

Schadenfreude Scale: Construct Validity Test with Confirmatory Factor Analysis

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Abstract. This research aimed to investigate construct validity of Schadenfreude measurement instrument adapted for the Indonesian context. Schadenfreude, which is the feeling of satisfaction at another individual's misfortune, is explored through five dimensions, namely concern for justice, aggression, competition, arrogance, and envy. These dimensions guided the development of a 60-item instrument based on scale by Crysel and Webster (2018). Data were collected from 500 respondents in Pagutan Village, Mataram, Lombok, Indonesia, reflecting the social, cultural, and economic context. Confirmatory factor analysis (CFA) and measurement invariance using M-plus were conducted to test construct validity. The result showed that 10 items were invalid, leaving a refined instrument of 50 valid items across the dimensions. This validated instrument provided a robust tool to measure Schadenfreude in Indonesian populations aged > 12, with applications in social, political, economic, and competitive contexts. In conclusion, the research showed the cultural relevance of Schadenfreude in understanding human emotions and social behavior.

Keywords: CFA, construct validity, Indonesian version, Schadenfreude scale, measurement invariance

DOI:

<https://doi.org/10.15575/psy.v11i2.33827>

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Psymphatic :

Jurnal Ilmiah Psikologi

Vol.11:2, December

2024,

Page 177-186

eISSN: 2502-2903

pISSN: 2356-3591

Article Info

Received:

February 22, 2024

Accepted:

December 5, 2024

Published:

December 31, 2024

Introduction

Schadenfreude is the phenomenon of expressing emotions as feelings of happiness, joy, relief, and satisfaction from another individual's misfortune, such as experiencing a disaster, difficulty, misfortune, defeat, failure, loss, humiliation, calamity, or catastrophe. This phenomenon of emotional expression is often found in a competitive atmosphere, such as in the context of social, political, economic, and sports (Zagorin, 2000). However, the full extent of the harm caused is often not realized by the perpetrator. Schadenfreude is part of the dark side of humans who enjoy the misfortune of others (Smith, 2018). This action is perceived as negative, such as a conflict between cognitive and emotional responses, which can erode empathy and sympathy as the symptoms of those who suffer from alexithymia (Moormann et al., 2021; Moormann et al., 2023). Moreover, individuals experiencing Schadenfreude often believe that happiness and luck are reserved exclusively for personal benefit, and not for others.

As a theoretical construct, Schadenfreude is a complex emotional state characterized by positive feelings derived from the misfortune of others, thereby constituting a negative attitude. This complexity has attracted the interest of several psychologists to further discuss the moral dimensions, empathy, sympathy, prosocial considerations, and the extinction of human affection (Simon, 2017). Schopenhauer (1860) argued that Schadenfreude is the worst trait and the dark side of human behavior. This phenomenon is specifically pertinent to individuals who consciously derive enjoyment from others' misfortune (Cartwright, 2019), a psychological symptom indicative of a society whose social order is destroyed by war, conflict, or competition. The negative emotional essence of Schadenfreude often remains concealed, unrecognized for its potential to incrementally erode morality (Smith, 2013; Berndsen & Tiggemann, 2020; Yee & Lee, 2022).

The phenomenon of Schadenfreude has been of interest to experts since the 18th century (Meier,

2000), but cannot be easily translated into other languages (Nachman, 1986; Bernardi, 1993). Schadenfreude is an emotion that is often hidden behind feelings of envy and shame (Smith, 2013), as well as jealousy (Blaazer, 1999). Experts argue that emotions are always developing and changing (McNamee, 2007). Many experts attempted to understand the phenomenon behind the pleasure of others suffering (van Dijk & Ouwkerk, 2014) as a bad trait due to the inherent celebration of misfortune (Walken & Smith, 1992; Schadenfreude als Schadenersatz, 2008). Schadenfreude can arise in various contexts, from business competition to interpersonal relationships, which can affect attitudes, behavior, and work outcomes (Nguyen & Ng, 2020a). This condition often triggers unhealthy competition among fellow employees or members of the organization.

Emotional conditions, such as feelings of joy, pleasure, or happiness over bad situations or misfortunes that befall others expressed through various forms, such as gossip, ridicule, even humor, and jokes are psychological phenomena that spread by word of mouth without being realized (Freud, 1960; Nachman, 1986). The phenomenon of Schadenfreude spreads through digital platform spaces as part of the process of identifying an individual's identity (Lynd, 1958), even going viral on various social media platforms in recent years (Wei & Liu, 2020). Behaviors that express dislike, envy, and hatred are no longer carried out in secret or covertly (Dasborough & Harvey, 2017) in the digital landscape. On social media, short video content is particularly prominent, often featuring people experiencing misfortune or exhibiting absurd behavior. This content serves as comedic material or entertainment, inviting laughter from viewers. In addition, social media content, such as YouTube or TikTok which are currently popular can be categorized as pranks and insinuations (Syukriah & Nurhadianti, 2020). Prank video content and playing with friends or others increases in intensity and duration. Furthermore, pranks in entertainment content on social media disguise Schadenfreude because the phenomenon is wrapped in humor (Nachman, 1986).

Behaviors typically deemed disruptive to the standards of politeness in interpersonal relationships often become ambiguous when presented humorously, particularly when jokes target the misfortune of others who become victims. This phenomenon undermines values like virtue, kindness, and decency, and is referred to as "aggressive humor style" in psychological discourse (Yee & Lee, 2022). Similarly, dark humor tends to belittle others under the guise of a joke, and aggressive humor refers to undermining the position of others through mocking satire (Martin et

al., 2012). This behavior of mocking or belittling others is a form of aggression, characterized by a lack of empathy, lack of sympathy, antisocial tendencies, cruelty, scorn, degradation of dignity, bullying, and more.

Symptoms of Schadenfreude occur when members of an internal group experience feelings of inferiority in response to the success of another (Leach & Spears, 2008). Schadenfreude is usually a chaos of internal pleasure within an individual without being able to recognize the symptoms through facial expressions or body movements (Leach et al., 2015). This phenomenon is also associated with the assumption that individual achievement, excellence, and career brilliance can be perceived as a disruption and threat to the social order. A powerful individual will tend to use power to cut off economic growth in others and hinder achievements, and excellence, by bringing down other superior people or friends. This phenomenon in Australia and New Zealand is known as the tall poppy syndrome as gardeners prune to be neat (Feather, 2003; 2006; 2008a; 2008b); Feather & Sherman, 2002; Feather & Naim, 2005; Feather & Boeckmann, 2007; Feather et al., 2011). In Indonesia, the phenomenon is known as "rice science" or even "grass science", as overly prominent achievements are perceived as potentially threatening.

Schadenfreude symptoms are prevalent in Indonesian villages and cities, but unfortunately, there is no adequate measuring instrument to assess the phenomenon psychometrically. Furthermore, there is still little research that discusses Schadenfreude in the formal context of compiling psychometric measuring instruments, both in Indonesia and abroad (Crysel & Webster, 2018). This research provides a new method with a focus on developing adequate psychometric measuring tools to assess Schadenfreude. Based on previous research, aspects that are believed to be dimensions of Schadenfreude were identified, including concerns about justice, aggression, competition, arrogance, hatred, and envy (Syahid & Akbar, 2020). Therefore, this research aimed to explore more deeply these dimensions and develop a more accurate and reliable measuring tool.

Dasborough and Harvey (2017) attempted to examine the various causes that influence the emergence of negative moral emotions, such as Schadenfreude. Apart from this research, there are no sources that discuss Schadenfreude in the context of formal psychometric measurement. Therefore, supporting research related to the development of Schadenfreude measuring instrument from a psychological perspective needs to be further developed. This concept is rarely addressed in formal psychometric measurement within psychology, both in Indonesia and abroad. Crysel and Webster (2018)

used the theory of [Smith et al. \(1996\)](#) in developing Schadenfreude scale, but the measuring instrument was not equipped with supporting dimensions. This measuring instrument still required further development in dimensions and indicators, both of which serve as guides for thinking in compiling the main ideas.

Based on the theory of [Smith et al. \(1996\)](#), Schadenfreude scale compiled by [Crysel and Webster \(2018\)](#) is not yet supported by solid dimensions and indicators. Research by [Simon \(2017\)](#) and [Dasborough and Harvey \(2017\)](#) used a measuring instrument that does not have these dimensions and indicators to analyze the moral and negative emotional dimensions of Schadenfreude. On this basis, [Syahid and Akbar \(2020\)](#) and [Syahid et al. \(2021\)](#) describe the dimensions that form the variable.

The dimensions developed by [Syahid & Akbar \(2020\)](#) and [Syahid et al. \(2021\)](#) as the basis for the new Indonesian version consisted of concerns about justice, aggression, competition, arrogance, and envy. Concern for justice is an active or passive action to ensure that individuals who violate social justice receive appropriate punishment. The aggression dimension is anger that comes from social identity and considers something different from an individual's understanding to be negative. Competition refers to the pursuit of wealth, resources, and achieving higher social status or prestige. The arrogance dimension is the nature of individuals who perceive the misfortune of others with thoughts of blame accompanied by a sense of arrogance and hidden pleasure in evil traits. The hatred dimension is an individual dislike of others due to certain factors driven by hatred. The envy dimension includes feeling displeasure or hurt upon seeing someone else experience pleasure or possess something that is also desired. Various dimensions from [Syahid and Akbar \(2020\)](#) were then used as a reference for compiling a validated and adapted Schadenfreude measuring instrument in Indonesia.

Based on the description of the phenomenon and the dimensions of formation, there is a need to conduct quantitative research on measurement of Schadenfreude in a social context with a sample of Indonesian society. Therefore, this research aimed to explore more deeply the dimensions and develop a more accurate and reliable measuring tool.

Methods

A quantitative method was adopted in this research to adapt and validate Schadenfreude measurement instrument in the context of social, economic, educational, and political competition in Indonesia. The adaptation process includes adjusting language, culture, and context to ensure the relevance,

reliability, and validity of the instrument in measuring the phenomenon being examined ([Azwar, 2012](#)).

The population consisted of the residents of Pagutan Village, Mataram City, West Nusa Tenggara. The sample comprised residents of Pagutan Village aged 22-55 years and had a minimum education in high school. Pagutan Village was chosen as the data collection point because this area exhibits characteristics typical of Schadenfreude behavior. In the village, Schadenfreude phenomenon was often reflected in the attitudes and behavior of those who feel happy or satisfied by the misfortune of others. In Pagutan Village, this often occurs in the context of social and political competition, where success or increased status of an individual is often accompanied by feelings of envy and hidden happiness. This behavior shows complex social dynamics and the role of negative emotions in interactions between individuals.

A purposive sampling method was carried out, where specific criteria were set to achieve research objectives. The sample size was calculated based on the formula developed by [Roscoe \(1975\)](#). The number of samples should be at least 10 times the variables being investigated in order to conduct a multivariate analysis. This research has six variables, showing that the minimum number of samples needed was 60 people. However, the number of samples used was 500 people from the total population of Pagutan Village which amounted to 10,890 people. Data were collected by distributing Schadenfreude questionnaire using the purposive side method to the residents of Pagutan Village who were over 21 years old. The incoming data was then processed using confirmatory factor analysis (CFA).

CFA

Construct validity of Schadenfreude scale was tested using CFA. Good construct validity ensures that scale factor values are consistent with empirical results from the field, accurately reflecting the properties of the measured instrument. Specifically, in CFA, the fit of the covariance structure of the measured variable is tested. Within CFA, there are modified models that can improve or change the structure to be more valid. CFA logic used in this research was based on the procedure of ([Umar, 2011](#)), as follows:

- 1) Operationalize construct definition to facilitate compilation into statements according to scale used. The results are factors, which are measured by analyzing the response on each item.
- 2) Testing the hypothesis of the unidimensionality model of items that have been constructed to determine the fit model. This model testing examines whether measurement is unidimensional, assessing a single underlying

Table 1
Criterion of Invariance Models (Chen, 2007)

Index Fit	N<=300			N>=300		
	Factor loading	Intercept	Residual	Factor loading	Intercept	Residual
CFI	≤ -.005	≤ -.005	≤ -.005	≤ -.01	≤ -.01	≤ -.01
RMSEA	≤ .01	≤ .01	≤ .01	≤ .015	≤ .015	≤ .015
SRMR	≤ .025	≤ .005	≤ .005	≤ .030	≤ .01	≤ .01

Table 2
Favorable and unfavorable Statement Score

Option	strongly disagree	disagree	agree	strongly agree
Favorable	1	2	3	4
Unfavorable	4	3	2	1

Table 3
Blueprint of Schadenfreude scale

Dimension	Indicators	Item	Sum
<i>Justice</i>	Considers appropriate happy or funny expressions towards those who are being bullied unlucky.	1, 2, 3, 4, 5, 6, 7*, 8, 9, 10, 11, 12*, 13, 14, 15, 16*, 17, 18, 19.	19
<i>Aggression</i>	Angry because there is a difference between hope and reality.	20, 21, 22.	6
	Justification of self-or group identity	23, 24, 25.	
<i>Competition</i>	Competition in public life	26, 27, 28, 29.	10
	Economic competition and achievement	30, 31.	
	Competition in the world of work	32, 33.	
	Competition in the family	34, 35.	
<i>Arrogant</i>	Thinking of the misfortunes of others by accompanying the sense of arrogance and pleasure	36, 37, 38, 39*, 40, 41, 42, 43, 44, 45, 46, 47, 48	13
<i>Hatred</i>		49, 50, 51, 52, 53, 54, 55	7
<i>Envy</i>	Feelings of displeasure and hurt due to pleasure in the other party or others who have whom he also wants	56	5
	Feelings of displeasure over the pleasure of others.	57	
	Feeling hurt when others achieve their dreams.	58	
	Feel dislike when others excel.	59, 60	
	Total		60

factor. Test was conducted by comparing the correlation matrix data (Σ) with the empirical (S). When this measurement is carried out unidimensionally, then there is no difference between Σ and S, or the notation is $\Sigma - S = 0$.

- 3) The null hypothesis is tested by examining the goodness of fit statistical coefficient contained in the output. A parametric test is used and when the chi-square is not significant ($p > .05$) then the model is said to be fit or $\Sigma - S = 0$. However, chi-square testing of this model is sensitive to sample size, showing that large datasets tend to yield significant chi-square coefficients, suggesting a poor model fit (Browne & Cudeck, 1992; Clogg & Bollen, 1991; Jöreskog & Sörbom, 1993). Alternatively, the Root Mean Square Error of Approximation (RMSEA) can be used, which is less sensitive to sample size and provides a more robust assessment. A model is considered a good fit with RMSEA when $p < .05$ or $p < .08$. (Browne & Cudeck, 1992). In addition, non-parametric tests, such as GFI, CFI, NFI, and others can also be used with criteria $p < .80$ (Dwi et al., 2021; Jöreskog & Sörbom, 1993).

- 4) In the case of a fit or suitable model, the next step is to test whether the items are significant, measuring the proposed factor using the p test. This research used the condition that significant items must have a p-value of less than .05 ($p < .05$).
- 5) Construct validity testing with CFA and measurement invariance were assisted using M-plus software or software.

Measurement Invariance

Measurement invariance is a statistical procedure that assesses whether measurement instrument measures the same construct consistently across different groups. More specifically, measurement invariance examines whether psychometric indices, such as factor loading (λ), intercept, and residual, remain equivalent across different groups. The different groups in question include ethnicity, ethnicity, gender, religion, level of education, and other demographic variables. Furthermore, this measure can be divided into several levels, namely configural, metric (λ invariance), scalar (intercept invariance), and error variance invariance (Byrne et al., 1989; Vandenberg & Lance, 2000).

Instrument description

The previous sub-chapter explained in detail the settings and constructs of Schadenfreude. This measuring instrument was constructed based on the theory of [Smith et al. \(1996\)](#) and scale condition of [Crysel and Webster \(2018\)](#), with initial limitations in factor structure. Research by [Simon \(2017\)](#), [Dasborough and Harvey \(2017\)](#), [Syahid and Akbar \(2020\)](#), and [Syahid et al. \(2021\)](#) identified six dimensions, namely, justice concern, aggression, competition, arrogance, hatred, and envy. Using Likert scale, Schadenfreude gauges were designed in a type of questionnaire with multi-choice answers. In this research, four scales were used, namely strongly disagree (STS), disagree (TS), agree (S), and strongly agree (SS). In addition, scale uses an item system arranged with favorable and unfavorable types. [Table 2](#) shows the provisions for assessing the items used in this research:

This measuring instrument is a modified version of Schadenfreude scale developed by [Crysel and Webster \(2018\)](#) based on the theory of [Smith et al. \(1996\)](#). The instrument was designed using six dimensions identified by [Syahid and Akbar \(2020\)](#), [Syahid et al. \(2021\)](#), [Simon \(2017\)](#), and [Dasborough and Harvey \(2017\)](#). Measuring instruments are arranged in the form of statements which are then distributed to adults between the ages of 25 to 55 years. The modification of various statements on this scale was also subjected to content validity test through expert judgment. The experts who assessed the validity of the content were Solicha (Lecturer at the Faculty of Psychology UIN Syarif Hidayatullah Jakarta) and Adiyo Roebianto (Lecturer in Psychometrics Faculty of Psychology Mercu Buana University) under the direct direction of Achmad Syahid (Professor of the Faculty of Psychology UIN Syarif Hidayatullah Jakarta).

Results and Discussion

CFA Measurement Results

The total sample size was 500 respondents, aged 22-55 years old. [Table 4](#) shows a detailed description of the research subjects' characteristics.

Table 4
Gender, Age, and Occupation of Research Subjects

Description	Total	Percentage
Gender		
Male	158	31.6 %
Female	342	68.4 %
Age		
22-35 Year	232	46.4 %
36-55 Year	268	53.6 %
Occupation		
Traders	151	31.5 %
University Students	84	11.0 %
Housewife	100	21.2 %
Self-employed	165	36.3 %

Table 5
Test Goodness of fit analysis

Index	Value	Fit Criteria
Chi-Square	1265.590	Closer to Zero
DF	1225	
P-Value	.0152	> .050
RMSEA	.009	< .050
90% C.I RMSEA	.000 – .015	< .050
Probability RMSEA <= .05	.000	> .050
CFI	.995	> .950
TLI	.993	> .950
SRMR	.038	< .080

[Table 4](#) shows the demographic characteristics of the 500 respondents comprising 31.6% (158) male and 68.4% (342) female. In terms of age, 46.4% (232) were between 22-35 years old, while 53.6% (268) were between 36-55 years old. The occupation breakdown was traders (30.2%, 151), students (16.8%, 84), housewives (33%, 165), and entrepreneurs (20%, 100).

In this sub-chapter, test of validity was presented using CFA.

[Table 5](#) shows the data analysis was carried out in several stages. The first stage is a model with 60 items theorized to measure six factors. The results of the first stage of CFA produced a Chi-square value = 1265.590 df = 1225, p-value = .0152, RMSEA = .009, 90% C.I. RMSEA = .000-.015, Probability RMSEA<.05 = .000, CFI = .995, TLI=.993, and SRMR=.038. Based on the criteria from [Hu and Bentler \(1999\)](#), the model above can be said to be fit. In other words, the null hypothesis "there is no difference between the theoretical model and empirical data" was not rejected. The results provide sufficient statistical evidence to confirm that the theoretical model is empirically supported. The analysis continued at the item level after the model was declared fit.

After achieving a fit model with data in the field, item selection was carried out. The selected items, which exhibited negative loadings, were x2, x7, x12, x16, x39, x50, x51, x52, x53, x54, and x55.

Measurement Invariance Test

CFA results were used to assess measurement invariance of the instrument, determining whether the instrument remains valid and measures the same construct across different groups. This was followed by an invariance test on demographic variables, namely the sex (gender) category of the research subjects. The number for the gender category of

Table 6

Measurement Invariance Test

Group	Model	χ^2	df	p-value	CFI	RMSEA	SRMR	Δ CFI	Δ RMSEA	Δ SRMR
Gender	Configural	3229.154	2430	< .000	.931	.036	.053	-	-	-
	Metric	332.053	2484	< .000	.928	.037	.059	-.003	.001	.006
	Scalar	3377.499	2538	< .000	.927	.036	.059	.001	-.001	.000

subjects was 158 and 342 for male and female, respectively.

Table 6 shows the first stage of invariance testing is the configural invariance test. The results for the gender groups showed a good model fit ($\chi^2=3229.154$, $df=2430$, $p\text{-value} < .000$, $CFI=.931$, $RMSEA=.036$, $SRMR=.053$), suggesting that the theoretical model fits the empirical data relatively well (Hu & Bentler, 1999; Marsh et al., 2005).

The next step was the metric invariance test. The results for the gender group showed that the theoretical model fits the empirical data ($CFI=.928$, $RMSEA=.037$, $SRMR=.059$). The change in model fit was minimal, and the CFI, RMSEA, and SRMR index values met the cutoff values ($\Delta CFI=-.003 < -.01$, $\Delta RMSEA=-.001 < .015$, $\Delta SRMR=.006 < .030$). Therefore, the metric invariance test was met, enabling comparisons of regression coefficients and unstandardized covariance across gender groups. Furthermore, the scalar invariance test for the gender group showed good agreement with the empirical data ($CFI=.927$, $RMSEA=.036$, $SRMR=.059$). The change in model fit was not significantly different compared to the metric invariance test. CFI, RMSEA, and SRMR index values met the cutoff criteria ($\Delta CFI=.001 < -.01$, $\Delta RMSEA=-.001 < .015$, $\Delta SRMR=.006 < .000$). This shows that latent mean comparisons can be carried out meaningfully in gender groups. The results show that the invariance test supports the scale invariance model, with an RMSEA value of less than .05. This shows that the measuring instrument exhibits equivalent loadings and intercepts across different groups, suggesting a strong level of invariance.

Discussion

In this research, several items were invalid because selection criteria ($p < .05$) were not met and some were dropped due to negative factor loadings in the dimensions. Items that were dropped due to not meeting criteria have weaknesses in placement, thereby showing ineffectiveness. The results of the review found items 2, 7, and 16 in the justice dimension, while number 39 was declared invalid in the arrogance dimension. Furthermore, items 50, 51, 52, 53, 54, and 55 were declared invalid on the hate dimension. All these items are unfavorable because of the inability to play a maximum role in measuring Schadenfreude. This result is consistent with the report of (Widhiarso, 2016), showing that unfavorable

items in several Indonesian research on measuring instrument validity failed to contribute meaningfully and compromised the results. In addition, Schadenfreude setting in this research is situated within a social context, resulting in measurements that are quite comprehensive and open to multiple interpretations (Hidayatullah & Shadiqi, 2020).

The depth of this research cannot be separated from the limitations in implementation and discussion. The measuring tool comprised an extensive number of items, which led to fatigue during the sampling process. Consequently, several respondents submitted careless responses due to boredom. A significant number of items feature lengthy narrative content, necessitating approximately 20-30 minutes for respondents to comprehend and provide accurate responses. The research period was relatively brief, spanning only four months, which included both preparation and sampling phases. Consequently, the analyst may not have devoted sufficient attention to ensuring the accuracy of item preparation. The statistical analysis showed that the CFA was highly sensitive to sample size, thereby influencing the results of the model fit test and item parameter estimation (Wang & Wang, 2020).

The phenomenon supported by abundant data and facts about the symptoms of Schadenfreude in Indonesia is a gap in the measuring instrument. The development of the Indonesian version aimed to enhance the dimensional and indicator validity of the measuring instrument and also address the existing gap in availability. The phenomenon of Schadenfreude emotional symptoms is prominent, specifically during political events, and economic, social, and sports competitions, where supporters express joy when the opposing party makes a blunder, mistake, and loses. In real life, some neighbors often do not get along when the other individual builds a house, buys a vehicle, or new items. The phenomenon of employees experiencing resentment towards promoted colleagues, leading to sabotage and hindered career advancement, necessitates the development of Schadenfreude theory construct. This framework should be grounded in robust dimensions, enabling the compilation of indicators and items on scale, which can then be tested for validity and reliability using Indonesian samples.

According to Smith (2018), a fundamental human desire is the pursuit of justice. Individuals are generally motivated to maintain a positive self-image.

A universal but often concealed, aspect of human nature is the tendency of comparison, often perceiving oneself as superior. This inclination is particularly pronounced when individuals experience Schadenfreude, a phenomenon where one derives pleasure from the misfortune of others perceived as superior. This sensation can temporarily bolster self-esteem and increase feelings of inadequacy. Instances of Schadenfreude are often trivial, manifesting as harmless gossip. Unchecked negative emotions, including envy, jealousy, and hatred, can precipitate harmful behavior, such as aggression, towards individuals who are perceived unfavorably.

In interpersonal relationships, [van Dijk and Ouwerkerk \(2014\)](#) explain that the experience of an accident, unfortunate event, fall, and setback, often triggers the emergence of Schadenfreude. This emotional experience is common and inherent in humans as social beings. Related to the five dimensions of Schadenfreude, which consist of justice concern, aggression, competition, arrogance, and envy. These five aspects are identified as constitutive elements of Schadenfreude, substantiated through a thorough theoretical examination of sources discussing the subject. From the many theories and discussions, these six aspects can best describe Schadenfreude in many settings, such as social, competitive, economic, business, and also sports settings. Future research requires a critical evaluation of the cross-cultural applicability and adaptability of measurement tools to diverse objectives, necessitating further comprehensive development.

Research conducted by [Takahashi et al. \(2009\)](#) showed the relationship between envy and Schadenfreude, describing the concept as an emotional response. This concept is characterized by feelings of distress and happiness in response to the good fortune and misfortune of others, respectively. In another term, *epichairekakia* refers to the pleasure derived from witnessing the misfortune of others, primarily driven by feelings of envy and jealousy, rather than competition or rivalry ([Manca, 2019](#)).

Building on the work of [Crysel and Webster \(2018\)](#), this research expands the discussion on Schadenfreude. The theory of [Smith et al \(1996\)](#) is integrated, with adjustments by [Syahid & Akbar \(2020\)](#) and [Syahid et al. \(2021\)](#) as well as [Simon \(2017\)](#), [Dasborough and Harvey \(2017\)](#). By applying principles of psychological measurement, a validated Schadenfreude measurement scale was developed. The validity was confirmed through CFA and measurement invariance testing.

The purpose of measurement invariance test is to determine the performance of Schadenfreude measuring instrument scale in various groups. In this research, the results of the invariance test on

configural, metric, and scalar were met. However, the actual invariance test results on the CFI index do not meet the model fit criteria.

Although Indonesia has a world reputation as a religious nation, the tendency towards power is an inherent element in the country ([Syahid, 2009](#)). Therefore, this measuring instrument is relevant for use on individuals whose behavior shows symptoms of Schadenfreude, specifically during political events, sports, pursuing educational achievements, careers, economics, vitality, and various situations faced by individuals as triggers.

Research on Schadenfreude in adolescents is scarce due to limited social interactions and an underdeveloped understanding of complex social emotions ([Hart & Matsuba, 2007](#)). The political situation can foster Schadenfreude, as polarized supporters of opposing parties often experience friction, triggering pleasure at the misfortune of others ([Iyengar & Krupenkin, 2018](#)). This research is still limited qualitatively by elaborating phenomena with relevant theories, thereby necessitating collaborative quantitative research to strengthen the theoretical concept of Schadenfreude.

The Pagutan village was selected as a sampling point to show the phenomenon of Schadenfreude. However, the scope is limited, and the measuring instrument requires further testing using empirical data. Future applications of this instrument could include political competitions, such as village head, regional, and presidential elections. This instrument may also be relevant in sports events, from local to international levels. In addition, the instrument is suitable for use among middle adolescents, aged >16, with at least a junior high school education, using a random sampling method.

Conclusion

In conclusion, the adaptation and validation of Schadenfreude Scale in Indonesia were declared valid and reliable. The result found that research on the Indonesian population were no longer reliant on the modified Schadenfreude scale by [Crysel and Webster \(2018\)](#), which was based on [Smith et al.'s \(1996\)](#) theory but used Schadenfreude Scale. This measuring instrument referred to the theory of [Smith et al. \(1996\)](#) and [Crysel and Webster \(2018\)](#) but with dimensions compiled by [Syahid and Akbar \(2020\)](#) and [Syahid et al. \(2021\)](#). A total of 50 items were declared valid and reliable construct, out of the 60 tested. Finally, 10 items were declared insignificant and invalid.

Acknowledgments

The success of the preparation of this measuring instrument cannot be separated from the contributions of several parties who helped in the drafting process.

Therefore, the authors are grateful to the 500 respondents who were willing to be sampled. The authors are also grateful to Adiyo Roebianti as an expert judgment who also gave an assessment in meeting the validity test of this measuring instrument content. Appreciation also goes to the staff of the Agniya Foundation who helped in the process of disseminating data to Pagutan Village, Mataram City, West Nusa Tenggara, Indonesia.

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