who argue frequently and engage in withdrawal or aggression during conflict—as observed by independent coders—report lower relationship satisfaction?

Furthermore, although we tested several psychometric properties, including structural, convergent, discriminant, nomological, and criterion validity, as well as internal consistency, we did not test the test–retest reliability of the GCSI-4's scale scores. Although relationship satisfaction may change as relationships develop, it would be interesting to examine the stability of scale scores over time. Longitudinal studies in which couples report their relationship satisfaction repeatedly over several months or following specific relationship transitions (e.g., moving in together) could provide valuable insight into the temporal stability of the GCSI-4's scale scores.

Although participants' ages in our studies varied widely, with some up to 90 years old and relationship durations of up to 69 years, most participants were relatively young (in their 20s and 30s). This limits the generalizability of the findings to older individuals and longer-term relationships. Additionally, we did not collect data on participants' disability status, and the results are specific to the German cultural context. Future research should aim to test whether the GCSI-4 also upholds its good psychometric properties in Austria and Switzerland.

Finally, we focused solely on the psychometric properties of the CSI-4, and we did not examine the longer versions, such as the CSI-16 or CSI-32. This decision was based on our use of the brief CSI-4, which has comparable psychometric properties to the longer versions (Funk and Rogge 2007). The brief variant is useful in panel and daily diary studies, but also in cross-sectional studies when researchers may wish to assess relationship satisfaction briefly as a control variable while focusing on other variables. Nevertheless, it would be an important avenue for future research to compare the nomological associations and other psychometric properties of the CSI-4 with those of the CSI-16 and CSI-32.

6 | Conclusion

The GCSI-4 is a reliable and valid measurement tool for assessing relationship satisfaction. By employing dyadic designs and including both sexual majority and minority participants, this work offers a thorough psychometric examination that accounts for dyadic effects and diverse relationship types. The GCSI-4's scale scores show robust and convincing structural, nomological, and criterion validity, as well as strict measurement invariance across gender and sexual orientation. We encourage researchers who wish to assess relationship satisfaction in an economic and psychometrically sound way to use this scale.

Author Contributions

R.K. conceived of the present idea. R.K. and I.K.G. collected the data. R.K. analyzed the data and drafted the initial manuscript. I.K.G. and R.K. critically revised the manuscript. R.K. and I.K.G. contributed to the final manuscript.

Acknowledgments

Open Access funding enabled and organized by Projekt DEAL.

Ethics Statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

Consent

Informed consent was obtained from all participants who were included in the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data and code are available at <https://osf.io/yhgwx/>.

Endnotes

¹Note that when analyzing only woman-man couples from Sample 4, the pattern of results for the dark triad traits remained similar. However, it was only men's Machiavellianism that was significantly related to their own and their women partner's relationship satisfaction (see [Supporting Information](#), <https://osf.io/yhgwx/files/mt4g2>). When analyzing only queer couples, no significant actor or partner effects were found.

²The significant associations between power, dominance, and psychological aggression with actors' and partners' relationship satisfaction also replicated when analyzing only woman-man couples from Sample 4. However, when analyzing only queer couples, only the actor effects of power on psychological aggression were significant (see [Supporting Information](#), <https://osf.io/yhgwx/files/mt4g2>).

References

- Aalgaard, R. A., R. M. Bolen, and W. R. Nugent. 2016. "A Literature Review of Forgiveness as a Beneficial Intervention to Increase Relationship Satisfaction in Couples Therapy." *Journal of Human Behavior in the Social Environment* 26, no. 1: 46–55. <https://doi.org/10.1080/10911359.2015.1059166>.
- Ackerman, R. A., T. Ledermann, and D. A. Kenny. 2020. "Power Analysis for the Actor-Partner Interdependence Model." <https://robert-a-ackerman.shinyapps.io/APIMPowerRdis/>.
- Adler, N. E., E. S. Epel, G. Castellazzo, and J. R. Ickovics. 2000. "Relationship of Subjective and Objective Social Status With Psychological and Physiological Functioning: Preliminary Data in Healthy, White Women." *Health Psychology* 19, no. 6: 586–592. <https://doi.org/10.1037/0278-6133.19.6.586>.
- Anderson, C., O. P. John, and D. Keltner. 2012. "The Personal Sense of Power." *Journal of Personality* 80, no. 2: 313–344. <https://doi.org/10.1111/j.1467-6494.2011.00734.x>.
- Berk, L. E. 2018. *Development Through the Lifespan*. 7th ed. Pearson.
- Bodenmann, G. 2008. *DCI: Dyadisches Coping Inventar*. Hans Huber.
- Bradbury, T. N., F. D. Fincham, and S. R. H. Beach. 2000. "Research on the Nature and Determinants of Marital Satisfaction: A Decade in Review." *Journal of Marriage and the Family* 62, no. 4: 964–980. <https://doi.org/10.1111/j.1741-3737.2000.00964.x>.
- Brailovskaia, J., and J. Margraf. 2020. "How to Measure Self-Esteem With One Item? Validation of the German Single-Item Self-Esteem

- Scale (G-SISE)." *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues* 39, no. 6: 2192–2202. <https://doi.org/10.1007/s12144-018-9911-x>.
- Brauer, K., and R. T. Proyer. 2024. "Assessing Jealousy: Factor Analyses, Measurement Invariance, Nomological Validity, and Longitudinal APIM Analyses of the Multidimensional Jealousy Scale." *Assessment* 32, no. 7: 1067–1081. <https://doi.org/10.1177/10731911241283927>.
- Brauer, K., R. Sendatzki, and R. T. Proyer. 2021. "Testing the Associations Between Dispositions Toward Ridicule and Being Laughed at and Romantic Jealousy in Couples: An APIM Analysis." *Journal of Personality* 89, no. 5: 883–898. <https://doi.org/10.1111/jopy.12621>.
- Brenk-Franz, K., and B. Strauß. 2011. "Der Multidimensionale Fragebogen Zur Sexualität (MFS): Erste Evaluation Der Deutschsprachigen Version Des Multidimensional Sexuality Questionnaire (MSQ) [an Initial Evaluation of the German Language Version of the Multidimensional Sexuality Questionnaire (MSQ)]." *Zeitschrift Für Sexualforschung* 24, no. 3: 256–271. <https://doi.org/10.1055/s-0031-128706>.
- Browne, M. W., and R. Cudeck. 1993. "Alternative Ways of Assessing Model Fit." In *Testing Structural Equation Models*, edited by K. A. Bollen and J. S. Long, 136–162. Sage.
- Bushman, B. J., and L. R. Huesmann. 2010. "Aggression." In *Handbook of Social Psychology*, edited by S. T. Fiske, D. T. Gilbert, and G. Lindzey, 5th ed., 833–863. John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470561119.socpsy002023>.
- Candel, O.-S., and M. N. Turliuc. 2019. "Insecure Attachment and Relationship Satisfaction: A Meta-Analysis of Actor and Partner Associations." *Personality and Individual Differences* 147: 190–199. <https://doi.org/10.1016/j.paid.2019.04.037>.
- Carswell, K. L., A. Muise, C. Harasymchuk, R. M. Horne, M. L. Visserman, and E. A. Impett. 2021. "Growing Desire or Growing Apart? Consequences of Personal Self-Expansion for Romantic Passion." *Journal of Personality and Social Psychology* 121, no. 2: 354–377. <https://doi.org/10.1037/pspi0000357>.
- Chen, F. F. 2007. "Sensitivity of Goodness of Fit Indexes to Lack of Measurement Invariance." *Structural Equation Modeling* 14, no. 3: 464–504. <https://doi.org/10.1080/10705510701301834>.
- Clark, M. S., and J. R. Mills. 2012. "A Theory of Communal (And Exchange) Relationships." In *Handbook of Theories of Social Psychology*, edited by P. A. M. Van Lange, A. W. Kruglanski, and E. T. Higgins, 232–250. Sage Publications Ltd. <https://doi.org/10.4135/9781446249222.n38>.
- Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Lawrence Erlbaum Associates.
- de Koning, E., and R. L. Weiss. 2002. "The Relational Humor Inventory: Functions of Humor in Close Relationships." *American Journal of Family Therapy* 30, no. 1: 1–18. <https://doi.org/10.1080/019261802753455615>.
- Diotaiuti, P., G. Valente, S. Mancone, L. Girelli, E. Cavicchiolo, and A. Chirico. 2022. "Validation Study of the Italian Brief Version of the Multidimensional Jealousy Scale: Psychometric Properties, Measurement Invariance Across Gender, and Convergent Validity." *Frontiers in Psychology* 13: 1013584. <https://doi.org/10.3389/fpsyg.2022.1013584>.
- Djundeva, M., and R. Keizer. 2024. "Relationship Satisfaction." In *Encyclopedia of Quality of Life and Well-Being Research*, edited by A. C. Michalos, 5867–5877. Springer. https://doi.org/10.1007/978-3-031-17299-1_2455.
- El Frenn, Y., M. Akel, S. Hallit, and S. Obeid. 2022. "Couple's Satisfaction Among Lebanese Adults: Validation of the Toronto Alexithymia Scale and Couple Satisfaction Index-4 Scales, Association With Attachment Styles, and Mediating Role of Alexithymia." *BMC Psychology* 10, no. 1: 13. <https://doi.org/10.1186/s40359-022-00719-6>.
- Elphinston, R. A., J. A. Feeney, P. Noller, J. P. Connor, and J. Fitzgerald. 2013. "Romantic Jealousy and Relationship Satisfaction: The Costs of Rumination." *Western Journal of Communication* 77, no. 3: 293–304. <https://doi.org/10.1080/10570314.2013.770161>.
- Erol, R. Y., and U. Orth. 2014. "Development of Self-Esteem and Relationship Satisfaction in Couples: Two Longitudinal Studies." *Developmental Psychology* 50, no. 9: 2291–2303. <https://doi.org/10.1037/a0037370>.
- Fletcher, G. J. O., J. A. Simpson, and G. Thomas. 2000. "The Measurement of Perceived Relationship Quality Components: A Confirmatory Factor Analytic Approach." *Personality and Social Psychology Bulletin* 26, no. 3: 340–354. <https://doi.org/10.1177/0146167200265007>.
- Fornell, C., and D. F. Larcker. 1981. "Evaluating Structural Equation Models With Unobservable Variables and Measurement Error." *Journal of Marketing Research* 18, no. 1: 39–50. <https://doi.org/10.2307/3151312>.
- Forouzesh Yekta, F., H. Yaghubi, F. Mootabi, R. Roshan, M. Gholami-Fesharaki, and A. Omid. 2017. "Psychometric Characteristics and Factor Analysis of the Persian Version of Couples Satisfaction Index." *Avicenna Journal of Neuro Psycho Physiology* 4, no. 2: 49–56. <https://doi.org/10.32598/ajnpp.4.2.49>.
- Funk, J. L., and R. D. Rogge. 2007. "Testing the Ruler With Item Response Theory: Increasing Precision of Measurement for Relationship Satisfaction With the Couples Satisfaction Index." *Journal of Family Psychology* 21, no. 4: 572–583. <https://doi.org/10.1037/0893-3200.21.4.572>.
- Gaunt, R. 2006. "Couple Similarity and Marital Satisfaction: Are Similar Spouses Happier?" *Journal of Personality* 74, no. 5: 1401–1420. <https://doi.org/10.1111/j.1467-6494.2006.00414.x>.
- Glenn, N. D., and C. N. Weaver. 1981. "The Contribution of Marital Happiness to Global Happiness." *Journal of Marriage and the Family* 43, no. 1: 161–168. <https://doi.org/10.2307/351426>.
- Grau, I., G. Mikula, and S. Engel. 2001. "Skalen Zum Investitionsmodell Von Rusbult [Measuring Components of the Investment Model by Rusbult]." *Zeitschrift für Sozialpsychologie* 32, no. 1: 29–44. <https://doi.org/10.1024/0044-3514.32.1.29>.
- Haversath, J., S. Kliem, and C. Kröger. 2017. "Measuring Spousal Forgiveness: German Version of the Marital Offence-Specific Forgiveness Scale (MOFS-German)." *Family Relations: An Interdisciplinary Journal of Applied Family Studies* 66, no. 5: 809–823. <https://doi.org/10.1111/fare.12290>.
- Heintz, S., W. Ruch, C. Lau, D. H. Saklofske, and P. McGhee. 2022. "Development and Validation of the Short Version of the Sense of Humor Scale (SHS-S): Paving the Way for Assessment of Humor Skills Training." *European Journal of Psychological Assessment* 38, no. 4: 320–331. <https://doi.org/10.1027/1015-5759/a000670>.
- Herzberg, P. Y., and S. Sierau. 2010. "Das Konfliktlösungsstil-Inventar Für Paare (KSIP)—Psychometrische Eigenschaften Und Validierung Der Autorisierten Deutschsprachigen Übersetzung [The German Version of the Conflict Resolution Styles Inventory (CRSI)—Psychometric Properties and Validation of the Authorized German Version]." *Diagnostica* 56, no. 2: 94–107. <https://doi.org/10.1026/0012-1924/a000014>.
- Hoebel, J., S. Müters, B. Kuntz, C. Lange, and T. Lampert. 2015. "Messung Des Subjektiven Sozialen Status In Der Gesundheitsforschung Mit Einer Deutschen Version Der MacArthur Scale [Measuring Subjective Social Status in Health Research With a German Version of the MacArthur Scale]." *Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz* 58, no. 7: 749–757. <https://doi.org/10.1007/s00103-015-2166-x>.
- International Test Commission. 2017. *The ITC Guidelines for Translating and Adapting Tests*. 2nd ed. <https://www.InTestCom.org>. International Test Commission.
- Jonason, P. K., and G. D. Webster. 2010. "The Dirty Dozen: A Concise Measure of the Dark Triad." *Psychological Assessment* 22, no. 2: 420–432. <https://doi.org/10.1037/a0019265>.

- Kardum, I., J. Hudek-Knezevic, N. Mehić, and K. Banov Trošelj. 2024. "The Dark Triad Traits and Relationship Satisfaction: Dyadic Response Surface Analysis." *Journal of Personality* 92, no. 4: 931–947. <https://doi.org/10.1111/jopy.12857>.
- Kenny, D. A., D. A. Kashy, and W. L. Cook. 2006. *Dyadic Data Analysis*. Guilford Press.
- Kenny, D. A., and T. Ledermann. 2010. "Detecting, Measuring, and Testing Dyadic Patterns in the Actor–Partner Interdependence Model." *Journal of Family Psychology* 24, no. 3: 359–366. <https://doi.org/10.1037/a0019651>.
- Kliem, S., A. K. Job, C. Kröger, et al. 2012. "Entwicklung Und Normierung Einer Kurzform Des Partnerschaftsfragebogens (PFB-K) an Einer Repräsentativen Deutschen Stichprobe [Development and Standardization of a Short Form of the Partnership Questionnaire (PFB-K) Using a Representative German Sample]." *Zeitschrift Für Klinische Psychologie Und Psychotherapie* 41, no. 2: 81–89. <https://doi.org/10.1026/1616-3443/a000135>.
- Kline, R. B. 2011. *Principles and Practice of Structural Equation Modeling*. 3rd ed. Guilford Press.
- Körner, R., T. Heydasch, and A. Schütz. 2022. "It's All About Power: Validation of Trait and State Versions of the German Personal Sense of Power Scale." *European Journal of Psychological Assessment* 38, no. 1: 36–48. <https://doi.org/10.1027/1015-5759/a000642>.
- Körner, R., T. Heydasch, and A. Schütz. 2023. "Dominance and Prestige as Self-Concept Facets." *Journal of Personality Assessment* 105, no. 5: 590–609. <https://doi.org/10.1080/00223891.2022.2137028>.
- Körner, R., B. A. Murphy, E. Zverling, et al. 2024. "Dominance and Prestige in Romantic Relationships: Actor and Partner Links to Relationship Quality." *Journal of Social and Personal Relationships* 41, no. 1: 302–332. <https://doi.org/10.1177/02654075231212940>.
- Körner, R., and A. Schütz. 2021. "Power in Romantic Relationships: How Positional and Experienced Power Are Associated With Relationship Quality." *Journal of Social and Personal Relationships* 38, no. 9: 2653–2677. <https://doi.org/10.1177/02654075211017670>.
- Körner, R., and A. Schütz. 2025. "Power Balance and Relationship Quality: An Overstated Link." *Social Psychological and Personality Science* 16, no. 5: 471–482. <https://doi.org/10.1177/19485506241234391>.
- Kowal, M., P. Sorokowski, B. M. Dinić, et al. 2024. "Validation of the Short Version (TLS-15) of the Triangular Love Scale (TLS-45) Across 37 Languages." *Archives of Sexual Behavior* 53, no. 2: 839–857. <https://doi.org/10.1007/s10508-023-02702-7>.
- Küfner, A. C. P., M. Dufner, and M. D. Back. 2015. "Das Dreieckige Dutzend Und Die Niederträchtigen Neun: Kurzskalen Zur Erfassung Von Narzissmus, Machiavellismus Und Psychopathie [the Dirty Dozen and the Naughty Nine: Short Scales for the Assessment of Narcissism, Machiavellianism, and Psychopathy]." *Diagnostica* 61, no. 2: 76–91. <https://doi.org/10.1026/0012-1924/a000124>.
- Lamela, D., B. Figueiredo, A. Morais, P. Matos, and I. Jongenelen. 2020. "Are Measures of Marital Satisfaction Valid for Women With Depressive Symptoms? The Examination of Factor Structure and Measurement Invariance of the Couple Satisfaction Index-4 Across Depression Levels in Portuguese Women." *Clinical Psychology and Psychotherapy* 27, no. 2: 214–219. <https://doi.org/10.1002/cpp.2420>.
- Marsh, H. W., K. T. Hau, and Z. Wen. 2004. "In Search of Golden Rules: Comment on Hypothesis Testing Approaches to Setting Cutoff Values for Fit Indexes and Dangers in Overgeneralizing Hu and Bentler's (1999) Findings." *Structural Equation Modeling* 11, no. 3: 320–341. https://doi.org/10.1207/s15328007sem1103_2.
- Meredith, W. 1993. "Measurement Invariance, Factor Analysis, and Factorial Invariance." *Psychometrika* 58, no. 4: 525–543. <https://doi.org/10.1007/BF02294825>.
- Murray, S. L., J. G. Holmes, G. MacDonald, and P. C. Ellsworth. 1998. "Through the Looking Glass Darkly. When Self-Doubts Turn Into Relationship Insecurities." *Journal of Personality and Social Psychology* 75, no. 6: 1459–1480. <https://doi.org/10.1037/0022-3514.75.6.1459>.
- Naumann, M., M. Pfister, V. Brandstätter, and M. Hennecke. 2025. "Romantic Relationships on a Daily Scale: 14 State Scales for Romantic Relationship Constructs." *European Journal of Psychological Assessment*. Advance Online Publication. <https://doi.org/10.1027/1015-5759/a000919>.
- Neumann, E., E. Rohmann, and H.-W. Bierhoff. 2007. *Experiences in Close Relationships Scale-German Version (BoBi, ECR)*. APA PsycTests. <https://doi.org/10.1037/t70159-000>.
- Nunnally, J. C., and I. H. Bernstein. 1994. *Psychometric Theory*. 3rd ed. McGraw-Hill.
- Okhotnikov, I. A., and N. D. Wood. 2020. "Adaptation of the Couples Satisfaction Index Into Russian." *Contemporary Family Therapy: An International Journal* 42, no. 2: 140–151. <https://doi.org/10.1007/s10591-019-09517-6>.
- Olsen, J. A., and D. A. Kenny. 2006. "Structural Equation Modeling With Interchangeable Dyads." *Psychological Methods* 11, no. 2: 127–141. <https://doi.org/10.1037/1082-989X.11.2.127>.
- Paulhus, D. L., and K. M. Williams. 2002. "The Dark Triad of Personality: Narcissism, Machiavellianism, and Psychopathy." *Journal of Research in Personality* 36, no. 6: 556–563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6).
- Pfeiffer, S. M., and P. T. Wong. 1989. "Multidimensional Jealousy." *Journal of Social and Personal Relationships* 6, no. 2: 181–196. <https://doi.org/10.1177/026540758900600203>.
- Quinn-Nilas, C. 2023. "Time for a Measurement Check-Up: Testing the Couple's Satisfaction Index and the Global Measure of Sexual Satisfaction Using Structural Equation Modeling and Item Response Theory." *Journal of Social and Personal Relationships* 40, no. 7: 2252–2276. <https://doi.org/10.1177/02654075221143360>.
- Rahat Bakhteyar, D. S. A., S. H. Khan, and A. Akhtar. 2023. "Couple Satisfaction Index-16: Translation and Validation in Pakistan." *Journal of Positive School Psychology* 7, no. 1: 1356–1370.
- Riggio, H. R., D. Weiser, A. Valenzuela, P. Lui, R. Montes, and J. Heuer. 2011. "Initial Validation of a Measure of Self-Efficacy in Romantic Relationships." *Personality and Individual Differences* 51, no. 5: 601–606. <https://doi.org/10.1016/j.paid.2011.05.026>.
- Robins, R. W., H. M. Hendin, and K. H. Trzesniewski. 2001. "Measuring Global Self-Esteem: Construct Validation of a Single-Item Measure and the Rosenberg Self-Esteem Scale." *Personality and Social Psychology Bulletin* 27, no. 2: 151–161. <https://doi.org/10.1177/0146167201272002>.
- Rusbult, C. E., J. M. Martz, and C. R. Agnew. 1998. "The Investment Model Scale: Measuring Commitment Level, Satisfaction Level, Quality of Alternatives, and Investment Size." *Personal Relationships* 5, no. 4: 357–387. <https://doi.org/10.1111/j.1475-6811.1998.tb00177.x>.
- Snell, W. E., T. D. Fisher, and A. S. Walters. 1993. "The Multidimensional Sexuality Questionnaire: An Objective Self-Report Measure of Psychological Tendencies Associated With Human Sexuality." *Annals of Sex Research* 6, no. 1: 27–55. <https://doi.org/10.1007/BF00849744>.
- Sprecher, S., and R. M. Cate. 2004. "Sexual Satisfaction and Sexual Expression as Predictors of Relationship Satisfaction and Stability." In *The Handbook of Sexuality in Close Relationships*, edited by J. H. Harvey, A. Wenzel, and S. Sprecher, 235–256. Lawrence Erlbaum Associates Publishers.
- Straus, M. A. 2004. "Cross-Cultural Reliability and Validity of the Revised Conflict Tactics Scales: A Study of University Student Dating Couples in 17 Nations." *Cross-Cultural Research: The Journal of Comparative Social Science* 38, no. 4: 407–432. <https://doi.org/10.1177/1069397104269543>.

- Straus, M. A., and E. M. Douglas. 2017. "Eight New Developments, Uses, and Clarifications of the Conflict Tactics Scales." *Journal of Family Issues* 38, no. 14: 1953–1973. <https://doi.org/10.1177/0192513X17729720>.
- Straus, M. A., S. L. Hamby, S. U. E. Boney-McCoy, and D. B. Sugarman. 1996. "The Revised Conflict Tactics Scales (CTS2) Development and Preliminary Psychometric Data." *Journal of Family Issues* 17, no. 3: 283–316. <https://doi.org/10.1177/019251396017003001>.
- von Collani, G., and P. Y. Herzberg. 2003. "Eine Revidierte Fassung Der Deutschsprachigen Skala Zum Selbstwertgefühl Von Rosenberg [A Revised Version of the German Adaptation of Rosenberg's Self-Esteem Scale]." *Zeitschrift Für Differentielle Und Diagnostische Psychologie* 24, no. 1: 3–7. <https://doi.org/10.1024/0170-1789.24.1.3>.
- Voorhees, C. M., M. K. Brady, R. Calantone, and E. Ramirez. 2016. "Discriminant Validity Testing in Marketing: An Analysis, Causes for Concern, and Proposed Remedies." *Journal of the Academy of Marketing Science* 44, no. 1: 119–134. <https://doi.org/10.1007/s11747-015-0455-4>.
- Wang, S., W.-C. Lee, and H. Ma. 2024. "The Chinese Version of the Couples Satisfaction Index: Psychometric Assessment and Differential Item Functioning Analysis With Item Response Theory." *SAGE Open* 14, no. 3: 21582440241. <https://doi.org/10.1177/21582440241271087>.
- Wei, M., D. W. Russell, B. Mallinckrodt, and D. L. Vogel. 2007. "The Experiences in Close Relationship Scale (ECR)-Short Form: Reliability, Validity, and Factor Structure." *Journal of Personality Assessment* 88, no. 2: 187–204. <https://doi.org/10.1080/00223890701268041>.
- Whisman, M. A., A. L. Gilmour, and J. M. Salinger. 2018. "Marital Satisfaction and Mortality in the United States Adult Population." *Health Psychology* 37, no. 11: 1041–1044. <https://doi.org/10.1037/hea000677>.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** pere70066-sup-0001-Supinfo.docx.