# Development and validation of Tripartite Schadenfreude Scale

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❧ ABSTRACT. Questo studio mirava a sviluppare una misura self-report della schadenfreude basata su un modello motivazionale tripartito. Nello Studio 1, è stato sviluppato un insieme di 36 item: l'analisi fattoriale di conferma (CFA) degli elementi della TSS in un campione intenzionale di 300 studenti dell'Università di Sargodha ha rivelato una soluzione a tre fattori di secondo ordine coerente con il modello motivazionale tripartito di schadenfreude. Lo Studio 2 ha replicato la struttura fattoriale della TSS in un campione intenzionale di 219 studenti anch'essi dell'Università di Sargodha. La TSS non era correlata con la vergogna o il senso di colpa, indicando così una validità discriminante. Nel complesso, dunque, questi risultati suggeriscono che la TSS di nuova concezione è una misura psicometricamente valida della schadenfreude tripartita.

❧ SUMMARY. *Entrenched in the tripartite motivational model of schadenfreude (Wang, Lilienfeld & Rochat, 2019), this study developed and validated a self-report measure of schadenfreude. In Study 1, a pool of 36 items was developed after a thorough review of the literature and expert opinions. The content validity index for the items and scale was established after obtaining the ratings of four experts. Confirmatory factor analysis (CFA) of the item pool of the Tripartite Schadenfreude Scale (TSS) in a purposive sample of 300 students at the University of Sargodha revealed a second-order three-factor solution consistent with the tripartite motivational model of schadenfreude. The first-order factor loadings ranged from .60 to .80 and their Cronbach's alpha coefficients of reliability ranged from .73 to .94. TSS and its three factors demonstrated a strong positive correlation with the Perceived Schadenfreude Scale (Batool, 2014), which established evidence of convergent validity. Study 2 replicated the factorial structure of TSS in a purposive sample of 219 students at the University of Sargodha. Moreover, TSS did not correlate with shame or guilt, indicating discriminant validity. Overall, these findings suggest that the newly developed TSS is a psychometrically sound measure of tripartite schadenfreude.*

**Keywords:** *Tripartite schadenfreude, Aggression schadenfreude, Rivalry schadenfreude, Justice schadenfreude*

## INTRODUCTION

According to van Dijk and colleagues (van Dijk, Wesseling, Ouwerkerk & van Koningsbruggen, 2010), experiencing pleasure from the misfortune of others is a commonly observed phenomenon. Although individuals tend to disapprove of such feelings when explicitly asked, there are instances in which a smile emerges involuntarily when witnessing another person's misfortune. This phenomenon, known as schadenfreude, is intricately connected to how individuals interpret the misfortune of others, and various factors influence the degree of pleasure experienced. These factors include the severity of the misfortune, the identity of the victim, and the individual's personal experiences with the victim (Chen & Lee, 2020; Thompson & Martinez, 2023). According to Heider (1958), the German word schadenfreude means harm joy and it refers to the joy or pleasure that people feel on the misfortune of others. A person who feels pleasure in other's misfortunes is termed schadenfroh. The current research is based on the tripartite motivational model of schadenfreude, based on a review study by Wang et al. (2019).

## Tripartite motivational model of schadenfreude

The tripartite motivational model of schadenfreude (Wang et al., 2019) examines the underlying motivations behind the experience of schadenfreude. According to this model, schadenfreude is driven by three primary motivational components: aggression, rivalry and justice.

The aggression component of schadenfreude suggests that individuals may experience pleasure when witnessing the misfortune of others, because it satisfies their aggressive tendencies. This may be particularly relevant when a person experiencing misfortune is perceived as causing harm or injustice to others. The rivalry component focuses on the comparison between oneself and a person experiencing a misfortune. Individuals may experience schadenfreude if they perceive the misfortune of others as enhancing their relative standing or superiority. It can be driven by feelings of envy, rivalry, or desire to maintain a sense of superiority. The justice component highlights the roles of perceived fairness and justice in schadenfreude. Individuals may derive pleasure from seeing the misfortune of others if they believe it is a form of poetic justice or retribution for the perceived

wrongdoing of the person experiencing misfortune.

The present research aimed to develop an indigenous measure of schadenfreude based on a tripartite motivational model (Wang et al., 2019) for Pakistani population. For this purpose, the standard procedure for scale construction is employed. The following section briefly describes each tripartite motivational model component.

– *Aggression schadenfreude.* According to Wang et al. (2019), aggression schadenfreude is a specific form of schadenfreude that revolves around deriving pleasure and satisfaction from witnessing the misfortunes or failures of others, particularly those perceived as competitors or adversaries. It is characterized by feelings of aggression and hostility towards the target of schadenfreude. Unlike other forms of schadenfreude, such as justice-based schadenfreude, aggression schadenfreude is primarily motivated by hostile intentions. In aggression schadenfreude, individuals experience a sense of pleasure and vindication when their rivals or enemies encounter setbacks, failures, or suffering. The target's misfortune is seen as a form of triumph or validation of one's superiority or dominance. The pleasure derived from aggression schadenfreude may stem from a desire to see the downfall of perceived threats or competitors, providing a sense of satisfaction and a boost to one's self-esteem.

– *Rivalry schadenfreude.* According to Wang et al. (2019), rivalry schadenfreude refers to the experience of pleasure or satisfaction derived from the misfortune or failure of individuals with whom one shares a competitive relationship or rivalry. It involves taking joy in the setbacks or difficulties encountered by rivals or competitors. Rivalry schadenfreude is often driven by the desire for personal success or achievement relative to others. When individuals perceive their rivals as threats or obstacles to their goals or aspirations, witnessing their failures can elicit a sense of pleasure or satisfaction. This can provide a sense of validation and superiority, as the misfortune of rivals is seen as a confirmation of one's relative success or competence (van Dijk & Ouwerkerk, 2014).

This form of schadenfreude can manifest in various domains including academics, sports, professional settings, and personal relationships. For example, in sports, fans may experience rivalry schadenfreude when their team's rival loses a game or faces defeat (Demir & Rigoni, 2017). In academic or professional settings, individuals may enjoy seeing that their competitors fail to achieve

their desired outcomes or face setbacks. Van de Ven et al. (2015) found that individuals who harbor malicious envy toward someone tend to experience heightened levels of schadenfreude when that person encounters a misfortune.

– *Justice schadenfreude.* Wang et al. (2019) delineated justice schadenfreude as the experience of pleasure or satisfaction that arises when witnessing the misfortunes or suffering of others who are perceived as deserving of punishment or experiencing a consequence for their actions. It is rooted in a sense of fairness, in which individuals believe that the harm suffered by the target of schadenfreude is justified based on their past behaviors or transgressions. The focus in justice schadenfreude is on the perceived fairness and appropriateness of punishment rather than deriving pleasure from suffering itself.

According to Smith and van Dijk (2018), the concept of justice schadenfreude is closely tied to the notion of retributive justice, which emphasizes that individuals should face consequences proportional to their actions. When individuals perceive that justice is served, they may experience a positive emotional response, including schadenfreude. This form of schadenfreude is driven by the belief that the target's misfortune is deserved, and serves as a form of moral vindication. Piskorz and Piskorz (2009) further established a positive association between schadenfreude and the perceived deservingness of the victim, finding that greater pleasure was derived when misfortune was considered justified or deserved.

Justice schadenfreude can be observed in various contexts, such as witnessing the downfall of individuals who have committed crimes, experienced professional or personal failures due to unethical behavior, or faced consequences for their harmful actions. It can also be directed towards groups or institutions that are seen as deserving of punishment or retribution. Overall, justice schadenfreude reflects a complex emotional response to the perceived alignment of a person's misfortune with their past actions rooted in the desire for fairness and moral accountability (Wang et al., 2019).

– *Developmental perspective of schadenfreude.* The developmental trajectory proposed by the tripartite motivation model of schadenfreude (van Dijk et al., 2019) suggests that different forms of schadenfreude emerge at different stages of development and are influenced by individuals evolving cognitive and social capacities.

According to van Dijk and colleagues (2019), aggression schadenfreude tends to emerge early in development. In childhood, children may engage in aggressive behaviors toward their peers or siblings. When they witness the misfortune or suffering of others, particularly those they perceive as competitors or adversaries, they may experience a sense of pleasure or satisfaction. This aggression schadenfreude is rooted in feelings of dominance, power, and gratification derived from seeing others in a subordinate position. Tajfel and Turner (1986) stated that infants at least by 9-14 months preferred individuals who harm dissimilar others to those who help them, an effect more pronounced in older infants. This finding suggests that infants' social evaluations are governed by a rudimentary sense of social identity rooted in similarity/dissimilarity judgments. Cikara and colleagues (Cikara, Botvinick & Fiske, 2011) argued that perceiving others as dissimilar motivates negative evaluation which provokes aggression. Hamlin and colleagues (Hamlin, Mahajan, Liberman & Wynn, 2013) stated that dissimilar others are previewed as out-group members, and their punishment is perceived as deserving and enjoyable. Therefore, infants' positive evaluation of harming dissimilar others may be a harbinger of aggression schadenfreude that derives from a concern for social identity.

As individuals progress through adolescence and adulthood, social comparisons and competition become more pronounced. Rivalry schadenfreude arises from a desire to outperform or gain an advantage over others. When individuals witness failures, setbacks, or misfortunes of their rivals or competitors, they may experience pleasure or satisfaction. This form of schadenfreude is driven by the need for personal success and validation obtained from seeing others who are perceived as threats or obstacles encountering difficulties (van Dijk et al., 2019). Research suggests that rivalry schadenfreude originates from concerns regarding social comparison. Steinbeis and Singer (2013) examined envy and schadenfreude in 7-13-year-old children in a reward and punishment task. They found that even children experience schadenfreude and envy toward their rivals. The children competed with an anonymous child to win a prize. In another study, Shamay and colleagues (2014) showed that 24-month-old infants who previously expressed jealousy toward another infant exhibited behavior indicative of schadenfreude when the rival infant lost his/her favorable position.

With further cognitive and moral development,

individuals begin to understand and appreciate social norms, fairness, and moral accountability. Justice-based schadenfreude arises when individuals perceive someone as deserving punishment or experiencing consequences for their actions. Witnessing the misfortune or suffering of these individuals elicits pleasure or satisfaction based on the belief that justice is being served. This form of schadenfreude is rooted in a sense of moral righteousness and the alignment of the target's misfortune with past behaviors (van Dijk et al., 2019). According to Nobes and colleagues (Nobes, Panagiotaki & Pawson, 2009), developmental research revealed that schadenfreude may trace its roots partly to a norm-based moral evaluation in children already evident in preschool years. Hamlin and Wynn (2011) argued that concern for social justice may even trace its developmental roots to social evaluation demonstrated in few-month-old infants. Three-month-old infants prefer puppets who help rather than hinder one another. This early emerging social discrimination is not only crucial for navigating the social world but may also be a developmental precursor to schadenfreude.

The developmental trajectory of schadenfreude suggests that aggression schadenfreude serves as an initial foundation, followed by the emergence of rivalry and justice-based schadenfreude as individuals mature and develop their cognitive and moral capacities. This trajectory highlights the interplay between emotional responses, social dynamics, and moral reasoning throughout different stages of development.

## Measurement of tripartite schadenfreude

Schadenfreude has important implications in social and interpersonal relationships. It is conceived as a negative emotional state, as it is incongruent with the victim's emotional state. For instance, in cases of bullying or harassment, some individuals find pleasure in witnessing their victims' suffering or misfortune. Likewise, rather than empathizing with someone's success or accomplishments, certain individuals may enjoy observing their failures or setbacks. Instead of celebrating collective achievements, some individuals derive satisfaction from competitors' misfortunes. Gossip frequently involves spreading negative information about others, and certain individuals derive

enjoyment from hearing about the misfortune or scandals surrounding people they are acquainted with. Smith and colleagues (Smith, Powell, Combs & Schurtz, 2009) reason that while schadenfreude is commonly associated with negative social connotations, it is important to acknowledge that it can arise as a natural and instinctive emotional response in humans.

The tripartite motivational model of schadenfreude is considered superior to its unidimensional conception for several reasons. First, the tripartite motivational model provides a more comprehensive explanation of schadenfreude by recognizing that it consists of multiple sub-forms with different underlying motivations. It acknowledges that schadenfreude can arise from various psychological processes and goals such as self-enhancement, social comparison, and justice-related concerns. In contrast, the unidimensional conception treats schadenfreude as a single, uniform phenomenon, without accounting for these diverse motivations.

Second, the tripartite model distinguishes between sub-forms of schadenfreude, namely, rivalry, aggression, and justice schadenfreude. This differentiation allows a clearer understanding of the underlying psychological mechanisms and contextual factors that contribute to each type of schadenfreude. By contrast, the unidimensional conception does not differentiate between these sub-forms, leading to a less nuanced understanding of the phenomenon.

Third, by considering the distinct motivations and processes involved in different sub-forms of schadenfreude, the tripartite model has greater predictive power. This can account for variations in schadenfreude experiences across different situations and individuals. In contrast, unidimensional conceptions may struggle to explain the heterogeneity observed in schadenfreude responses.

Fourth, the tripartite model's comprehensive understanding of schadenfreude has practical implications for various domains. For example, it can inform interventions aimed at reducing harmful or malicious expressions of schadenfreude, while promoting prosocial behaviors. A nuanced understanding of the different motivations behind schadenfreude can also aid in designing effective communication strategies and conflict-resolution techniques.

Overall, the tripartite motivational model of schadenfreude offers a more comprehensive, differentiated, and predictive framework than the unidimensional model. Its multidimensional approach recognizes the complexity and

diversity of schadenfreude experiences, leading to a deeper understanding of the phenomenon and its implications.

Owing to the aforementioned characteristics of the tripartite motivational model of schadenfreude, this study aims to develop a psychometrically sound measure of schadenfreude in consonance with the tripartite motivational model of schadenfreude (Wang et al., 2019). The current research constructed and psychometrically tested a measure that operationalizes schadenfreude in terms of rivalry, aggression, and justice schadenfreude; thus, it has yielded empirical support for the tripartite motivational model of schadenfreude. The existing measures of schadenfreude do not espouse a sound theoretical framework, and they do not identify the various dimensions of schadenfreude.

To the best of our knowledge, there are three scales for measuring schadenfreude. The first was indigenously developed by Batool (2014) and conceptualized schadenfreude in terms of the superiority theory of humor (Hurley et al., 2011). This theory explains schadenfreude in terms of humor, people's experience of the misfortune of others, and feeling superior. This scale was unidimensional, and it only measured a single aspect of schadenfreude in terms of the humor that people feel at the misfortune of others. The second scale is van Dijk's *Schadenfreude and Sympathy Scale* (van Dijk, Ouwerkerk, Goslinga & Nieweg, 2005), which is a short measure of schadenfreude (5 items) and sympathy (3 items). This scale is also unidimensional and conceives of schadenfreude in very general terms of humor on the misfortunes of others. The third measure is the *Trait Schadenfreude Scale* (Baren, 2017), which was developed to measure individual differences in trait schadenfreude to understand the degree to which people differ in their degree of joy they might feel when learning others' downfall. This scale is also unidimensional and conceives of schadenfreude in terms of humor or fun that people may feel about the everyday misfortune of others. Thus, it becomes clear that the available measures of schadenfreude are not based on any exclusive theory of schadenfreude, and all of them have conceived of schadenfreude as a unidimensional construct in terms of fun, amusement, or joy that individuals experience in the suffering of others in everyday situations.

To the best of our knowledge, schadenfreude sub-forms are yet to be operationally defined following the tripartite motivational model through a psychometrically sound measure. The present study was designed to fill this gap in the literature so that a valid measure of schadenfreude

can be developed to assess schadenfreude in terms of a superordinate construct comprising three constituents: aggression, rivalry, and justice. The convergent and discriminant validity of the newly developed measures was also assessed. The findings of the current research establish validity evidence for the tripartite motivational model of schadenfreude (Wang et al., 2019).

## Hypotheses

We expect that the scores on the *Tripartite Schadenfreude Scale* will correlate positively with the scores on the *Perceived Schadenfreude Scale* (Batool, 2014), which is an indigenously developed unidimensional and psychometrically good measure of perceived schadenfreude. The positive association between these two measures may provide evidence of the convergent validity of the *Tripartite Schadenfreude Scale*.

Affective states of shame and guilt were chosen to discriminate tripartite schadenfreude from these negative emotional states. Marshall (1994) defined shame and guilt as two negative emotions that were considered the same in the sense that a person feels them after doing something wrong, however, these two are different emotions. Shame involves a negative self-appraisal of one's global sense of self (Barrett, 1995; Tangney, 1995), and this negative self-scrutiny arises in response to engaging in some action that is judged to be bad. Shame is experienced when 'bad' behavior is attributed to an internal and unchangeable feature of the person. In this respect, the self is seen as bad, and as such, bad behavior is both inevitable and irremediable. Shame (i.e., 'I am a bad person.'): unfortunately, this results in the person feeling unable to stop the bad behavior that generated the emotion (Marshall, Marshall, Serran & O'Brien, 2009). Guilt, on the other hand, involves the negative appraisal of a specific action (Barrett, 1995; Tangney, 1995). In this case, the person distinguishes between himself/herself as a whole being and the particular action of concern. Essentially persons experiencing guilt say to themselves 'I am not a bad person but I did a bad thing.' Thus, a response of guilt to an unacceptable action, unlike shame, does not involve an appraisal of the person's core identity but rather focuses on stopping problematic behavior (Tangney, 1995). Guilt prompts other-oriented concerns, whereas shame involves self-focus (Marshall et al., 2009). Tangney and Dearing (2002) suggest that events that cause shame and guilt are

social. Thus, feelings of guilt and shame encourage people to act according to socially acceptable and legitimate standards of right and wrong.

Previous literature has provided no evidence of whether schadenfreude experiences lead to feelings of guilt and shame. Guilt and shame originate from moral and self-conscious emotions that obey social norms and traditions. On the other hand, schadenfreude is conceived as a negative and socially unacceptable emotion that is usually kept secret and that can question one's moral state of mind. Schadenfreude is found to be the product of social comparison in rivalry schadenfreude and is exhibited as an effective response to others. Aggression schadenfreude is elicited by a discrepancy between one's group ideal self and the current self by comparing it with the outgroup. Thus, guilt and shame might not occur, as the loss of the outgroup does not outperform the gains of the in-group. Finally, justice schadenfreude is elicited when deservingness requirements are socially and morally acceptable. Thus, justice schadenfreude may not lead to guilt and shame in schadenfroh because guilt and shame occur because of severe violations of moral values, whereas a person who experiences justice schadenfreude considers the misfortune befallen on the other as morally legitimate. Thus, schadenfreude and its components may not be related to shame and guilt and may serve as potentially relevant variables for establishing the discriminant validity of the *Tripartite Schadenfreude Scale* developed in the present study. Based on these arguments, we hypothesize the following:

1. the scores on the *Tripartite Schadenfreude Scale* and its three components will be positively related to scores on the *Perceived Schadenfreude Scale* (Batool, 2014);
2. the *Tripartite Schadenfreude Scale* and its three components will not be related to affective states of shame and guilt.

## METHOD

This study comprised of two studies. The first study dealt with the development of TSS in the Urdu language and the establishment of its psychometric properties. In the second study, the factorial structure of the newly developed TSS was reconfirmed through confirmatory factor analysis (CFA). The research was conducted in strict compliance with the ethical guidelines of the American Psychological Association and was monitored by the research ethics committee of the Department of Psychology, University of Sargodha, Pakistan.

## Study 1: Development of TSS

Study 1 consisted of two phases. Phase 1 of Study 1 involved the development of an item pool of an indigenous self-report measure of TSS in Urdu. In Phase 2, the final item pool of the TSS was administered to a sample of university students to explore its psychometric properties in terms of reliability, factorial structure, and validity.

– *Phase 1(a): Item pool generation*
  To generate an item pool, we followed the guidelines of Burisch (1984). Both qualitative and quantitative approaches have been used to develop the TSS. In the qualitative phase, scientific literature on schadenfreude was reviewed by Wang and colleagues (2019), with an emphasis on developing a deep understanding of the tripartite motivational model of schadenfreude. Aggression, rivalry, and justice schadenfreude items were separately constructed, analyzed, molded, and extracted repeatedly. Phase 1 involved the development of an initial pool of 50 items in several steps. These steps included (i) a review of the pertinent literature, (ii) an in-depth study of the tripartite motivational model of schadenfreude (Wang et al., 2019), and (iii) a review of the existing measures of schadenfreude. The item pool included 17 items on aggression schadenfreude, 17 items on rivalry schadenfreude, and 16 items on justice schadenfreude. A committee of experts reviewed the initial pool of items.

– *Phase 1(b): Review of item pool through committee approach*
  In the second part of Phase 1, the committee approach was used to evaluate the item pool of TSS. A committee approach was sought so that each item of the item pool could be evaluated in terms of its language, cultural relevance, appropriateness, comprehension, and understandability of the target population. The committee comprised six faculty members of the Department of Psychology, University of Sargodha; four members had Ph.D. degrees (assistant professors), and two had M.Phil degrees in psychology (lecturers). The committee identified certain items as ambiguous in terms of phrasing, overlapping with other items, and leading or double-barreled items. The amendments of the committee, including phrasal of a couple of items, addition, or obstruction of words, were incorporated into the final items of the scale. Based on the above procedure, a final item pool of 36 items was generated for the assessment of the three sub-forms of schadenfreude. These sub-forms include aggression

schadenfreude with 13 items (item no.1-13), rivalry schadenfreude with 13 items (item no.14-26), and justice schadenfreude with 10 items (item no.27-36).

– *Phase 2(a): Content validity*

Views from experts proficient in the psychometrics field were obtained to assess the content validity of the TSS. The major objective of obtaining opinions from experts was to ensure content validity. The experts recommended that the items be included in the final scale, which was in line with the theoretical conception of the tripartite motivational model.

*Participants and procedure*: to establish the content validity of the TSS, four faculty members of the Department of Psychology, University of Sargodha, were given an article by Wang and colleagues (2019), who explained the tripartite motivational model of schadenfreude in detail. They were requested to go through the article so that they could have a better understanding of the theory behind the development of the TSS and could readily understand rivalry, justice, and aggression schadenfreude. They were then asked to rate each item for its correspondence with one of the three facets/sub-forms of schadenfreude (rivalry, aggression, and justice) on a 4-point (1-4) rating scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, and 4 = highly relevant).

The content validity indices for items (I-CVIs) and scale (S-CVI) were calculated. Items with I-CVIs lower than .78 were excluded (Lynn, 1986). In this way, six items from the TSS were omitted, and 30 items were retained for the final scale, which were used for the evaluation of additional psychometric properties. Finally, TSS was converted into a self-report measure consisting of a 5-point rating scale (1-5), where 1 = not at all and 5 = always. The committee also consensually finalized the items falling in each facet/sub-form of schadenfreude.

– *Phase 2(b): Assessment of psychometric properties of the TSS*

Phase 2 involved assessment of the psychometric properties of the TSS in terms of its factorial structure, reliability, and construct validity.

## Study 1: Sample

To determine the appropriate sample size, we conducted a power analysis using the tool developed by Preacher and Coffman (2006). The findings indicated that with a power of .90 and $\alpha$ = .01, the null hypothesis that the Root Mean Square Error of Approximation (RMSEA) = .00, against the alternate hypothesis that RMSEA = .05, with *df* = 393, could be reliably tested with a sample size of 116. To be more cautious, we recruited a purposive sample of Study 1 comprising (*N* = 300) undergraduate students from a large public sector Pakistani university. The sample had an almost equal representation of both sexes. The age of the sample ranged from 18 to 25 years (*M* = 21.68 years; *SD* = 2.78 years). The inclusion criteria dictated that the sample of the study was restricted to full-time university students with an age range of 18-25 years enrolled in BS and master's programs. Postgraduate students, part-time students, and students doing jobs were not included in the study sample.

## Study 1: Instruments

All measures used in Study 1 were self-reported psychometrically sound instruments in Urdu; the details are as follows.

– *TSS Initial Item Pool.* The final item pool of the TSS consisting of 30 items on a 5-point Likert rating scale ranging from 1 = strongly agree to 5 = strongly disagree was administered to the participants. There were no negative items. Scores were obtained by calculating the sum of the scores for each item on the scale. There were three subscales: aggression schadenfreude (item no. 1-12), rivalry schadenfreude (item no. 13-24), and justice schadenfreude (item no. 25-30). Possible scores ranged from 30 to 150, with higher scores indicating greater schadenfreude.

– *Perceived Schadenfreude Scale (PSS).* The PSS (Batool, 2014) was used to measure perceived schadenfreude. It comprises 28 items with a 5-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. The scale showed a satisfactory alpha coefficient of .82 (Batool 2014). Possible scores ranged from 28 to 140, with high scores indicating greater schadenfreude.

## Study 1: Procedure

After finalization of the scales and permission from the authors of all the scales, informed consent and demographic forms were constructed, and the final draft of

the questionnaire form was composed. Participants' written informed consent was also obtained, and it was assured that the information would be used only for research purposes and that full confidentiality would be maintained. The participants were provided with a questionnaire booklet in a paper-pencil format and were briefed that their responses would be useful for scientific knowledge; however, they had the right to withdraw from participation in the study. They were asked to provide honest responses. The response rate was 82.64%.

## Study 2: Replication of CFA and validation of TSS

In Study 2, the TSS (finalized as a result of Study 1) and the *State of Shame and Guilt Scale* (*SSGS*; Zia, 2018) were administered to a purposive sample of (*N* = 219) undergraduate students at the University of Sargodha. In this study, the factorial structure of the TSS was replicated using confirmatory factor analysis (CFA). CFA was undertaken instead of EFA because the purpose of factor analysis was to confirm the factor structure of the TSS items pool in accordance with the tripartite motivational model of schadenfreude (Wang et al., 2019) instead of exploring the factor structure. The items in the item pool of the TSS were developed in accordance with the three forms of schadenfreude as per the tripartite motivational model of schadenfreude, and were content validated through an empirical procedure. This study fulfilled the requirements i.e the assumptions and critical steps of conducting CFA as it is rooted in hypothesized measurement model based on theory and prior research. While describing the comparison between EFA and CFA, it has been argued by Brown (2006) that CFA is often used in scale development and validation when there are established theoretical and empirical grounds for construct being measured. Orcan (2018) stated that CFA can be initiated as factor analysis technique in scale construction studies if there is hypothetically tested and known relationship between factors. According to Maltby (2002) CFA is more powerful and suitable than EFA for a theory-based construct as it provides the researcher a tool to reject or accept a theory. An examination of relevant literature reveals several studies that utilized CFA for scale development grounded in theoretical frameworks. For instance, Schaufeli and colleagues (Schaufeli, Bakker & Salanova, 2006) employed CFA in the development of the *Short Utrecht Work Engagement Scale* (*UWES*-9) in their

cross-national research spanning ten countries. Therefore, we ran a CFA to test whether the content validated items loaded on their corresponding factors as per the hypothesized measurement model. In addition to confirming the factorial structure of TSS, evidence for the discriminant validity of TSS was also established.

## Study 2: Sample

To determine the appropriate sample size for Study 2, we conducted a power analysis using a tool developed by Preacher and Coffman (2006). The results suggest that the null hypothesis that the Root Mean Square Error of Approximation (RMSEA) = .00, against the alternate hypothesis that RMSEA = .05, with *df* = 401, could reliably be tested with a sample size of 114 with a power of 90% and α = .01. More cautiously, we recruited a purposive sample of Study 2 comprising (*N* = 219) undergraduate students (111 girls and 108 boys) from a large public sector Pakistani university during the spring semester of 2020. Participants' ages ranged from 18-25 (*M* = 22.48 years, *SD* = 2.89 years). The inclusion criteria dictated that the sample of the study was restricted to full-time students of the University of Sargodha with an age range of 18-25 years enrolled in BS and master's programs. Postgraduate students, part-time students, and students doing jobs were not included in the study sample.

## Study 2: Instruments

All measures used in Study 2 were self-reported psychometrically sound instruments in Urdu; the details are as follows.

– *Tripartite Schadenfreude Scale*. The TSS, developed as a result of the CFA in Study 1, was used to measure schadenfreude. The scale consisted of 30 items. The three sub-forms are as follows: aggression schadenfreude contains 12 items (item no. 1-12), rivalry schadenfreude has 12 items (item no. 13-24), and justice schadenfreude has six items (item no. 25-30). The scale showed a good alpha reliability. The reliability of TSS was also satisfactory with an alpha coefficient of .97, while its subscales were aggression schadenfreude (α = .86), rivalry schadenfreude (α = .87), and justice schadenfreude (α = .73).

– *State Shame and Guilt Scale (SSGS)*. The Urdu-translated

version (Zia, 2018) of the *State Shame and Guilt Scale* (*SSGS*; Cavalera et al., 2017) was used to measure shame and guilt. The scale consisted of 10 items. It is rated on a 5-point Likert scale. A high score reflected a high degree of guilt or shame. The Urdu version of the SSGS has shown good reliability, with an alpha coefficient of .76 (Zia, 2018).

## Study 2: Procedure

All the scales required for the validation of the indigenously developed TSS were distributed among the study participants. First, written consent was obtained from the participants, and instructions were given regarding filling out the scales. Participants were assured that their information would be used only for the purpose of the study and kept confidential.

## RESULTS

Study 1 was conducted in two phases. In Phase 1, the content validity of the TSS was ensured. In Phase 2, confirmatory factor analysis, reliability, and correlations were computed to ensure the validity of the TSS.

## Study 1: Phase 1 - Content validity

According to Lynn's (1986) guidelines, items with a content validity index lower than .78 were excluded. In this way, six items from the item pool of the TSS were excluded, and 30 items were retained for the final scale and used for additional psychometric properties. Moreover, the averaging approach (S-CVI/Ave) was used to calculate the S-CVI of TSS. Waltz and colleagues (Waltz, Strickland & Lenz, 2005) and Lynn (1986) recommended that the S-CVI/Ave should be .90 or higher. In the current study, S-CVI/Ave was .95, which indicated good content validity of the TSS.

## Study 1: Phase 2 - Confirmatory factor analysis of TSS

The TSS was subjected to CFA using maximum likelihood estimation to discern whether the same three-factor structure

could be replicated, as found in Study 1. An assessment of the multivariate normality of TSS items revealed that the data met the assumptions required for maximum likelihood (ML) estimation in confirmatory factor analysis (CFA). Skewness and kurtosis statistics for each item fell within acceptable ranges, indicating univariate normality. Mardia's multivariate kurtosis test confirmed that the data did not significantly deviate from multivariate normality. Additionally, Q-Q plots showed that the items closely followed the expected normal distribution, and Mahalanobis distance calculations did not identify any significant multivariate outliers. These results confirm that the items of TSS were suitable for ML estimation in CFA. The CFA was computed through the AMOS-24 to confirm whether the item pool of the TSS yields a three-factor structure in consonance with the tripartite motivational model of schadenfreude. The fit indices of the competing factorial model of the scale are presented in Table 2, and the standardized loadings of the items are presented in Table 3.

Table 2 shows the stepwise model fit indices for the CFA of the TSS. The first measurement model involved a single-factor model and demonstrated a poor fit with the data. The second model was a two-factor second-order model with schadenfreude as the second-order factor, whereas justice and rivalry plus aggression were first-order factors. This model demonstrated a significantly better fit to the data than Model 1 did. The third model is the proposed measurement model, which specifies a three-factor second-order model with TSS as the second-order factor and aggression schadenfreude (12 indicators), rivalry schadenfreude (12 indicators), and justice schadenfreude (six indicators) as first-order factors with independent error variances. This model again demonstrated a superior fit to the data compared to Model 2. An inspection of the model fit indices suggested further room for improvement of the model fit. Therefore, we allowed a few error variances in the same latent factor to covary according to the modification indices. The fit indices of this model are reported in Model 4 in Table 2, which suggests that Model 4 demonstrated a very good fit to the data, and it was superior to Model 3 as the chi-square difference test between Model 3 and Model 4 was significant. Model 4 depicts the results of the confirmatory factor analysis, where 30 indicators loaded on their respective first-order factors, and the three first-order factors converged on the superordinate construct of the TSS.

Table 3 shows the standard factor loadings of the second-order confirmatory factor analysis of TSS. In this study, a three-factor structure was obtained using CFA. The first

**Table 1** – Expert ratings on a 36-item pool of the TSS (Study 1)

| Item no. | Expert 1 | Expert 2 | Expert 3 | Expert 4 | Agreements | Item CVI |
|----------|----------|----------|----------|----------|------------|----------|
| 1 | X | X | X | X | 4 | 1.0 |
| 2 | X | X | X | X | 4 | 1.0 |
| 3 | X | X | X | X | 4 | 1.0 |
| 4 | X | X | X | — | 3 | .75 |
| 5 | X | X | X | X | 4 | 1.0 |
| 6 | X | X | X | — | 3 | .75 |
| 7 | X | X | X | X | 4 | 1.0 |
| 8 | X | X | X | X | 4 | 1.0 |
| 9 | X | X | X | X | 4 | 1.0 |
| 10 | X | X | X | X | 4 | 1.0 |
| 11 | X | X | X | X | 4 | 1.0 |
| 12 | X | X | X | X | 4 | 1.0 |
| 13 | X | X | X | X | 4 | 1.0 |
| 14 | X | X | X | X | 4 | 1.0 |
| 15 | X | X | X | X | 4 | 1.0 |
| 16 | X | X | X | X | 4 | 1.0 |
| 17 | X | X | X | X | 4 | 1.0 |
| 18 | X | X | X | X | 4 | 1.0 |
| 19 | X | X | X | X | 4 | 1.0 |
| 20 | X | — | X | X | 3 | .75 |
| 21 | X | X | X | X | 4 | 1.0 |
| 22 | X | X | X | X | 4 | 1.0 |
| 23 | — | X | X | X | 3 | .75 |
| 24 | X | X | X | X | 4 | 1.0 |
| 25 | X | — | X | X | 3 | .75 |
| 26 | X | X | X | X | 4 | 1.0 |
| 27 | X | X | X | X | 4 | 1.0 |
| 28 | X | X | X | X | 4 | 1.0 |
| 29 | X | X | — | X | 3 | .75 |

*continued*

| Item no. | Expert 1 | Expert 2 | Expert 3 | Expert 4 | Agreements | Item CVI |
|---|---|---|---|---|---|---|
| 30 | X | X | X | — | 3 | .75 |
| 31 | X | X | X | X | 4 | 1.0 |
| 32 | X | X | X | X | 4 | 1.0 |
| 33 | X | X | X | X | 4 | 1.0 |
| 34 | X | X | X | X | 4 | 1.0 |
| 35 | X | X | X | X | 4 | 1.0 |
| 36 | X | X | X | X | 4 | 1.0 |
| Proportion relevant | | | | | *Mean* I-CVI = .95 | |
| | .95 | .95 | .95 | .95 | S-CVI/UA = .83 | |
| | | | | | Mean Expert Opinion = .90 | |

*Legenda.* I-CVI = item-level content validity index; S-CVI/UA = scale-level content validity index/universal aagreement calculation method.

**Table 2** – Stepwise model fit for CFA of item pool of TSS (Study 1, N = 300)

| Models | $\chi^2$ | df | Fit indices | | | | $\Delta\chi2$ | $\Delta df$ |
|---|---|---|---|---|---|---|---|---|
| | | | CFI | SRMR | RMSEA | $p_{\chi2}$ | | |
| Model 1 (30 items, single-factor) | | | | | | | | |
| | 1300.24 | 404 | .78 | .07 | .09 | <.001 | – | – |
| Model 2 (30 items, two-factor) | | | | | | | | |
| | 950 | 403 | .86 | .06 | .07 | <.001 | 350.24*** | 1 |
| Model 3 (30 items, three-factor, independent error variances) | | | | | | | | |
| | 844.22 | 402 | .88 | .05 | .06 | <.01 | 105.78*** | 1 |
| Model 4 (30 items, three-factor, error variances allowed to covary) | | | | | | | | |
| | 734.24 | 393 | .95 | .048 | .05 | <.001 | 109.98*** | 9 |

*Legenda.* CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; *df* = degree of freedom.
*** *p*<.001

**Table 3** – Summary of confirmatory factor analysis of item pool of TSS (Study 1, N = 300)

| Items | Rivalry | Aggression | Justice |
|---|---|---|---|
| | **.98** (.93) | | |
| 15 | .68 | | |
| 16 | .64 | | |
| 17 | .72 | | |
| 18 | .61 | | |
| 19 | .64 | | |
| 20 | .64 | | |
| 21 | .60 | | |
| 22 | .63 | | |
| 24 | .69 | | |
| 26 | .65 | | |
| 27 | .65 | | |
| 28 | .61 | | |
| | | **.92** (.94) | |
| 1 | | .63 | |
| 2 | | .60 | |
| 3 | | .61 | |
| 5 | | .62 | |
| 7 | | .67 | |
| 8 | | .68 | |
| 9 | | .64 | |
| 10 | | .64 | |
| 11 | | .61 | |
| 12 | | .65 | |
| 13 | | .66 | |
| 14 | | .68 | |

continued

| Items | Rivalry | Aggression | Justice |
|-------|---------|------------|---------|
|       |         |            | **.67** (.73) |
| 31    |         |            | .71 |
| 32    |         |            | .80 |
| 33    |         |            | .73 |
| 34    |         |            | .74 |
| 35    |         |            | .67 |

*Note.* Standardized factor loadings of first-order loading are bold. The alpha coefficients of each factor are shown in parenthesis.

factor measures rivalry and contains 12 items; the second factor measures aggression, and it also comprises 12 items; and the third factor measures justice and comprises six items.

Figure 1 shows the factor structure of the three sub-forms of the TSS: aggression, rivalry, and justice schadenfreude. The item loadings for all first-order factors remained at ≥.60, whereas the second-order factor loadings remained at ≥.68. TSS explained 85% of the variance in aggression, 97% in rivalry, and 44% in justice. To improve the model fit, a few error variances on the same first-order factor were allowed to covary, as suggested by the modification indices.

Table 4 shows the psychometric properties of the study constructs. The alpha coefficients for all scales ranged from .70 to .93, which indicated satisfactory internal consistency. Table 4 also shows that all subscales were positively correlated with each other.

## Study 2: Validation of the factorial structure of the TSS

In Study 2, the same procedure was applied to assess the multivariate normality of TSS items, confirming that the data met the assumptions required for maximum likelihood (ML) estimation in confirmatory factor analysis (CFA). The findings of the CFA demonstrated that the data of Study 2 fit well with the hypothesized measurement model of the TSS, which validated the factorial structure of the TSS established in Study 1. The model fit indices indicated a good fit ($\chi^2$ = 869.70, $df$ = 401, $p$<.001; CFI = .96; SRMR = .041; RMSEA = .048; $p$ = .07). The results of confirmatory factor analysis revealed that the 30 indicators loaded on their respective first-order factors, and the three first-order factors converged on the superordinate construct of schadenfreude.

Table 5 shows the standard factor loadings of the second-order confirmatory factor analysis of the TSS. All indicators had a standardized factor loading ≥.40, which revealed that items of various factors of schadenfreude had unique contributions to the operationalization of this construct. In this study, a three-factor structure was obtained using CFA. The first factor measures rivalry and contains 12 items; the second factor measures aggression, and it also comprises 12 items; and the third factor measures justice and comprises six items.

Figure 2 shows the factor structure of the three subscales of the TSS: aggression, rivalry, and justice schadenfreude. Item loadings for all first-order factors remained ≥.40, whereas second-order factor loadings remained ≥.90. TSS explained 94% variance in aggression, 96% in rivalry, and 85 % in justice. To improve the model fit, a couple of error variances on the same first-order factor were allowed to covary, as suggested by the modification indices. First, the error terms of items 4 and 5 of the rivalry schadenfreude were allowed to covary because both items shared a common theme

**Figure 1** – Factor structure of the three sub-forms of the TSS
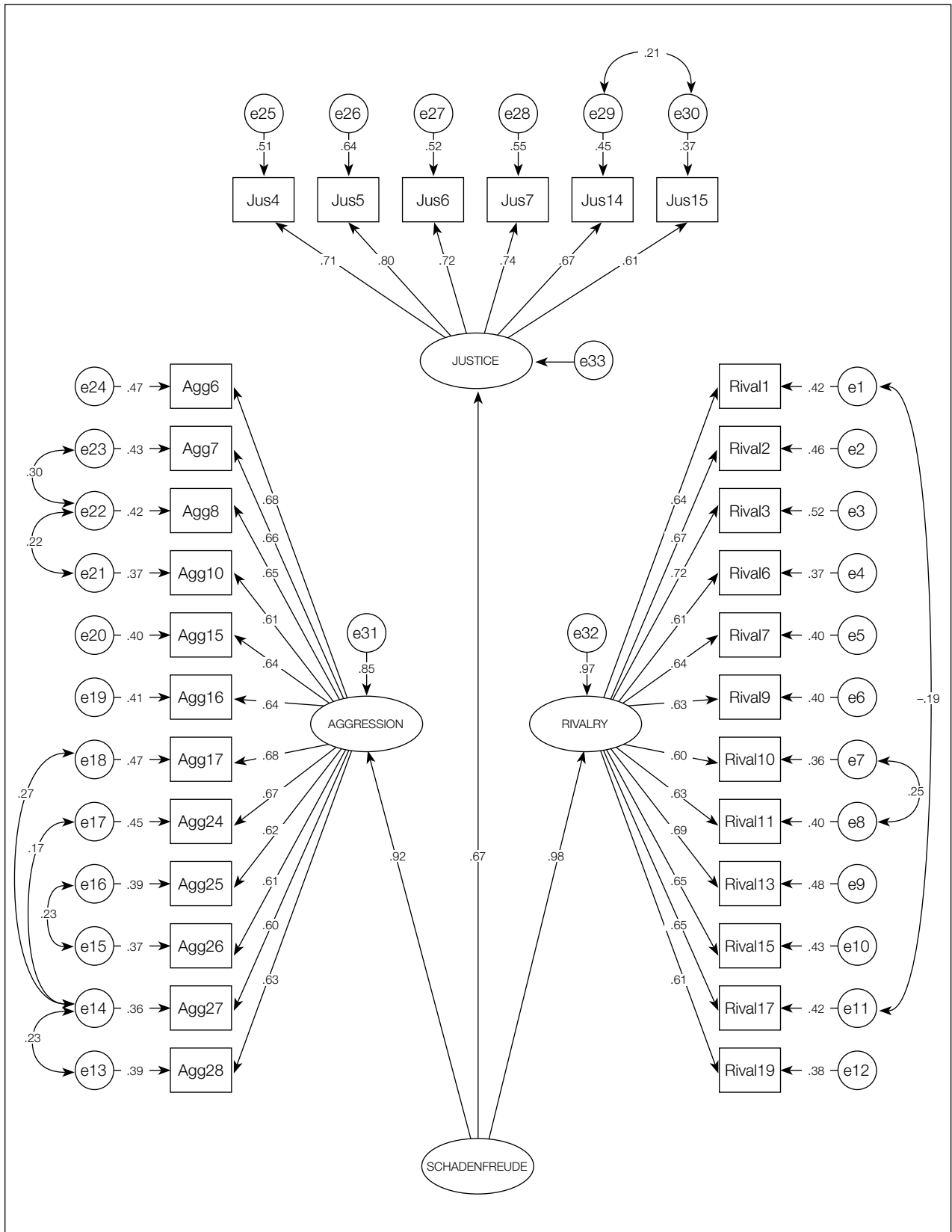
**Table 4** – Means, standard deviations, alpha reliabilities and correlations among the variables of Study 1 (N = 300)

| Variables | 1 | 2 | 3 | 4 | 5 | M | SD | α | Sk[a] | Ku[b] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. PSS | — | .60** | .69** | .69** | .74** | 59.65 | 12.02 | .93 | .09 | −.15 |
| 2. ASS | | — | .81** | .54** | .93*** | 24.81 | 10.1 | .86 | .77 | .30 |
| 3. RSS | | | — | .59** | .94*** | 23.89 | 9.60 | .87 | .68 | −.27 |
| 4. JSS | | | | — | .74** | 13.61 | 5.7 | .73 | .48 | .14 |
| 5. TSS | | | | | — | 63.32 | 22.7 | .97 | .63 | −.10 |

*Legenda.* PSS = *Perceived Schadenfreude Scale*; ASS = *Aggression Schadenfreude Scale*; RSS = *Rivalry Schadenfreude Scale*; JSS = *Justice Schadenfreude Scale*; TSS = *Tripartite Schadenfreude Scale*.

*Note.* [a]Standard error of skewness = .13; [b]standard error of kurtosis = .27.
\*\* *p*<.01; \*\*\* *p*<.001

**Table 5** – Summary of confirmatory factor analysis of TSS (Study 2, N = 219)

| Items | Rivalry | Aggression | Justice |
|---|---|---|---|
| | **.98** (.93) | | |
| Riv 1 | .49 | | |
| Riv 2 | .78 | | |
| Riv 3 | .77 | | |
| Riv 4 | .54 | | |
| Riv 5 | .76 | | |
| Riv 6 | .70 | | |
| Riv 7 | .47 | | |
| Riv 8 | .44 | | |
| Riv 9 | .72 | | |
| Riv 10 | .40 | | |
| Riv 11 | .61 | | |
| Riv 12 | .61 | | |

*continued*

| Items | Rivalry | Aggression | Justice |
|-------|---------|------------|---------|
| | | **.97** (.94) | |
| Agg 1 | | .43 | |
| Agg 2 | | .65 | |
| Agg 3 | | .69 | |
| Agg 4 | | .64 | |
| Agg 5 | | .58 | |
| Agg 6 | | .58 | |
| Agg 7 | | .62 | |
| Agg 8 | | .77 | |
| Agg 9 | | .66 | |
| Agg 10 | | .61 | |
| Agg 11 | | .77 | |
| Agg 12 | | .55 | |
| | | | **.92** (.73) |
| Jus 1 | | | .61 |
| Jus 2 | | | .50 |
| Jus 3 | | | .50 |
| Jus 4 | | | .53 |
| Jus 5 | | | .82 |
| Jus 6 | | | .54 |

*Legenda.* Riv = rivalry schadenfreude; Agg = aggression schadenfreude; Jus = justice schadenfreude.

*Note.* Standardized factor loadings of first-order loading are bold. The alpha coefficients of each factor are shown in parenthesis.

**Figure 2** – Factor structure of the three subscale of the TSS
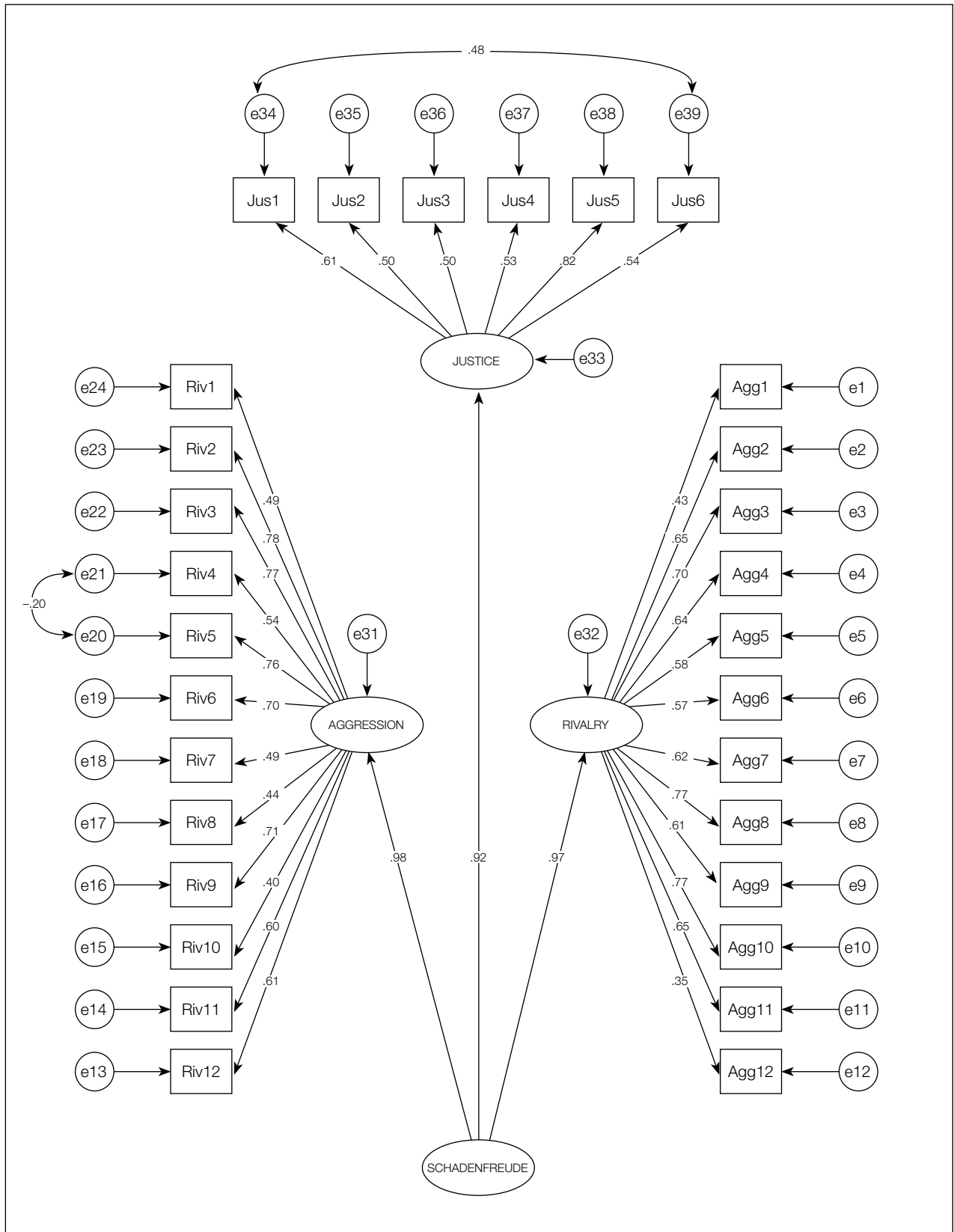
related to dominance and the desire to establish superiority over rivals. They capture different aspects of dominance and satisfaction derived from exerting power over rivals who attempt to dominate or challenge one's position. Second, the error terms of items 2 and 6 of justice schadenfreude were allowed to covary because both items reflect different aspects of schadenfreude but share a common theme related to the satisfaction or pleasure derived from witnessing negative outcomes for individuals who have engaged in deceptive or wrongful behavior.

Table 6 shows the psychometric properties of the study constructs. The alpha coefficients for all scales ranged from .70 to .93, which indicated satisfactory internal consistency. Table 6 also depicts the non-significant relationships between states of guilt and shame with the three sub-forms of TSS.

## DISCUSSION

This study aimed to develop a comprehensive and indigenous measure of schadenfreude based on a tripartite motivational model. The literature provides a basis for this model and a theoretical foundation for the item generation of the scale. The extensive study and analyses of this model have paved the way for item generation. The cultural and contextual conditions of the local subjects, their characteristics, and their behavioral patterns were also considered while developing the item pool of the scale. The schadenfreude construct was measured in Urdu, the language of the targeted population. To the best of our knowledge, no psychometrically sound measure of schadenfreude in consonance with the tripartite motivational model has been developed.

The *Tripartite Schadenfreude Scale* (*TSS*) underwent the standard content validity procedures recommended by Waltz et al. (2005) and Lynn (1986). Thirty out of 36 items with I-CVIs greater than .80 were retained, resulting in an excellent scale-level content validity index (S-CVI). TSS is considered an excellent measure for assessing tripartite schadenfreude because of its strong content validity.

Confirmatory factor analysis confirmed the three-factor structure of the *Tripartite Schadenfreude Scale* (*TSS*), aligned with the tripartite model of schadenfreude. The final model consisted of 30 items, with high internal consistency and reliability. The factor structure was successfully replicated in an independent sample, demonstrating a good fit for the proposed TSS measurement model.

**Table 6** – Means, standard deviations, alpha reliabilities and correlations among the variables of Study 2 (N = 219)

| Variables | 1 | 2 | 3 | 4 | 5 | M | SD | α | $Sk^a$ | $Ku^b$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. TSS | — | .83** | .86** | .09 | .12 | 22.63 | 8.90 | .86 | .64 | −.59 |
| 2. RSS | | | .66** | .08 | .11 | 22.53 | 9.40 | .87 | .87 | −.91 |
| 3. JSS | | | | .07 | .07 | 13.33 | 7.75 | .75 | .33 | −.42 |
| 4. SGS | | | | | .75** | 15.04 | 4.65 | .70 | −.06 | −.74 |
| 5. SSS | | | | | — | 14.92 | 5.69 | .83 | −.17 | −.90 |

*Legenda.* TSS = *Tripartite Schadenfreude Scale*; RSS = *Rivalry Schadenfreude Scale*; JSS = *Justice Schadenfreude Scale*; SGS = *State of Guilt Scale;* SSS = *State of Shame Scale*.

*Note.* [a]Standard error of skewness = .12; [b]standard error of kurtosis = .26.

** *p*<.01; *** *p*<.001

The first-factor, aggression schadenfreude, measures the level of experience of schadenfreude due to a threat to in-group identity from the outgroup. Aggression schadenfreude arises from the sense of social identity and group membership. This occurs when individuals derive pleasure from witnessing the misfortune or suffering of out-group members and those who do not belong to their identified group. It is driven by a hostile or competitive mindset towards the out-group and can involve feelings of superiority, dominance, or satisfaction over their downfall. Thus, it can be defined as "on a superior group's failure, the spontaneous pleasure felt by the in-group members to enhance in-group identity is known as aggression schadenfreude".

Items on the second factor represent rivalry schadenfreude. Rivalry schadenfreude primarily focuses on one's position in social comparison. It occurs when individuals experience pleasure from the misfortunes or failures of others who are seen as rivals or competitors. The primary motivation behind rivalry schadenfreude is to enhance one's self-esteem or self-worth by highlighting superiority or relative success in comparison to the rival. It can be defined as "the pleasure felt by exploiting others whenever possible in social comparison". It stems from the preference for advantageous inequity, which means that inequity is preferred when you are benefitting and not when others are on benefited end. It arises from an earlier sense of self-identity.

The items on the third factor measure justice schadenfreude, which refers to the social phenomenon of deservingness. Justice schadenfreude is other-oriented and revolves around concerns about social justice and fairness. It occurs when individuals derive satisfaction from seeing individuals who violate social norms or principles of fairness receive appropriate punishment or consequences for their actions. The primary goal of justice schadenfreude is to ensure that justice is served and that those who transgress societal rules face retribution. The person who experiences justice schadenfreude wants to confirm whether the individual who violates social norms, has received punishment and if the violator received punishment, what is his/her affective state. Thus, the affective state of the violator is a source of pleasure for schadenfroh (Jensen, 2012).

In summary, aggression schadenfreude is driven by intergroup dynamics, rivalry schadenfreude focuses on self-enhancement through social comparison, and justice schadenfreude is motivated by a desire for fairness and punishment of social violators. These sub-forms highlight

the diverse motivations and contexts in which schadenfreude can manifest. Accordingly, in the light of the factor structure of the TSS, tripartite schadenfreude can be defined as "the feeling of pleasure on the misfortune of others, while appraising another's misfortune in terms of personal gains in enhancing one's social identity, self-identity, and belief in social justice". Intergroup aggression emerges due to social identity; self-evaluation emerges due to social comparison, and the sense of deservingness emerges due to belief in a just world. This definition seems to be comprehensive as it involves all three factors, which operationalize tripartite schadenfreude.

To establish the evidence for the convergent validity of the TSS, the scores on the TSS were correlated with scores on PSS. The results show that the TSS has a strong positive correlation with the PSS. Correlation analysis depicts that aggression, rivalry, and justice schadenfreude sub-scales are significantly and strongly positively related to the PSS. Perceived schadenfreude involves the tendency to experience schadenfreude following perceiving another's misfortune (Naila, 2014). This confirms the conceptual relevance of both measures. The findings showed that the nomological network of schadenfreude measured by both scales is also comparable.

The discriminant validity of the TSS was established against the state of shame and guilt as we reasoned that people who are high on schadenfreude may not experience shame or guilt on the misfortune of others; rather they may feel pleasure in it. As hypothesized, the results have shown that TSS and its components have a non-significant correlation with the state of shame and the state of guilt. There are several reasons to support the absence of an association between schadenfreude and feelings of shame and guilt. Firstly, schadenfreude is primarily directed toward others' misfortune or suffering. It involves deriving pleasure or satisfaction from witnessing the downfall or failures of others. In contrast, shame and guilt are predominantly self-focused emotions that arise from one's own perceived shortcomings, mistakes, or transgressions. The focus of schadenfreude on external events and others' experiences makes it less likely to be closely related to the internal states of shame and guilt.

Secondly, schadenfreude is often characterized by a lack of self-reflection or introspection. Individuals experiencing schadenfreude may not critically evaluate their behavior or actions concerning others' suffering. In contrast, shame and guilt involve self-evaluation and an awareness of personal responsibility for the negative outcomes or harm caused

to others. The absence of self-reflection in schadenfreude further reduces the likelihood of a strong correlation with shame and guilt.

Thirdly, schadenfreude is typically associated with positive affect or pleasure derived from others' misfortune. Shame and guilt, on the other hand, are negative emotions that arise from a sense of wrongdoing or moral transgressions. These opposing emotional valences make it less likely for schadenfreude to be strongly correlated with shame and guilt.

While there may be some cases where schadenfreude and feelings of shame or guilt co-occur, such as when individuals feel shame or guilt about experiencing schadenfreude itself, the general expectation is that schadenfreude is not strongly correlated with shame and guilt due to its different focus, lack of self-reflection, and opposing emotional valence.

## CONCLUSION

Schadenfreude is an important concept in social psychology. The present study developed a psychometrically sound measure of schadenfreude based on the tripartite motivational model of schadenfreude. Tripartite schadenfreude involves appraising another's misfortune as a means to achieve personal goals related to social identity, self-identity, deservingness, and feeling pleasure. The TSS developed in the present study has demonstrated that it was content valid as it sufficiently covered various aspects of the conceptual definition of schadenfreude. Furthermore, evidence for the construct validity of TSS has also been established through factor analysis and convergent and discriminant validity. TSS and its various subscales also demonstrated satisfactory levels of internal consistency.

## Limitations and suggestions

The present study has limited generalizability as the data were collected from some Departments of the University of Sargodha, so to enhance the external validity, further research should be conducted on large and diverse samples. As all the scales were self-reported measures, therefore mono-method bias and social desirability can be a potential threat to internal validity. Schadenfreude is generally viewed as a negative emotion. People did not admit that they have felt such emotions. Therefore, social desirability may also have

interrupted the reporting of socially undesirable behaviors. It might be better to use vignettes instead of simple items to reduce social desirability. However, vignettes take a longer time for participants' responses and there is a risk of fatigue. Moreover, vignettes may not have sound psychometric properties. The self-report measure of TSS has been developed and validated in the Urdu language. Therefore, to apply it across regions and cultures, it must be translated into other languages as well. It will also help establish more evidence for the psychometric soundness of the TSS.

The present study provides a novel self-reporting measure of schadenfreude in the field of psychology, established its nomological network, and explored some of its correlates. It is recommended to researchers to further elaborate on the nomological structure of schadenfreude by applying it to samples of different regions. It is highly encouraged to translate TSS into other languages so that it can be used in diverse cultures and regions. Moreover, research studies while operationalizing TSS on ethnic minorities, with different variables should be carried out to enhance generalizability. Experimental research should be carried out to infer causal relationships of schadenfreude with social constructs. Furthermore, TSS should be cross-culturally validated in future studies.

## Implications of the present study

Tripartite schadenfreude can improve people's view related to schadenfreude and their acceptance of it as a normal phenomenon because tripartite schadenfreude helps people to enhance their social identity, self-identify, and belief in social justice. This life improvement also leads to better flourishing and overall satisfaction with one's life. The development of the TSS as a psychometrically sound measure of schadenfreude may open new avenues of research on this important personal strength. In future studies, this scale may be used for the assessment of schadenfreude and its three aspects with various correlates, which will help expand the nomological network of schadenfreude. Furthermore, cross-cultural research on schadenfreude may reflect whether it is a universal personal strength or if it may have different factorial structures across different cultures. Thus, the development of this scale may contribute to the fields of positive and cross-cultural psychology.

Schadenfreude has been a notoriously difficult concept to

measure, and the present study would support that conclusion. As has been stated before, it may be that schadenfreude defies the logic of being a singular unit, but is best understood by its three aspects. The TSS as developed in the present study has shown that it adequately covers the conceptual definition of tripartite schadenfreude and has shown construct validity. The present TSS provides a workable instrument to continue the advancement of our knowledge of this important construct.

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# APPENDIX

Final Tripartite Scadenfreude Scale items

نیچے دیے گۓ بیانات کو غور سے پڑھیں اور بتا ئیں کہ نیچے دی گئی صورتحال میں آپ کس قدر خوشی اور اطمینان محسوس کرتے ہیں ۔ اپنے بارے میں مناسب رائے کے اظہار کیلیے نیچے دئیے گیے ممکنہ جوابات میں سے موزوں ترین جواب کا انتخاب کریں۔

| ہمیشہ | اکثر | کبھی کبھار | کبھی نادر شاذو | کبھی نہیں | بیانات | |
|---|---|---|---|---|---|---|
| | | | | | **AGGRESSION SCHADENFREUDE** | **1** |
| 5 | 4 | 3 | 2 | 1 | میرے لیے یہ باعث مسرت ہے کہ سما جی لحاظ سے میرے مخالفین مجھ سے کمتر ہیں۔ | 1 |
| 5 | 4 | 3 | 2 | 1 | اگر ایک شخص کو میری ذات /قبیلہ /برا دری کے لوگ برا سمجھیں تو اس شخص کی ناکامی پر مجھے خوشی ہو تی ہے۔ | 2 |
| 5 | 4 | 3 | 2 | 1 | اپنے ساتھیوں کو مرعوب کر نے کیلیے انکے دشمنوں پر کیچڑ اچھالنا میری پسندیدہ حکمت عملی ہے۔ | 3 |
| 5 | 4 | 3 | | 1 | اپنی ذات /قبیلہ /برا دری سے کم تر لوگوں کو کامیاب ہو تے دیکھ کر میرا دل کڑھتا ہے۔ | 4 |
| 5 | 4 | 3 | 2 | 1 | مجھے ایسی فلمیں دیکھنا پسند ہیں جس میں سما جی فرق کو ظلم و زیادتی اور مار پیٹ کے طور پر دکھایا گیا ہو۔ | 5 |
| 5 | 4 | 3 | 2 | 1 | مجھے اپنے مخالفین کی برائیاں اور اپنے ساتھیوں کی اچھا ئیاں بیان کرنا اچھا لگتا ہے | 6 |
| 5 | 4 | 3 | 2 | 1 | اپنے مخالفین کی کامیابی کا سن کر مجھے غصہ آتا ہے۔ | 7 |
| 5 | 4 | 3 | 2 | 1 | ذہین اور کامیاب لوگوں کو ناکام دیکھ کر مجھے بہت مزا آتا ہے۔ | 8 |
| 5 | 4 | 3 | 2 | 1 | دوسروں کو پھسل کر گرتے دیکھ کر میں اپنی ہنسی پر قابو نہیں رکھ سکتا/سکتی۔ | 9 |
| 5 | 4 | 3 | 2 | 1 | مجھے ان لوگوں کا مذاق اڑا نا کر مزا آتا ہے جنہوں نے میری شکل /لباس کا مذاق اڑایا ہو۔ | 10 |
| 5 | 4 | 3 | 2 | 1 | میرے لیے لوگوں کو عروج کے بعد رو بہ زوال دیکھنا قابل مسرت ہے۔ | 11 |
| 5 | 4 | 3 | 2 | 1 | مجھے مشہور لوگوں ( سیاستدان، گلو کار، کھلاڑی وغیرہ) کی کامیابیوں کی بہ نسبت ان کی ناکامیوں کے بارے میں جاننا اچھا لگتا | 12 |
| | | | | | **RIVALRY SCHADENFREUDE** | **2** |
| 5 | 4 | 3 | 2 | 1 | مجھے اپنی ذات/قبیلہ /خاندان کے لوگوں سے اپنے مرتبے کا موازنہ کرتے رہنا اچھا لگتا ہے۔ | 13 |
| 5 | 4 | 3 | 2 | 1 | لوگوں کو نقصان پہنچا کر اپنا فائدہ حاصل کرنے کا الگ ہی مزہ ہے۔ | 14 |

| بیانات | | کبھی نہیں | کبھی کبھار | کبھی کبھار | اکثر | ہمیشہ |
|---|---|---|---|---|---|---|
| 15 | اپنا فائدہ حاصل کرنے کیلیے مجھے بر طرح کے حربے آزمانے میں خوشی ہوتی ہے | 1 | 2 | 3 | 4 | 5 |
| 16 | دوسروں پر اپنی برتری قائم کرنے کے لیے میں قانون کو ہاتھ میں لے کر ان پر غالب آنے کو ترجیح دوں گا/ دوں گی۔ | 1 | 2 | 3 | 4 | 5 |
| 17 | جو لوگ مختلف حربوں کے ذریعی مجھ پر حاوی ہونا چاہیں مجھے ان کو مغلوب کرنے میں بہت تسکین ملتی ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 18 | مجھے ذاتی مفاد حاصل کرنے کیلیے دوسروں کا استحصال کرنا پسند ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 19 | جب میں کسی دوسرے کو غلطی کرتے ہوئے دیکھوں تو میں خود کو زیادہ عقل مند اور قابل انسان سمجھتا /سمجھتی ہوں۔ | 1 | 2 | 3 | 4 | 5 |
| 20 | مجھے لگتا ہے کہ دوسروں کی کمزوریوں سے فائدہ اٹھاتے ہوئے آگے بڑھنے اور ترقی کرنے کا اپنا ہی مزا ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 21 | کسی کا چھوٹا موٹا نقصان کرکے اپنے سماجی رتبہ میں اضافہ کرنے میں کوئی حرج نہیں۔ | 1 | 2 | 3 | 4 | 5 |
| 22 | اگر میرے کسی عمل سے مخالف ذات/قبیلہ /خاندان کے فرد کو نا قابل تلافی نقصان پہنچ رہا ہو تو ایسا کام کرنے میں مجھے خوشی ہو گی۔ | 1 | 2 | 3 | 4 | 5 |
| 23 | مجھے ذاتی مفاد کیلیے دوسروں کو نقصان پہنچانے میں دلیری اور خوشی کا احساس ہوتا ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 24 | میں ایسی محافل میں جانا پسند کرتا /کرتی ہوں جن میں میرے حلقہ احباب والے ایسے شخص کو برا بھلا کہیں جس سے میرا ذاتی بغض ہو۔ | 1 | 2 | 3 | 4 | 5 |
| **3** | **JUSTICE SCHADENFREUDE** | | | | | |
| 25 | مجھے ایسے شخص کو بے یارو مدد گار دیکھ کر خوشی ہوتی ہے جو خود دوسروں کی مدد نہیں کرتا۔ | 1 | 2 | 3 | 4 | 5 |
| 26 | جب دھوکہ دینے والا خود دھوکہ پاتا ہے تو مجھے طمانیت کا احساس ہوتا ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 27 | میں چاہتا /چاہتی ہوں کہ جسے دوسروں کی مشکلات کا احساس نہیں ہوتا اسے خود ان مصائب کا سامنا کرنا پڑے۔ | 1 | 2 | 3 | 4 | 5 |
| 28 | جو شخص دوسروں کی عزت نہیں کرتا اسے بےعزت ہوتے دیکھ کر مجھے دلی تسکین ملتی ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 29 | وہ شخص جو خاندان کی روایات سے بغاوت کرے اس کے ساتھ برا ہوتے دیکھ کر اطمینان کا احساس ہوتا ہے۔ | 1 | 2 | 3 | 4 | 5 |
| 30 | کسی کو غلطی کی سزا پاتے دیکھ کر مجھے سکون کا احساس ہوتا ہے۔ | 1 | 2 | 3 | 4 | 5 |

English translation of Tripartite Schadenfreude Scale items

1. It is gratifying that my opponents are socially inferior to me.

2. If a person is considered bad by members of my community or tribe, I feel happy about that person's failure.

3. To impress my companions, my favorite strategy is to accuse or insult their enemies.

4. Seeing people inferior to my community or tribe succeed, makes me upset.

5. I like watching movies that show social differences as oppression, abuse, and violence.

6. I enjoy talking about my opponents' faults and my companions' virtues.

7. Hearing about my opponents' success makes me angry.

8. Seeing smart and successful people fail gives me great pleasure.

9. I cannot control my laughter when I see others slipping and falling

10. I enjoy making fun of people who have mocked my appearance or my clothes.

11. It gives me pleasure to see people fall from grace after their success.

12. I prefer learning about the failures of famous people (like politicians, singers, athletes, etc.) rather than their successes.

13. I like comparing my status with the people of my caste, tribe, or clan.

14. There is a unique pleasure in gaining benefits by harming others.

15. I enjoy trying every possible tactic to achieve my goals.

16. To establish my superiority over others, I prefer taking the law into my hands and overpowering them.

17. I find great satisfaction in defeating those who try to dominate me through various tactics.

18. I like exploiting others for personal gain.

19. When I see someone else making a mistake, I consider myself an intelligent and capable human being.

20. I believe that taking advantage of others' weaknesses to advance and succeed has its pleasure.

21. There is nothing wrong with causing someone a small loss to enhance your social status.

22. If any of my actions cause irreparable harm to an individual from a rival caste/tribe/family, I would be happy to do so.

23. I feel brave and happy when I harm others for personal gain.

24. I like attending gatherings where my circle of friends criticizes someone, against whom I have personal grudges.

25. I feel happy to see a person helpless, who does not help others.

26. I feel satisfaction when someone who deceives others, gets deceived.

27. I wish that the person, who does not care about others' troubles, may face the same difficulties.

28. I feel inner peace seeing a person being humiliated, who does not respect others.

29. I feel contentment when a person who rebels against family traditions faces bad consequences.

30. I feel a sense of calm when I see someone being punished for his mistakes.