

## Research Article

# Measuring Complaint Attitude in College Students: Scale Development and Validation

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## Abstract

A complaint attitude is defined as an evaluative disposition, comprising cognitive, affective, and behavioral components, that individuals express dissatisfaction in response to perceived injustices. Despite the relevance of complaints in academic settings, there is a lack of brief, validated instruments for assessing students' attitudes toward complaining. This study aimed to develop and validate the Complaint Attitude Scale (CAS) based on the tripartite model of attitude. An initial pool of 11 items was developed from theoretical constructs and refined through expert judgment by seven specialists who rated each item's relevance, coherence, and clarity on a 4-point scale. The Aiken's  $V$  values ranged from .95 to 1.00, confirming strong content validity. Two independent samples were used: sample 1 ( $n = 110$ ) for exploratory factor analysis (EFA) and sample 2 ( $n = 328$ ) for confirmatory factor analysis (CFA). The EFA identified four items with poor performance, and the CFA confirmed a unidimensional model with acceptable fit indices (CFI = .99, TLI = .99, RMSEA = .07, SRMR = .02). The final 6-item model demonstrated strong internal consistency ( $\alpha = .89$ ;  $\omega = .85$ ) and high factor loading ( $> .60$ ). Graded Response Model analysis indicated high item discrimination ( $a = 1.35$ – $2.87$ ) and a balanced range of difficulty parameters ( $b = -1.15$  to  $1.76$ ). These findings support the CAS as a psychometrically robust and theoretically grounded instrument for assessing college students' attitudes toward lawsuits.

*Keywords:* attitude; complaint; validation; instrument design; psychometry.

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Student complaints are typically examined from a social perspective, wherein assertions of the rights and demands of students in higher education are addressed through such demonstrations. This approach to student demands enables the identification of empirical evidence from sociology and psychology (e.g. [Artyukhina et al., 2022](#); [Dahlum, 2019](#); [Karter et al., 2021](#); [Ustyuzhanin et al., 2023](#)). Nevertheless, there is a lack of research on students' complaints in everyday life. This phenomenon is of particular relevance for educational institutions since the management of student complaints is a critical factor for their sustainability, reputation, and long-term success. In a competitive environment, students are considered key actors in the quality of services, and their institutional experience, including the way their complaints are handled, has a direct impact on the sustainability and social valuation of universities ([Calma & Dickson-Deane, 2020](#); [Vecchi et al., 2021](#)). Establishing positive and lasting relationships with students requires effective responses to their concerns and complaints. This approach not only resolves specific conflicts but also increases satisfaction, promotes loyalty, and reinforces the perception of institutional legitimacy ([Idris et al., 2023](#)). According to the findings of multiple studies, levels of dissatisfaction are particularly high in the education sector. These studies also indicated that complaints are frequently directed to external entities due to a lack of confidence in internal mechanisms ([Orsingher et al., 2010](#); [Singh, 1990](#); [Voorhees & Brady, 2005](#); [Wright & O'Neill, 2002](#)). In this regard, many institutions continue to face serious limitations in implementing accessible, secure, and reliable systems for handling complaints, which weakens their responsiveness and has long-term negative effects.

Considering the aforementioned context, it becomes imperative to comprehend not only the manifest complaint behavior but also the concomitant psychological factors that precede it, with particular emphasis on attitudes towards such behavior. Attitude, as defined in extant literature, is understood as a predisposition or evaluative tendency that integrates beliefs,



emotions, and behavioral tendencies to respond positively or negatively to an idea, object, person, or situation (Vargas-Sánchez et al., 2016). By directing attention to the complaint, students who have a negative attitude toward it due to fear, distrust, or a perceived lack of efficacy may opt for silence, thereby making pertinent institutional problems invisible (see FitzPatrick et al., 2012; Lacy, 2024). Previous studies have shown that emotional factors, such as anger, anxiety, and dissatisfaction, play a crucial role in the predisposition to complain (Alhamdan & Al-Shorman, 2022). Conversely, a positive attitude reinforces ongoing improvement processes and active engagement of the student body. Additionally, the perception of control and self-awareness has been demonstrated to exert a significant influence, thereby enabling the differentiation between students who elect to articulate their nonconformities and those who opt for reticence despite their discomfort (Bodey & Grace, 2006).

Complaint attitudes are influenced by contextual factors, including the accessibility of formal complaint channels and confidence in an institution's capacity to take effective action. When procedures are perceived as simple, safe, and responsive, students are more likely to voice their concerns (Lala & Priluck, 2011). Consequently, effective institutional grievance management cannot be confined to a reactive response to service failures; rather, it necessitates a comprehensive understanding of the emotional, cognitive, and contextual factors that influence students' attitudes toward articulating their grievances.

A significant gap in the literature is that most studies related to student complaints have focused on variables such as complaint behavior, institutional loyalty, service quality, user satisfaction, conflict management, and mediating emotions (Ting et al., 2020). Recent research focusing on complaints expressed through digital platforms acknowledges that institutional responses are influenced by various attitudinal reactions. However, no standardized model exists to systematically measure this predisposition (Leone & Guimarães, 2024). Consequently, measurement of attitude as an autonomous psychological construct has been scarce and fragmented. For instance, some studies have relied on complaints lodged through institutional mailboxes as an indirect measure of the phenomenon (Yates, 2014), whereas others have assessed attitudes based on past experiences using predetermined scenarios (Sallaberry et al., 2024). While some studies have addressed complaint attitudes more broadly using measurement instruments, psychometric analysis was not their primary objective. However, this has made it possible to explore relevant associations with contextual and attitudinal factors (Ferguson & Phau, 2012; Thøgersen et al., 2009). This methodological limitation hinders the advancement of empirical analysis and design of effective and culturally relevant interventions. Consequently, developing a new

contextualized and validated instrument is not only relevant but also essential to comprehensively understand this phenomenon, facilitate comparative studies between institutions, and support informed decision making in the educational field. To this end, we propose an exhaustive literature review as a foundation for guiding theoretical and empirical developments.

According to the tripartite attitude theory proposed by [Eagly and Chaiken \(1993\)](#), attitudes are understood as psychological predispositions that manifest through three interrelated components: cognitive, affective, and behavioral. This theoretical framework has been extensively validated as a comprehensive model to explain how people evaluate and respond to social stimuli, including complaints in institutional contexts. In a university setting, this theory allows us to conceptualize attitudes toward complaining not only as a rational judgment about its usefulness but also as an emotional experience loaded with personal and social meanings. Recent studies on student attitudes in higher education have adopted this structure to develop scales in contexts such as digital learning and participation in institutional programs, evidencing its applicability and cross-sectional validity ([Novikova et al., 2023](#); [Saba & Saini, 2023](#)).

The tripartite model proposes that the cognitive component refers to students' beliefs and knowledge regarding the effectiveness and possible consequences of filing a complaint. This component is closely related to perceived control over behavior, as students believe they have the ability to file complaints that generate effective responses ([Abun et al., 2019](#)). Research indicates that students who possess in-depth knowledge of complaint procedures and confidence in the system are more likely to use these mechanisms ([Svenningsson et al., 2022](#)). The emotional aspect encompasses the emotions students associate with their complaints. The existing literature indicates that positive emotions, such as confidence in problem-solving, may motivate students to complain, whereas negative emotions, such as anxiety or fear of rejection, may inhibit this behavior ([Guslyakova & Guslyakova, 2019](#)). Additionally, peer and teacher emotional support significantly influences students' willingness to voice their concerns ([Svenningsson et al., 2022](#)). Finally, the behavioral component refers to students' intentions and actions regarding complaints. This component is strongly influenced by subjective norms, understood as students' perceptions of the expectations of important individuals in their social environment (e.g., peers and teachers) regarding complaining behavior. Students who perceive robust social support for complaints are more inclined to voice their concerns ([Abun et al., 2019](#)). Additionally, previous positive

experiences with complaints can increase the likelihood of students engaging in similar actions in the future (Ting et al., 2020).

In addition, the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and its extension, the Theory of Planned Behavior (Ajzen, 1985), provide an explanatory framework for understanding how attitudes influence the intention of behaviors such as filing a complaint. These theories assert that behavioral intention is influenced by three factors: attitude toward behavior, subjective norms, and perceived behavioral control. In this sense, a tripartite attitude functions as a foundational element contributing to the development of complaint intentions. For instance, a student who believes that complaining is acceptable (cognitive), feels safe doing so (affective), and has done so in the past (behavioral) is more likely to formulate a complaint if they also perceive that others approve of such behavior and have sufficient resources to carry it out (Ajzen & Kruglanski, 2019).

This theoretical intertwining allowed us to explain why many students did not formulate formal complaints despite being dissatisfied. They may have positive beliefs about the right to complain but may experience negative emotions (such as fear or discomfort) or feel that the environment does not support such behavior. Integrating the tripartite model with the planned behavior approach provides a more comprehensive understanding of attitudes toward complaints, emphasizing their dynamic and contextual nature. This approach also assists in the development of measurement instruments that accurately reflect the complexity of phenomena in university settings. This validates the necessity of creating customized scales that assess this attitude in a reliable, valid, and culturally pertinent manner (Leone & Guimarães, 2024; Ting et al., 2020).

### **The Present Study**

The primary purpose of this study was to develop and validate a brief and reliable instrument for measuring attitudes toward complaints among university students. To that end, the study set out the following objectives: (a) to design an initial set of items grounded in the tripartite model of attitude and complementary behavioral theories; (b) to analyze content validity through expert judgment to ensure the conceptual coherence of the proposed items; (c) to examine the instrument's internal structure through exploratory and confirmatory factor analyses, identifying the dimensionality of the construct; d) to evaluate the reliability of the instrument through internal consistency coefficients; and e) to complement the psychometric validation with an Item Response Theory (IRT) analysis to identify the discriminative capacity of each item and the precision of the instrument at different levels of the trait measured.

These steps, articulated in a rigorous approach, ensured that the developed scale reliably reflected attitudes towards complaining in the university context.

## Method

### Participants

The study employed two samples: the initial sample was used for preliminary evidence, and the second was used for the confirmatory component of the instrument. A minimum sample size of 110 participants was established for the first group, with a specification of ten subjects per variable (Schumacker & Lomax, 2016). Data were obtained from a non-probabilistic sample of 130 university students with a mean age of 24.4 years ( $SD = 7.09$  years). The data indicated that 41.54% of the subjects were male, 56.15% were female, and 2.31% did not specify their gender. Regarding marital status, 84.62% of the participants were single, 6.92% were married, and 8.46% cohabited with their partners. Regarding work activities, 33.08% were engaged in studies while 66.92% were engaged in studies and employment. In this regard, 56.15% were responsible for bearing the costs of their studies, while 43.85% received financial assistance from the government.

For the second data, a sample calculation was performed with statistical power using a 95% power statistic, 5% probability of error, and an anticipated effect size of 0.1. This resulted in a minimum sample size of 328 participants (Soper, 2021). Data were obtained from 470 university students with the same characteristics as the first sample using a non-probabilistic convenience sampling method. The dataset included 37.87% males, 60.21% females, and 1.91% individuals who did not declare their sex. The mean age of the participants was 23.2 years ( $SD = 7.37$ ). Most respondents (86.60%) were single, 5.53% were married, 7.02% cohabited, and 0.85% divorced. Forty-three percent of the respondents were engaged in academic studies, while 57 percent pursued academic studies and employment simultaneously. Similarly, 50% of respondents indicated that they were responsible for paying for their studies, while the remaining 50% reported receiving financial assistance.

**Table1.***Sociodemographic data of the two samples*

	First Sample ( <i>n</i> = 130)	Second Sample ( <i>n</i> = 470)
Age	<i>M</i> = 24.4 <i>SD</i> = 7.09	<i>M</i> = 23.2 <i>SD</i> = 7.37
Sex		
Male	54 (41.54%)	178 (37.87%)
Female	73 (56.15%)	283 (60.21%)
Not specified	3 (2.31%)	9 (1.91%)
Civil Status		
Single	110 (84.62%)	407 (86.60%)
Married	9 (6.92%)	26 (5.53%)
Cohabiting	11 (8.46%)	33 (7.02%)
Divorced	–	4 (0.85%)
Work		
Study only	43 (33.08%)	202 (42.98%)
Study and work	87 (66.92%)	268 (57.02%)
You pay for your studies		
Yes	73 (56.15%)	235 (50.00%)
No	57 (43.85%)	235 (50.00%)

### Instruments

The Complaint Attitude Scale (CAS) was developed specifically for this study to assess university students' attitudes toward complaints. The initial version of the instrument consisted of 11 items, each constructed to align with the tripartite model of attitude (Eagly & Chaiken, 1993), which conceptualizes attitudes as comprising cognitive (beliefs and evaluations), affective (emotions and feelings), and behavioral (intentions and tendencies to act) components. The items were designed to capture general attitudinal tendencies rather than context-specific behaviors in order to ensure conceptual consistency. The development process was based on the standards for educational and psychological testing proposed by the American Psychological Association (APA), American Educational Research Association (AERA), and National Council on Measurement in Education (NCME, 2019).

The CAS uses a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), allowing for a standardized assessment of students' attitudinal responses. The final version, composed of six items, captured the three core indicators of the Tripartite Attitude Model. For example, the cognitive component is represented in items such as "I believe that complaints can bring about positive changes at the university", while the affective dimension is reflected in statements like "I am satisfied with making a complaint at the university". Behavioral intention is expressed through items such as "I would recommend other students complain about situations that affect them at the university". These items integrate both individual beliefs and perceived social expectations, consistent with the Theory of Reasoned



Action and the Theory of Planned Behavior (Ajzen, 1985; Fishbein & Ajzen, 1975), supporting the scale's theoretical coherence and construct validity.

### Procedure

The study was approved by the Ethics Committee of the University of Sciences and Humanities (CEI Act N° 034 - Code 036-23). All ethical principles pertinent to the research were observed, thereby ensuring the right to anonymity and confidentiality of published documentation. The study participants voluntarily participated, and they first accepted the informed consent form. The virtual form is distributed in two stages. The first sample was surveyed in December 2023 and the second was surveyed between May and June 2024.

### Data Analysis

First, content analysis was conducted by expert judges based on the criteria of relevance, clarity, and coherence of the items in conjunction with the calculation of Aiken's V for each criterion (Aiken, 1980). All subsequent analyses were conducted using the free R Studio program (v. 4.4.1). Exploratory factor analysis (EFA) was conducted using the psych, GPA rotation, and parameter packages. Given the ordinal nature of the data derived from Likert-type items, the Weighted Least Squares (WLS) estimator was used because it is more appropriate than the maximum likelihood for non-continuous variables. The factor extraction method was guided by parallel analysis, a robust and widely recommended technique (Ledesma et al., 2021) that allows for a comparison between observed eigenvalues and those generated from random data to determine the number of factors to retain. For factor rotation, promax oblique rotation was applied, as it assumes that the underlying factors are correlated (Costello & Osborne, 2005). An initial item analysis was performed to evaluate the measures of central tendency and dispersion. To assess univariate normality, skewness ( $\pm 2$ ) and kurtosis ( $\pm 7$ ) coefficients were employed (Finney & DiStefano, 2013). To determine whether the EFA was appropriate for the data collected, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were evaluated. The factor weights were analyzed with the understanding that loadings above .50 demonstrate the representativeness of the items in their respective factors (Dominguez-Lara, 2018).

Confirmatory Factor Analysis (CFA) was conducted on the second sample using lavaan and semTools packages in R. Cohen's (1988) criterion was employed for the interpretation of correlations, wherein the strength of the association is classified as follows: null (less than .10), weak (.10 to .30), moderate (.30 to .50), and strong (greater than .50). The weighted least squares mean and variance adjusted (WLSMV) estimator was employed because of the categorical nature of the variables. The comparative fit index (CFI), Tucker–Lewis index



(TLI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA) were used to evaluate the model as outlined by [Browne and Cudeck \(1992\)](#). The modification indices (MI) were also assessed to determine whether they necessitated a model re-specification for optimization ([Thoemmes et al., 2018](#)). Subsequently, the reliability of the final model was evaluated using the alpha ( $\alpha$ ) and omega ( $\omega$ ) coefficients, which should exceed .70 to be deemed as having adequate internal consistency ([Choi et al., 2009](#)).

Regarding the analysis employing Item Response Theory, the Graded Response Model ([Samejima, 1997](#)) with its two-parameter extension for polytomous data ([Hambleton et al., 2010](#)) was used. The discrimination ( $a$ ) and difficulty ( $b$ ) parameters were subsequently estimated. Subsequently, the model was evaluated using the Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and Tucker–Lewis index (TLI). Furthermore, item and test curves (IIC and TIC, respectively) were calculated.

## Results

### Content Validity

As part of the initial validation process, 11 items were submitted for evaluation by seven expert judges from academic and professional backgrounds in educational psychology and psychometrics. Each item was assessed across three criteria: relevance, coherence, and clarity, using a 4-point ordinal scale (0 = not at all, 3 = totally). The Aiken's V coefficient was calculated for each item and criterion. The results yielded Aiken's V values ranging from .95 to 1.00, which are well above the established cutoff point of .70, indicating a high level of interrater agreement and strong content validity ([Merino-Soto & Livia-Segovia, 2009](#)).

In addition to the quantitative results, the expert panel provided brief qualitative feedback that focused mainly on minor adjustments in wording to enhance the clarity and interpretability of some items. None of the items were deemed conceptually inadequate or irrelevant to the study. Consequently, all 11 items were retained for the next stage of the analysis, with slight linguistic refinements made to ensure semantic precision and accessibility for the target population.

### Items Analysis

The initial outcome was the item analysis, which is presented in Table 2. The mean value for the 11 items was between 3.18 and 4.66, indicating a tendency towards responses that indicated agreement or strong agreement. Regarding univariate normality, the skewness and kurtosis values were within the normal range, except for item 2, which exhibited a leptokurtic

tendency. Subsequently, the correlations between items ranged from zero to strong, with coefficients indicating varying degrees of correlation. Similarly, negative correlations were identified, enabling the observation of the difficulties addressed in the subsequent analysis.

**Table 2.**  
*Item analysis*

Sample	Items	<i>M</i>	<i>SD</i>	<i>g</i> <sub>1</sub>	<i>g</i> <sub>2</sub>	Polychoric Correlation												
						1	2	3	4	5	6	7	8	9	10	11		
First sample (n = 130)	1	4.19	.97	-1.36	1.83	-												
	2	4.66	.69	-2.99	11.55	.57	-											
	3	4.52	.80	-2.11	5.17	.48	.83	-										
	4	3.71	.93	-.44	-.14	.37	.27	.48	-									
	5	4.38	.73	-.94	.31	.24	.36	.47	.48	-								
	6	4.34	.75	-1.29	2.47	.32	.55	.59	.37	.63	-							
	7	3.59	1.02	-.59	-.13	.51	.15	.21	.53	.19	.28	-						
	8	3.18	.98	.19	-.53	-.14	.23	.17	-.15	.14	.04	-.04	-					
	9	3.45	.91	-.33	-.35	.38	-.03	.15	.31	.20	.13	.59	-.04	-				
	10	3.42	.95	-.32	-.14	.33	-.02	.16	.61	.25	.06	.54	-.11	.49	-			
	11	4.45	.72	-1.26	1.42	.16	.56	.76	.40	.50	.69	.12	.22	.09	.17	-		
Second sample (n = 470)						<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>11</b>						
	1	4.23	.94	-1.73	3.43	-												
	2	4.46	.87	-2.45	7.01	.71	-											
	3	4.40	.88	-2.18	5.74	.59	.84	-										
	4	3.81	1.00	-.89	.67	.43	.54	.61	-									
	5	4.26	.88	-1.53	2.98	.44	.56	.64	.57	-								
6	4.22	.91	-1.56	2.93	.50	.67	.74	.60	.70	-								
11	4.24	.83	-1.57	3.68	.47	.63	.68	.51	.59	.71	-							

Note. *M*: mean; *SD*: standard deviation; *g*<sub>1</sub>: skewness; *g*<sub>2</sub>: kurtosis.



## Factor Analysis

Exploratory factor analysis was conducted to assess the instrument's construct validity. A KMO of .74, and Bartlett's test ( $\chi^2 = 531.2$ ;  $p < .001$ ) were obtained by including the 11 items. However, the factor extraction methods indicated that a three-factor model comprising of three factors was more appropriate. The initial model was found to be unsustainable, particularly because Factor 3 was defined solely by item 8, which was psychometrically inadequate. A single item cannot support a latent factor, and item 8 also showed weak communalities and poor theoretical alignment with the attitude construct. Its content focuses on procedural complexity rather than cognitive, affective, or behavioral dispositions toward complaining. Therefore, item 8 was removed to improve the model's structural and conceptual coherence. In contrast, the second factor consisted of items exhibiting negative, null, and weak correlations in the item analysis. Accordingly, an exploratory model was tested without items 7, 8, 9, and 10. A one-factor solution was identified in the second exploratory analysis, supported by a KMO of .76, and Bartlett's test ( $\chi^2 = 224.0$ ,  $p < .001$ ). These values were deemed adequate to ensure unidimensionality of the scale.

**Table 3.**

*Confirmatory Analysis of the CAS Model*

Models	Fit Index								Factor Loadings						Reliability		
	$\chi^2$	df	$\chi^2/df$	CFI	TLI	SRMR	RMSEA	IC 90%	1	2	3	4	5	6	11	$\alpha$	$\omega$
EFA Model	142.7	14	10.2	.97	.95	.05	.14	.12 - .16	.67	.89	.90	.68	.75	.85	.77	.92	.89
Final Model <sup>a</sup>	28.4	9	3.2	.99	.99	.02	.07	.04 - .10	.61	-	.86	.70	.77	.88	.78	.89	.85

**Table 4.**

*Graded Response Model of the CAS Items*

Item	a	b1	b2	b3	b4	M2	df	SRMR	RMSEA	TLI	CFI
1	1.38	-2.89	-2.62	-1.79	.18	21.3	9	.05	.054	.99	.99
3	3.13	-2.10	-2.02	-1.59	-.17						
4	1.77	-2.46	-1.89	-.73	.88						
5	2.40	-2.51	-2.19	-1.30	.09						
6	3.66	-2.12	-1.75	-1.13	.12						
11	2.41	-2.52	-2.20	-1.44	.25						

s the unidimensional model identified in the EFA (Table 3). The model exhibited adequate fit indices overall, except for RMSEA, which exceeded the .08 threshold, indicating a higher degree of error in the model. Accordingly, modification indices (MI) were consulted, which arose from the association of item 2 with items 1, 3, and 4. Item 2 was identified as the source of difficulty in the distribution and was thus eliminated from the model, allowing testing of the final model. The final model exhibited a marked improvement over the previous model, with all fit indices demonstrating adequacy. As anticipated, the factor loadings exceeded .61 (Figure 1), which is aligned with the recommended threshold of .50 or above. Regarding reliability, the alpha and omega values exceeded .70, ensuring internal consistency of the instrument. The final instrument is presented in Appendix A.

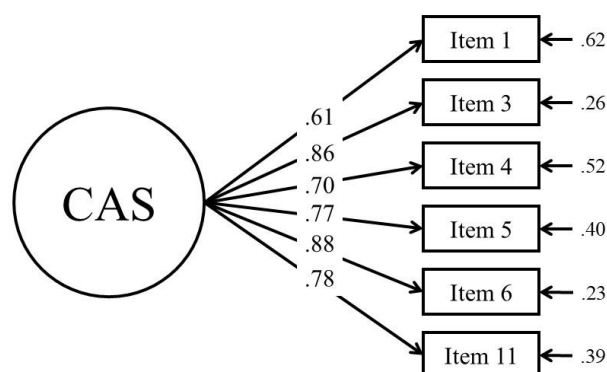


Figure 1. A one-dimensional model of the CAS

### Item Response Theory

Table 4 presents the data on the discrimination and difficulty of the items analyzed using the graded response model (GRM). The model demonstrated an adequate fit to the data, allowing for further analysis. A greater degree of discrimination is evident in items 3 ("I consider that university students assert their rights through complaints") and 6 ("I would recommend other students to make a complaint about situations that affect them at the university"). These items demonstrate a heightened level of discrimination among those with attitudes toward complaints. Nevertheless, all items showed satisfactory discrimination. Regarding the difficulty of responses, the items exhibited a monotonic increase, which was anticipated based on satisfactory discrimination of the items. Figure 2 illustrates the curves generated by the model, which provide a visual representation of the discrimination and difficulty of the items.

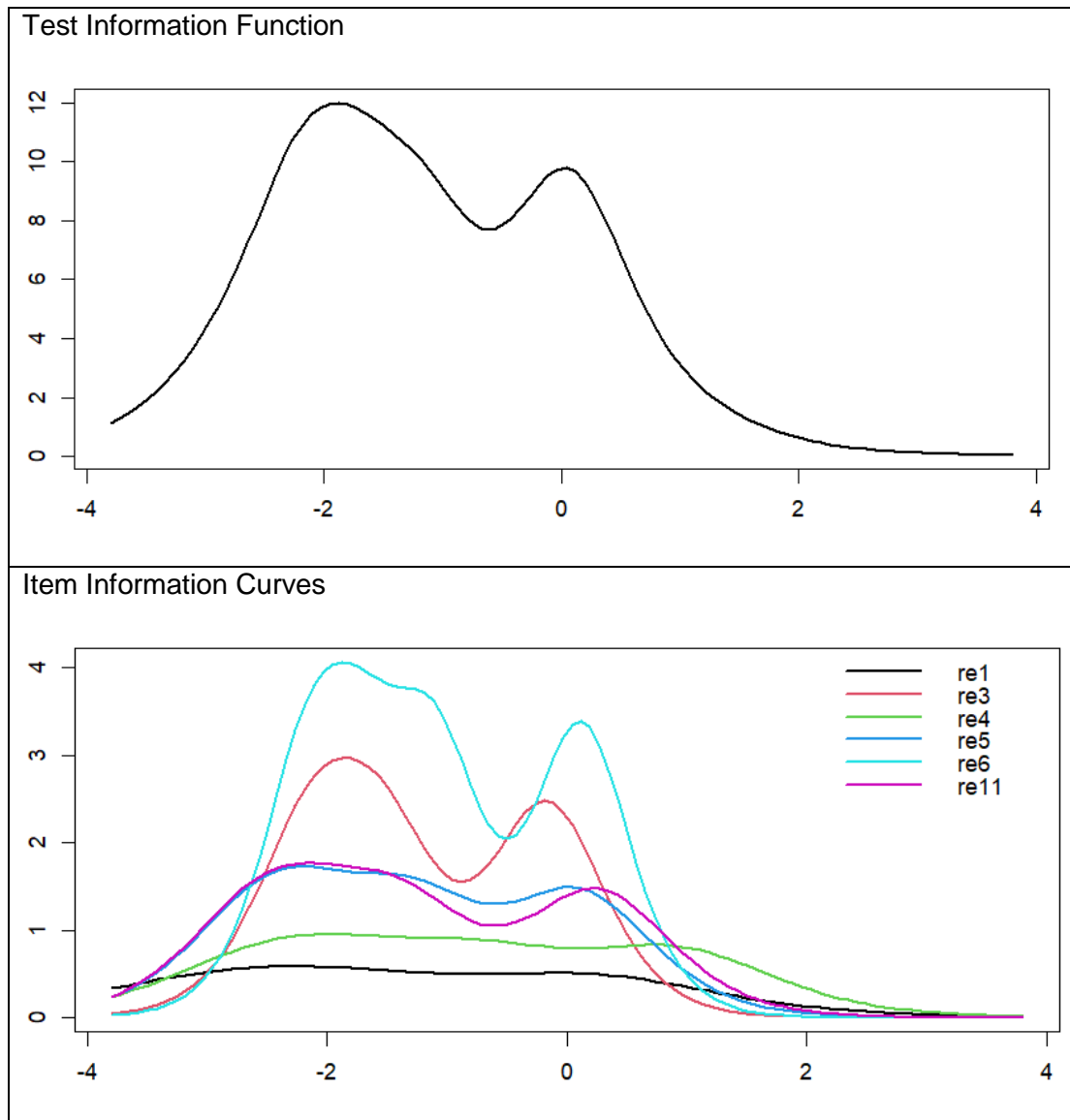


Figure 2. TIF and IIC of CAS

## Discussion

The results of this study support the validity of a psychometric instrument designed to assess attitudes toward complaints among university students. The exploratory factor analysis refined the initial 11-item scale. During this phase, four items (7, 8, 9, and 10) were eliminated due to issues with normality, correlation with the rest of the instrument, and conceptual alignment. A more detailed conceptual analysis revealed that these items primarily focused on aspects of self-perception or judgments about the institutional context, rather than directly assessing students' attitudes towards complaining. This deviation impacted the structural integrity of the model as the items did not adequately capture the

evaluative disposition that defines attitudes. Additionally, the formulation of these items exhibited a self-referential approach in contrast to the more general and attitudinal character of the rest of the scale. This discrepancy may have induced semantic noise or artificial factors in the factorial structure. This finding is consistent with previous statements warning about the impact of wording bias on the structural validity of scales, as poorly formulated items or items focused on specific personal experiences tend to generate spurious factors and reduce internal consistency (Yang et al., 2012). A unidimensional structure consistent with the concept of attitude as a disposition integrated with cognitive, affective, and behavioral indicators was identified.

Subsequently, confirmatory factor analysis validated the refined six-item structure, which showed adequate fit indices (CFI, TLI, and RMSEA) and high reliability ( $\alpha = .89$ ;  $\omega = .85$ ). The incorporation of Item Response Theory (IRT) complemented the psychometric evaluation by demonstrating that the final items effectively discriminated between different levels of attitude toward complaining, thus strengthening the diagnostic utility of the instrument. Taken together, these findings indicate that attitudes toward complaining can be validated as a unidimensional disposition, consistent with its theoretical underpinnings, and is applicable in educational contexts for research, institutional diagnosis, and the design of interventions focused on student engagement.

From a theoretical perspective, this study makes a significant contribution to the attitude-behavior literature by offering a robust psychometric tool for assessing complaint attitudes in university contexts. This study integrates three complementary theoretical frameworks: the tripartite theory of attitude (Eagly & Chaiken, 1993; Hagger, 2019), Theory of Reasoned Action, and the Theory of Planned Behavior (Fishbein & Ajzen, 2011; McEachan et al., 2011). These theories have been widely used to explain the relationship between beliefs, intentions, and behavior but have rarely been applied to the phenomenon of student complaints. Therefore, the present instrument allows us not only to identify predispositions toward complaining behavior, but also to understand how beliefs (cognitions), emotions (affects), and action tendencies (behavior) interact in this process. This theoretical integration aligns with previous research emphasizing the importance of considering multidimensional attitudes to explain complex social behaviors (Kim et al., 2003) as well as with empirical evidence indicating that perceived control beliefs and subjective norms directly influence the intention to complain.

The practical application of this instrument is equally significant. In institutional contexts, especially within universities, measuring attitudes towards complaints can identify latent barriers to student participation. These barriers may include fear of retaliation, perceived

uselessness of complaints, or distrust of formal mechanisms. This is particularly relevant, given that numerous studies have documented how an institutional culture that does not promote or legitimize feedback can discourage the expression of complaints, even when there is genuine dissatisfaction (Bodey & Grace, 2006; Svenningsson et al., 2022). By implementing this scale, universities can generate more accurate diagnoses to guide continuous improvement policies, foster trusting environments, and reinforce effective communication channels. Furthermore, individualized analysis of items through Item Response Theory (IRT) allows for the identification of subgroups of students with different predispositions to complain, opening the possibility of targeted interventions or psychoeducational support programs.

One of the primary limitations of this study was the use of non-probability sampling, which limits the generalizability of the findings to the entire university population. Although the sample size was adequate for the psychometric analyses, the representativeness of the sample could be compromised. Additionally, there was an unequal distribution in terms of sex, with a higher proportion of women than of men. This may make it difficult to perform finer analyses, such as metric invariance, between groups. This imbalance could have influenced the results, as previous research has indicated sex differences in the propensity to file for complaints. The use of a self-report instrument introduces risks inherent to this type of methodology, such as social desirability, which may bias responses toward attitudes considered more acceptable or expected in the university context.

Despite these limitations, the results obtained provide valuable and consistent information, paving the way for future research to replicate and extend these findings using more diverse samples, longitudinal designs, and mixed approaches that combine quantitative and qualitative data. These studies can apply the scale to larger and more diverse samples, including universities from different regions, academic modalities (face-to-face, virtual, and hybrid), and varied sociodemographic characteristics of the participants. This would allow for the evaluation of factorial invariance between groups and progress towards the cross-cultural validation of the instrument. Incorporating mixed methods, such as interviews or focus groups, to complement quantitative data would enrich our understanding of attitudes towards complaining from a more contextualized perspective. Another relevant line of research is to examine the predictive validity of the instrument and explore its capacity to anticipate real complaining behaviors in a university setting. Finally, longitudinal studies are suggested to evaluate the temporal stability of the construct and analyze how attitudes may change as a



function of institutional factors, previous experiences, or campaigns promoting the right to complain in a safe and constructive manner.

### **Conclusion**

In conclusion, psychometric analyses, including exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and item response theory (IRT), were essential to refine the proposed instrument and ensure its alignment with the theoretical framework. The systematic elimination of items that demonstrated poor statistical performance or conceptual misalignment with the tripartite model of attitudes enhanced the structural coherence and internal consistency of the scale. The final model, consisting of six items and a unidimensional structure, demonstrated strong reliability coefficients, providing evidence of its psychometric robustness. Beyond its methodological rigor, this instrument offers a meaningful contribution to the study of student behavior in higher education by capturing the cognitive, affective, and behavioral components that shape attitudes toward complaints. Its application may serve as a diagnostic tool for institutional self-assessment and a basis for designing interventions and policies that foster student engagement, participatory governance, and the normalization of complaint expression as a legitimate form of academic agency.

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### **Competing Interests**

The authors have declared that no competing interests exist.

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## Appendix A

Table A. The Complaint Attitude Scale (CAS)

N	Items	1	2	3	4	5
1 (1)	Me dispongo a realizar un reclamo si una situación me afecta injustamente en la universidad. [ <i>I am prepared to make a complaint if lam unfairly affected by a situation at the university</i> ]					
2 (3)	Considero que los estudiantes universitarios hagan valer sus derechos a través del reclamo. [ <i>I believe that university students should assert their rights by complaining</i> ]					
3 (4)	Me siento satisfecho/a al realizar un reclamo en la universidad. [ <i>I am satisfied with making a complain at the university</i> ]					
4 (5)	Creo que los reclamos pueden generar cambios positivos en la universidad. [ <i>I believe that complaints can bring about positive changes at the university</i> ]					
5 (6)	Recomendaría a otros estudiantes realizar un reclamo ante situaciones que les afecten en la universidad. [ <i>I would recommend other students to make a complaint about situations that affect them at the university</i> ]					
6 (11)	Se debería promover el derecho al reclamo para que los estudiantes conozcan sus derechos. [ <i>The right to complain should be promoted so that students are aware of their rights</i> ]					

1 = Totalmente en desacuerdo [Strongly disagree]

2 = En desacuerdo [Disagree]

3 = Ni de acuerdo ni en desacuerdo [Neither agree nor disagree]

4 = De acuerdo [Agree]

5 = Totalmente de acuerdo [Strongly agree]

