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THE IMPACT OF JUSTICE SENSITIVITY AND SOCIAL COMPARISON ON SCHADENFREUDE IN YOUNG ADULTS

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Abstract
The purpose of the present study was to inspect the impact of social comparison and justice sensitivity on schadenfreude in university students. The hypotheses of this study were, Schadenfreude would be higher when misfortune occurred to the students of the rival university (out-group), schadenfreude would be higher when the failure was perceived as deserved. The N=200 (50 each scenario) aged 18 to 27 were taken through convenience sampling. The measures that were utilized included the Schadenfreude Scale, the Rosenberg Self-Esteem Scale (Rosenberg, 1979), and the Short Dark Triad Scale (Jones & Paulhus, 2013). 2-way ANOVA analysis was done, and the results showed that group comparison (in-group and out-group) had a non-significant impact on schadenfreude, while justice sensitivity had a significant effect on schadenfreude and the interaction effect of social comparison, and justice sensitivity was also non-significant.
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Introduction

Human beings have been blessed with a variety of emotions. They have a unique ability to understand feelings and emotions through cognitive, emotional, and compassionate empathy.

Emotion is an important part of human life. The word emotion is derived from a Latin word, emovere, which translates to the word move out. Emotions are often interwoven with personality, frame of mind, disposition, and drive (Kovalkova, 2019). Most of the theories acknowledge either directly or indirectly that emotions are multifaceted. Questioning one to explain his/her emotions will not give the whole picture. It cannot be described sufficiently by electrophysiological measurements of activities in the brain, other neurological systems, and circulatory, respiratory, and glandular systems. It cannot be adequately described as a muscular or verbal action that is commensurate with emotions. Three segments must be taken into account to give full-scale description of emotion. The three segments include the experience or conscious feeling of emotion, the neurological and brain processes, and the last segment is visible patterns of emotional expressions and especially those on the human face (Izard, 2013).

Other individuals and their relation to the environment may be characterized with the help of emotions, motivation, and cognition. The sensations that change individuals and their choices are affected by emotions. They may also be accompanied by pain or pleasure. These are anger, fear, sympathy, and their counterparts. Emotions touch everything and even tend to influence our visions of owning the behaviors we take (Kovalkova, 2019).

Schadenfreude

Schadenfreude is the satisfaction derived from the misfortune of others. It is a complicated psychological phenomenon that is characterized by hidden

aggression towards others and damages social interaction (Sun et al., 2024). The term schadenfreude is a combination of two German Words: schaden, which means harm and freude, which means delight or joy (Hoogland, 2021). Children as young as 4 years old also feel schadenfreude and use avoidance techniques when confronted with their schadenfreude opponent's desire to help (Sun et al., 2024).

Schadenfreude occurs through the process of sustaining self-evaluation because it is a feeling that is closely linked to both the self and others. It has to do with the person's self-esteem. People with low self-esteem are more susceptible to risks to their self-esteem from higher-ups than people with high self-esteem, and as a result, they experience more schadenfreude when their superiors fail or experience adversity. However, schadenfreude is lessened when these people are given the chance to validate themselves, and such people who experience it are often viewed as incompetent, cold, and immoral by people who are around them (Watanabe, 2018).

Schadenfreude happens when people can feel that the unfortunate person deserves this harm. In other words, an individual is more entitled to the feeling of schadenfreude when he is the suffering party and the generator of suffering. This may be what causes people to feel it regularly when there is either a scandalous action or those involved are officials or superstars who are subjected to national contempt. It does not always relate to deservingness: in other words, individuals may have some schadenfreude when they do not believe the victim deserved to be victimized. Schadenfreude occurs when individuals believe that the unfortunate person deserves harm. Put another way, someone is more likely to feel schadenfreude if they are the person who is suffering and caused it. This could be the reason why people frequently experience it when officials or superstars are implicated in a controversy or face public disgrace. It is not always associated with deservingness, though; in other words, people might feel schadenfreude even if they do not think the victim deserved to suffer. This might be because people often compare their situations with others, and when someone else experiences hardship, they may feel better about their situation. Schadenfreude can also mean many things in context. It, for example, can sometimes be used as a kind of retaliation or retribution. In other situations, it could be a way to get over feelings of envy or jealousy. Schadenfreude can occur, for example, when one has a setback and becomes envious of another person's success (Ali et al., 2024).

Four types of schadenfreude were proposed by Cecconi et al. 2020 that are aversion, compensation, injustice, and identification. Aversion involves seeking pleasure from the misfortune of a person whom you dislike. Compensation is defined as seeking pleasure from the misfortune of a person who is experiencing the same pain. Injustice involves taking pleasure in the misery of someone who is thought to deserve revenge or punishment for their sins, while identification involves seeking pleasure from the suffering of a person who is thought to be like us.

Wang et al. (2019) offered another classification that was derived top-down from the analysis of previous literature and distinguishes three forms of schadenfreude that are aggression, rivalry and justice. An earlier sense of social identity developed during childhood, a sense of in-group membership, is the root cause of aggression. Comparing one's social standing to that of people who have experienced a terrible occurrence is the main emphasis of Schadenfreude. Rivalry is the practice of contrasting one's social standing with that of individuals who have been harmed by a terrible incident and justice is defined as schadenfreude is person-oriented and can be felt when social comparison is involved, since it concentrates on the other rather than their position in society (Cecconi et al., 2020).

Justice Sensitivity

When someone is highly justice-sensitive, they are more acutely aware of concerns regarding equity, equality, fairness, and other justice issues; they notice unfair practices when they occur and strive hard to bring others' attention to them and fix them. A person's level of justice sensitivity is a measure of how conscious they are of these types of problems. Compared to people with lesser justice sensitivity, people with high justice sensitivity are also more likely to stay engaged in justice issues for longer periods and with more depth. They could be motivated to act to address injustices in their environment. The numerous injustices that take place every day all across

the world may also leave someone exhausted or burned out (Baumert & Schmitt, 2016).

The ability of individuals to sense injustice and the intensity of their emotional, behavioral, and cognitive responses vary systematically. It has been discovered that these distinctions hold for many kinds of injustices and are largely constant across time. Distinct viewpoints on justice (victim, observer, beneficiary, and offender) have led to distinct classifications of justice sensitivity. It has been demonstrated that these sensitive perspectives differ from other aspects of personality. Supportive attitudes are linked to observer, beneficiary, and offender sensitivity, while victim sensitivity appears to involve more antisocial tendencies and the fear of being taken advantage of. It has been demonstrated that sensitive perspectives strongly predict people's responses to perceived injustice, their compliance with justice norms, and more distinct health effects (Baumert & Schmitt, 2016).

According to Portman (2002), the proof of justice triumphing before our eyes, rather than the misery of others, is what pleases us. To put is at another way, when a norm violator gets a proper punishment, people ought to experience schadenfreude because the previous standard violation has been corrected and the justice has been restored (Yam et al., 2023).

Feelings of injustice significantly impact a person's mental and physical well-being. Feeling unappreciated can lead to distress and intense negative emotions, make it difficult to cope with, and encourage harmful habits. Such a belief can become a great risk factor in acquiring depression, burnout, and insomnia symptoms. Conversely, it has been shown that an experience of being treated with equal representation and dignity can eliminate discomfort, and it is always associated with a sense of wellness (Baumert et al., 2013).

Group Comparison

In addition to being helpful for survival, the capacity to classify people into social groupings is also helpful for directing one's conduct and forecasting that of others. We can apply what we already know about social groupings to new goals by using social categorization (such as fruits versus vegetables), in that individuals also classify themselves. Social categorization is the process of moving from an individual (I or me) to a communal (we or us) self-concept (Cikara, 2015).

People who have the same characteristics are grouped and assigned a shared identity, and people with different characteristics are given a different identity. This classification of identities is frequently based on a particular criterion or trait. According to the earlier studies, there are differences in the level of schadenfreude toward the misfortunes of members of the intergroup and out-group. People sympathize and feel unhappy with the in-group members when a team is in an unfriendly and competitive relationship with the other, but they also have warm feelings when the opponents' misfortune occurs. Out-group or intergroup contacts may offer a unique environment for schadenfreude because of the prevalent standard of group favoritism, which forces group members to put the defense of the in-group's concerns ahead of evaluating those of other people.

Intergroup conflicts can be increased by competitive connections between groups. Intergroup bias and hate are typically increased when two groups are placed directly in a competitive relationship. Views of competitiveness are predicted by differences in authority and access to important assets between the two groups, even in the absence of obvious competition. When groups are competing with one another, they will be happy for the competitor's losses and sad for the competitor's gains because they place a high value on both victories and defeats (Sun et al., 2024).

Additionally, Nietzsche (1998) suggested that schadenfreude should be intensified if the reputation of the in-group is in danger, suggesting that it could act as a defensive reaction against such warnings. Nietzsche asserts that a desire to deaden pain-awakening emotions is a result of the fear of an individual's inferiority.

The danger of own inadequacy increases interpersonal schadenfreude, and out-groups will often be criticized if their status is threatened. Individuals of groups with low status in the actual world, for instance, exhibit the greatest levels of prejudice towards out-groups because their group identity is chronically challenged by the existence of more powerful groups. It has also been demonstrated that there are more acute risks to group identification, such as poor performance on a particular job, and

heightened criticism of out-groups. Further, criticizing outgroups can increase group value, which may be the driving force behind this kind of imagined retaliation (Spears & Leach, 2004).

Theoretical Framework

To understand the theoretical bases of schadenfreude, many theories were proposed, among them, social comparison theory by Festinger (1954) and social identity theory by Tajfel (1979) are the most prominent theories.

Social Comparison Theory

This theory states that comparing a belief and ability in oneself to those making stuff outside is responsible for giving people motivation to evaluate the beliefs and skills in themselves, and humans are always inclined to measure their opinions, abilities, and self-esteem by comparing themselves to others. This analogy is particularly remarkable where there is a lack of objective standards. People can also make upward comparisons by comparing themselves to people deemed to be superior, and this can be motivational by slogging to become better, or it may make one feel better, or it may make one feel deficient.

Downward comparison is the comparison of oneself with those judged to be in worse circumstances; on the contrary, it usually acts as a safeguard or source of self-esteem improvement. Such comparison processes not only help define the psychological perception of others but also contribute to forming their emotional responses, such as feelings of envy, pride, or even seeking pleasure at the misfortune of others, based on social and psychological context (Festinger, 1954). Downward comparison promotes altruism, helping behaviors, and life satisfaction through developing gratitude for oneself, increasing self-esteem, and empathy for others (Hu et al., 2024), while upward comparison increases desire to do new experiences and try new products (Matthews & Kelemen, 2024).

Social Identity Theory

This theory describes the way people describe themselves according to their social status, belief system, or ethnicity. It implies that individuals try to improve their sense of self-worth by separating themselves from out-groups while identifying with in-groups. Group bias, discrimination, and stereotyping can result from this, since individuals tend to favor members of their group. The 3 stages of social identity are social categorization, social identification, and social comparison.

Social categorization is the inclination of people to categorize themselves and others into different social groups according to characteristics such as race, sex, belief system, etc. Although this social categorization makes social situations easier for people, it can also lead to stereotyping. Assigning individuals to a category provides information about them. Once, people classify themselves as belonging to a group, they take on the identity of the group they identify with, this is called social identification. The individuals start to identify with the traits of the group and take on its customs, beliefs, and ways of behaving. Their self-esteem becomes closely linked to the group with which they identify themselves, and the relationship with that group will have emotional meaning. Following group classification and identification, people evaluate their group against others. In-group bias results from this comparison, which is frequently skewed in favor of one's group. Because two groups are compelled to compete for individuals to preserve their self-worth once they identify as opponents, this is essential to comprehending bias (Huddy, 2001).

In-group choices and out-group discrimination arise when the assessment and understanding of what someone else has experienced differ depending on the identity of the group to which the other person relates. The degree of schadenfreude for bad news regarding the in-group decreases with increasing in-group identification, while their degree of schadenfreude for bad news regarding the out-group

increases. Additionally, the degree of schadenfreude also strongly indicates a person's readiness to share bad news. When people witness their colleagues or friends experience tragedy, they frequently feel sympathy for them, but when they witness their rivals or enemies experience misfortune, empathy frequently transforms into schadenfreude (Sun et al., 2024).

Literature Review

This study aimed to investigate the impact of group comparison and justice sensitivity (fair and unfair) on schadenfreude while dark triads and self-esteem were covariates. The following is about the previous research studies that have been done on schadenfreude, justice, and in-group and out-group comparison.

A study investigated how various social interactions and group identity impact schadenfreude and its mechanics. Chinese college students participated in the research. Study 1 (n = 83) investigated whether people differed in their schadenfreude directed toward members of the in-group and out-group under the two distinct social interaction patterns of rivalry and cooperation. Based on this research, Study 2 (n = 73) examined the processes by which Schadenfreude affects members of the in-group and out-group in competitive settings, as well as the mediating function of distaste. People exhibited more schadenfreude over the misfortunes of out-group members than in-group members, and competitive conditions increased disdain and schadenfreude against out-group members, according to research on the relationship between group identity and social interaction styles. Nonetheless, in collaborative environments, there were no variations in people's schadenfreude for in-group and out-group members. This is instructive in terms of interpersonal patterns and actual life intergroup connections. This demonstrates that schadenfreude can be decreased through collaboration and group interaction (Sun et al., 2024).

Four studies employed trustworthiness games to study schadenfreude's effects on attitudes and conduct towards outsiders who discourage earlier breaches of respondents' trust. In every study, participants' opinions that the offender should be punished positively correlated with their degree of schadenfreude, and schadenfreude was greater when trust violators experienced unfavorable rather than positive results. In experiment 2, participants' views and behavior were comparatively more positive when these negative results were inflicted on trust violators, while they were less positive toward third parties that provided more negative outcomes in experiment 1. Additionally, respondents exhibited more positive views and behaviors toward outsiders that produced negative results without violating their trust. Additionally, in experiment 3, the findings aligned with a statistical framework in which opinions regarding outside penalties were successively influenced by penalty through just world views, deservingness, and schadenfreude. With greater numbers of participants and additional targeted metrics, these findings were repeated in the pre-registered experiment 4. When considered collectively, our results support the idea that schadenfreude in response to betrayals of credibility fulfills the societal purpose of bringing people into line with those who carry out revengeful justice (Yam et al., 2023b).

A study examined how the Dark Triad and schadenfreude are mediated by relational hostility and moral disengagement. An online questionnaire consisting of the Short Dark Triad, the Moral Disengagement, Relational Aggression in Relationships, and an author-created assessment of stated schadenfreude was filled out by 309 individuals. The greater degree of interpersonal violence, schadenfreude, and ethical detachment was linked to greater levels of psychopathy, narcissism, and Machiavellianism. Machiavellianism, narcissism, and psychopathy all had an impact on stated schadenfreude, but these consequences were mitigated by interpersonal aggressiveness and ethical disengagement. According to the research, those with dark personalities are more inclined to feel schadenfreude and to detach morally. They also seem to be relationally aggressive (Erzi, 2020).

A study was conducted to examine the relationship between dark triads and schadenfreude. The study consisted of 693 Iranian students, and a convenient sampling method was used. The trait schadenfreude scale, the short Dark Triad, the moral disengagement scale, and the aggressive humor style scale were measured through an online survey. It was found that dark triads were positively correlated with

schadenfreude, aggressive humor style, and moral disengagement. The study also emphasizes the significance of hostile comedy and ethical detachment as a possible cause behind the association among schadenfreude and Dark Triad features (Zadegan et al., 2024).

Research was done to investigate the implications of explicit and implicit self-esteem to the concept of Schadenfreude, or the joy that is brought by the misfortunes of others. The topic was studied in two studies. In study 1, 282 were sampled to receive modified scenarios based on Sawada (2008) and afterwards answered a questionnaire in which they were required to make a judgment on the target person, on whether the participants would be considered as high social status or low social status. In investigation 2, the direct and indirect impacts of self-esteem were tested in the situation developed under study 1, with 92 people being involved. Results of variance showed that there was a main effect of implicit self-esteem rather than explicit self-esteem on schadenfreude towards a target person. The increased rating of implicit self-esteem led to stronger rating of schadenfreude. Also, there was a correlation between social status and implicit self-esteem, where the high implicit self-esteem group reported stronger malicious enjoyment of an advantaged target person (Fujii & Sawada, 2014).

Research consisting of 128 participants (89 women and 39 men) was done to study the relationship between Personality and Schadenfreude in Hypothetical Versus Live Situations. Dispositional Envy Scale, Interpersonal Reactivity Index, Global Belief in Just World Scale, Mach IV, Narcissistic Personality Inventory, Self-Reported Psychopathy, Rosenberg Self-Esteem Scale, BFI, and Schadenfreude Scenarios were used to measure the variables. The findings showed that participants who reported higher levels of schadenfreude exhibited notably greater levels of just world belief and the Dark Triad Assessment and considerably fewer feelings of empathy and agreeableness. Unexpectedly, dispositional jealousy, BFI, and self-esteem did not significantly predict the malicious enjoyment situation. Not a single dark personality trait was related to malicious enjoyment in the live event, which means that responses to fabricated situations may not correspond to schadenfreude events in real life (Greenier, 2017).

Research was done to investigate the impact of peer relations on schadenfreude. The study was conducted in Class XI of SMK Yadika Manado Vocational School. The sample was gathered by cluster random sampling. The instrument was an adapted measure of schadenfreude to the measure used by Musyaafa concerning the theory presented by Smith and the peer-relations measure as explained by Aydogdu. One of the quantitative analysis methods that was employed was regression analysis. 134 of the teenagers aged 15-17 were used as items. In the data analysis, both schadenfreude and peer relations were determined to be negatively related, which means that more peer relationships decrease schadenfreude. Further, another analysis revealed that relationships with friends can induce schadenfreude ($p>0.05$). The involvement of peers effectively contributes to influencing schadenfreude (Baba & Mootalu, 2023).

A study was done to discuss the role of self-esteem as a mediator between social comparison and feelings of pleasure on the misfortune of others among young adults. The sample consisted of 350 participants aged between 18 to 24 years. The individual social comparison tendencies and self-esteem were measured by using the Lowa Netherlands Comparison Orientation Measure and the Rosenberg Self-esteem Scale, respectively. Data were analyzed by simple and multiple regression tests that revealed that self-esteem strongly undermines the relationship between social comparison and self-related schadenfreude at young adulthood (Larasati et al., 2024).

In electoral and buyer settings, two research studies examine schadenfreude as an emotional reaction to information about out-group unfortunate events. Study 1 was done to examine how opposing party supporters responded to the defeat of a Dutch coalition's government, and Study 2 was done to investigate how Blackberry consumers responded to the unfavorable coverage of the iPhone. A voluntary questionnaire was filled out by 606 students from 7 distinct institutions and a variety of subject areas. Both studies revealed that attachment to an in-group boosts schadenfreude reactions to news about an out-group's suffering if suffering happens in the area that is important to information receivers. According to the results of study 2, this interaction effect was still

there when emotional attitudes towards the out-group were controlled, but according to the results of study 1, it diminished when an in-group member experiences tragedy. Furthermore, findings indicated that schadenfreude emotions reinforce later desires to spread information regarding the out-group's sufferings or to engage in negative word-of-mouth, according to study 2 (Ouwerkerk et al., 2016).

Research consisting of 3 experiments was done to study group comparison and schadenfreude, and in them, participants were invited to read a story about a particular powerful doctor who was either pro-vaccinated or not vaccinated and died of corona virus. Subsequently, after reading the story of the unvaccinated doctor, there was greater schadenfreude in fully vaccinated participants in study 1(N=83). Study 2 sampled vaccinated and unvaccinated respondents who read the death of an unvaccinated or vaccinated doctor (N=393). This study revealed that vaccinated participants exhibited a higher level of pleasure from the misfortune of the doctor as compared to their non-immunized counterparts. Finally, results attained by study 3 (N=797), correlating with study 2 but by using the same method of study 1 proved that study 2 was correct, and revealed that the relationship between schadenfreude and vaccination status was mediated by group affiliation, and perception of the honesty of the doctor (Barlett & Meier, 2023).

Aims of the Present Study

- To examine the impact of in-group and out-group comparison on schadenfreude.
- To investigate the role of justice sensitivity in schadenfreude.
- To investigate the role of self-esteem in developing schadenfreude.
- To investigate the role of dark triads in developing schadenfreude.

Hypotheses

- Schadenfreude would be higher when misfortune occurred to the students of the rival university (out-group).
- Schadenfreude would be higher when the failure was perceived as deserved.

Social and Clinical Significance

Schadenfreude, or the joy of the failing circumstances of another human, does not imply a transient, fleeting emotional state, but its appropriate explanations affect clinical psychology and overall societal relationships. Although an indigenous qualitative research was done to explore the coping of schadenfreude in working women (Ali et al., 2024) but there is still a need to study it from a different perspective, so a 2x2 experimental research was planned to explore this phenomenon.

A Study has shown in recent years that when one consistently or excessively shows schadenfreude, especially in children and adolescents, it may be an indication of underlying psychological weakness. All of them can be pathological narcissism, low self-esteem, chronic jealousy, and difficulty with empathy, all of which are associated with more general issues of anxiety, depression, or even personality pathology (Van Dijk & Tigchelaar, 2011).

Schadenfreude is a clinical phenomenon, as most of the time it is used as a defensive tool, particularly when individuals depend on social comparison to assess their status. Envy feels bad to a person as it arises when people hold someone, they consider a better or luckier person. Schadenfreude is a defense mechanism relieving this awkwardness in the short term because it changes the comparison and once again makes one feel relatively superior (Waghorn et al.,2023). It is especially applicable to those who have narcissistic characteristics, as they are over-sensitive to the threats to ego and frequently find satisfaction in the defeat of other people (James et al., 2014). Additionally, people who are Machiavellian and psychopathic are much more prone to the feeling of schadenfreude, as it is typically caused by their poor affective empathy and desire to manipulate others (Sharafi Zadegan et al., 2024).

These patterns may also be precursors to greater dysfunction of personality. Chronic or pathological cases of schadenfreude can also be indicators of the emergence of antisocial behavior, empathy deficiency, or conduct disorders. As an example, it was found that morally disengaged young people are also more likely than others to score high on the Dark Triad traits (Sharafi Zadegan et al., 2024). Such a pattern of thinking has been closely linked to violence, bullying, and social inhumanity.

Schadenfreude may be more often expressed in such situations as bullying and gossip, especially in adolescents, and online shaming. Up-to-date electronic platforms such as Instagram, TikTok, and X (former Twitter) contain ample opportunities to participate in social comparison. The youth are continuously bombarded by the carefully crafted achievements of others, and this creates envy and puts them at a higher risk of garnering satisfaction in their loss (Gini & Pozzoli, 2012). Research has shown that adolescents and children who commit cyber-aggression repeatedly find themselves in a position where schadenfreude is more likely to be reported, as it is perceived as satisfying and justifying among their peers (Johansen et al., 2024). The tendencies are additionally strengthened by the accruing of the so-called likes, sharing, and good commentary by other peers involved in a vicious circle of indulging in emotional satisfaction at the expense of others.

It is thus essential to learn the effects and social purpose of schadenfreude to be able to deal with it both preventively and interventive. The clinicians treating teens will be able to evaluate the concept of schadenfreude as more of a symptom rather than just a specific emotion related to poor emotional regulation, self-esteem, or thinking biases. Interventional measures focused on enhancing the levels of empathy, perspective-taking, and emotional literacy will lower the desire to find joy in the misfortune of other people. Cognitive-behavioral therapy (CBT) is the type of intervention that can enable adolescents to question related beliefs about a connection between the failure of others and their self-value, and schadenfreude can be decreased through training in empathy, which makes emotional ties between individuals stronger (Eisenberg et al., 2021).

Digital literacy and emotional education may also be a form of prevention in school and youth programs. Both teen bullying and personalized shame can be minimized with the teaching of youths to see the emotional aftermath of their actions on the internet and to critically examine the use of social comparison as the basis of emotional existence. With the online world increasingly defining the perceptions of adolescents, and how they think about themselves and others, it is important to remember that schadenfreude is not such a simple dark emotion, but can serve as a class behavioral feature, both from a clinical perspective and social education.

Method

This study was about the impact of group comparison and justice sensitivity on schadenfreude while taking self-esteem and dark triads as covariates in young adults, and this chapter is about the method that was used to study the variables.

Research Design

The research was planned to study the impact of in-group and out-group comparison and justice sensitivity on schadenfreude. Due to this, a 2x2 between-subjects experimental research design was used. This study was comprised of 4 groups that were in-group comparison and, fair outcome, in-group comparison and unfair outcome, out-group comparison and, fair outcome, out-group comparison and, unfair outcome. An experimental research design is used to study cause and effect between variables, and in a between-subjects experimental research design, each participant is exposed to only one condition. It involves manipulating two independent variables with two levels and observing their effect on a dependent variable. In the present study, group comparison and justice sensitivity are two independent variables, and schadenfreude is a dependent variable, while dark triads and self-esteem are covariates.

Sampling Strategy

The convenience sampling method was used for research. Convenience sampling is the one in which participants who are easiest to select and are willing to participate are selected. The purpose of choosing a convenient sampling is to efficiently and quickly collect data from the available participants (Bhardwaj, 2019).

Sample Size

G-Power recommended a sample of 200 participants, and literature guided the age range of the participants from 18 to 27 years, both men and women.

Participant Characteristics

Inclusion Criteria

- Participants had to be between the ages of 18 to 27 years old.
- Participants had to be university students.

Exclusion Criteria

- Participants who had any type of psychological disorder.
- Participants who were studying psychology.

Measures

The following tools, along with a demographic sheet, were used for research. 4 scenarios generated by using the literature were used. The demographic sheet, the Rosenberg Self-Esteem Scale (Rosenberg, 1979), Short Dark Triad Scale by Daniel N. Jones and Delroy L. Paulhus (Jones & Paulhus, 2013) were also used to measure self-esteem and dark triads, respectively.

Demographic Sheet

The demographic sheet included information about the participant's name, age, program of study, year of education, and field of study, etc.

Schadenfreude Scale

It was based on 4 different scenarios that were designed by using previous literature (Sun et al., 2024; Barron et al., 2023). The scenarios were used to measure schadenfreude, justice sensitivity (fair vs unfair), and group comparison (in and out-group). It has a reliability value of 0.75 in the present study. The scale had 3 subscales: the schadenfreude scale, moral justification, and control questions. The four scenarios were divided into 4 categories that are given below.

In-group Comparison + Fair Outcome. This scenario was created to measure the impact of in-group (same university) comparison and fair outcome (deserved misfortune) on schadenfreude.

In-group Comparison + Unfair Outcome. This scenario was designed to measure the impact of in-group comparison and unfair outcome on schadenfreude.

Out-group Comparison + Fair Outcome. This scenario was designed to measure the impact of out-group (rival university) and fair outcome on schadenfreude.

Out-group Comparison + Unfair Outcome. This scenario was designed to measure the impact of out-group comparison and unfair outcome on schadenfreude.

Rosenberg Self Esteem Scale [RSES] (Rosenberg, 1979)

This scale was developed to measure the self-esteem of individuals, and it consists of 10 items. It uses a 4-point Likert scale with 1 representing strongly agree and 4 representing strongly disagree. Its scoring involves a combined rating, also involves reverse scoring of negatively phrased items that are 3, 5, 8, 9, and 10, and the total scores of the scale are 40's original English version of the scale has t-retest reliability is 0.85 and 0.88 over a 2-week duration and 0.88 across four studies (Monteiro et al., 2021) and Urdu version has Cronbach's α of 0.773 (Rizwan et al., 2017) while the present study has Cronbach's α of 0.10.

Short Dark Triad Scale [SD3] (Jones & Paulhus, 2013)

This scale was developed to measure socially uncompassionate personality traits, Machiavellianism, narcissism, and psychopathy of individuals. It consists of 3 subscales, Machiavellianism, narcissism, and psychopathy, each with 9 items, and it constitutes a total of 27 items. It uses a 1-5 Likert-type scale with 1 representing strongly disagree and 5 representing strongly agree. Some items involve reverse scoring, and each sub-scale has a total of 45 scores, and the whole test constitutes a total score of 135. The original English version of the test was used. The alpha reliability for subscales is 0.71, 0.77, and 0.80 for Psychopathy, Narcissism, and Machiavellianism subscales, respectively. The test-retest reliability has a value of 0.81. 0.83 and 0.74 respectively for Machiavellianism, Psychopathy, and Narcissism (Malesza et al., 2017) while Urdu version has reliability values of 0.41, 0.56, and 0.61 respectively for Machiavellianism, Narcissism, Psychopathy (Yusuf & Tahir, 2024), and present study has Cronbach's α values of 0.60, 0.38, and 0.45 for Machiavellianism, , Narcissism, and Psychopathy subscales respectively.

Procedure

For research, the topic was selected with the help of a supervisor, and after the approval of the Departmental Doctoral Committee, the research was conducted. Permission from the director of the Centre for Clinical Psychology for data collection.
Tools were publicly free to use, so there was no need to take permission from the authors personally. Permission was also requested from the respective heads of institutions to collect the data from different departments.

Pilot Study

A pilot study was conducted on 20 participants to check the ability of scales to measure schadenfreude, self-esteem, and dark triads. Comprehension level and time taken to complete the questionnaire were assessed and necessary changes were made for the main study. Informed consent was also provided to the participant before taking the data. Based on informed consent, they could withdraw from the research at any time or without completing it. Ethical considerations were considered while doing the study. The participants were divided into 4 groups, and each group was given a different scenario. The nature and goal of the present study were also explained to the participants through an information sheet that was provided to them, and a debriefing was also done at the end of the research. and they would be able to see their results whenever they wanted.

Main Study

Once the pilot study was complete and any modifications were performed, dependent on feedback received from the participants and preliminary analysis, the actual study began. In the study, a 2x2 between-subjects experimental design was applied to examine the influence of two independent variables on schadenfreude. These factors were justice sensitivity (just vs. unjust) as well as group comparison (in-group vs. out-group). They chose a variety of classrooms and academic units to choose participants. To ensure the integrity of the manipulation of the study and reduce demand characteristics, the actual purpose of the study was concealed. The subjects were told that they were just participating in a general psychology study that investigates emotional reactions to hypothetical events without directly discussing the idea of schadenfreude. Each of the four groups was randomly assigned a different scenario that signified one of the experimental conditions (e.g., in-group with fair outcome, in-group with unfair outcome, out-group with fair outcome, and out-group with unfair outcome). These situations have been created with the help of existing literature and were expected to measure or elicit schadenfreude-associated responses. The level of emotional distress was also narrow, as would have been expected in the hypothetical model, although some individuals had little of it, perhaps due to the sensitive nature of the catastrophe scenarios. To meet the ethical standards, the debriefing session was conducted immediately after data collection and was done lastly in every classroom. In the debriefing session, the participants were duly informed about the actual original goal of the experiment, the reason for deception, and the psychological term schadenfreude. They would have an opportunity to ask questions, seek assistance in case they felt uncomfortable, and erase their data in case they wanted to. Ethical considerations were thoroughly observed throughout the research process, and they may include consent (informed consent), confidentiality, and anonymity of participants, the right to withdrawal by the participants, and approval by the institutional review board. The ethical strength and the methodological rigor of the study promoted the welfare of the participants and the validity of the findings.

Statistical Analysis

Descriptive statistics were used on the IBM SPSS 21 to measure the frequency and percentage as well as mean and standard deviation of the results. Reliability analysis was run to determine the internal consistency of the scales and subscales used in the study. Two-way ANOVA was used to study the effect of group comparison and justice sensitivity and group comparison on schadenfreude.

Ethical Considerations

The following ethical considerations were followed while conducting research.

- Research was conducted after taking institutional approval from the Centre for Clinical Psychology and the Supervisor.
- Data was collected from universities after taking permission from the heads of the institutes.

- An informed consent was given to the participants was given to the participants. Participants were allowed to leave the research whenever they wanted.
- Deception was given while describing the purpose of the current study.
- Confidentiality regarding the identity or other information was maintained by the researchers.
- De-briefing was done at the end of the research.

Results

The present study focused on studying the impact of group comparison, role of justice sensitivity, self-esteem, and dark triads in schadenfreude in young adults who have been university students. The following chapter focuses on the results of the study, the demographics, and the analysis of the above-mentioned study. The results of these analyses are presented in the following chapter. The test of normality to check the normal distribution of data, the Cronbach's alpha test to find out the reliability of the items of the tests, was used in this research. Based on the results of the normality test, a 2-way ANOVA was performed to study the impact of independent variables on dependent variables.

Descriptive Analysis

Descriptive analysis was done to study the demographics of the participants that took part in the present study.

Table 1

Demographic characteristics of the participants (N=200).

Variable	Category	Frequency (f)	Percentile (100%)
Gender	Male	62	16.6
	Female	138	37.0
Program of Study	Bachelors	184	49.3
	Masters	14	3.8
	Other	2	0.5
Year of Study	1st	48	12.9
	2nd	46	12.3
	3rd	39	10.5
	4th or above	67	18.0

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Reliability Analysis

Reliability analysis was done to study the psychometric properties of the tools that were used in the present study.

Table 2

Psychometric properties of the questionnaires used (N=200).

Scale	k	M	SD	α	Range	
					Potential	Actual
Short Dark Triad	27	81.98	10.73	0.79	27-135	27-135
Machiavellianism	9	29.54	4.94	0.60	9-45	9-45
Narcissism	9	27.57	3.96	0.38	9-45	9-45
Psychopathy	9	24.95	18.94	0.45	9-45	9-45

Self-Esteem	10	22.02	2.49	0.10	10-40	10-40
Schadenfreude	8	25.82	9.55	0.75	8-56	8-56

Note. N= Sample size; M = Mean; SD = Standard Deviation

Table 2 shows the Cronbach's alpha value for Short Dark Triad, Rosenberg Self-Esteem and Schadenfreude scale. Rosenberg Self-Esteem Scale has high Cronbach's alpha value of 0.10 indicating very poor reliability, Short Dark Triad had acceptable Cronbach's alpha value of 0.79, indicating reasonable reliability and Schadenfreude scale had an acceptable Cronbach's alpha value of 0.75 indicating reasonable reliability. Overall, the reliability analysis showed that most of the scales were psychometrically reliable, with the exception of the Rosenberg Self-Esteem Scale, which demonstrated inadequate reliability.

Two-Way ANOVA

A 2-way ANOVA was done to study the interaction and main effect impact of justice sensitivity (fair and unfair), and group comparison (in-group and out-group)on schadenfreude that were the variables of the present study.

Table 3

Interaction and main Effects of Group Comparison and Justice Sensitivity.

Variables	Sources	M	SD	F (1,176)	p	η^2
Group Comparison	In-group	25.59	9.81	2.49	0.32	0.66
	Out-group	24.76	8.93			
Justice Sensitivity*	Fair	29.93	8.69	270.1	0.03	0.99
	Unfair	21.43	8.52			
GC × JS	Out-group and unfair	21.22	8.71	0.12	0.72	0.001
	Out-group and fair	28.20	7.77	0.12	0.72	0.001
	In-group and unfair	21.64	8.44	0.12	0.72	0.001
	In-group and fair	29.63	9.54	0.12	0.72	0.001
Self-Esteem		22.02	2.4	1.21	0.27	0.000
Dark Triads		81.98	10.7	0.80	0.7	0.007

M = Mean; SD= Standard Deviation; η^2 = Effect Size; F = Mean differences, GC= Group Comparison; JS= Justice Sensitivity

*Note. N=200; *p<0.05*

Table 3 shows that there is no significant main effect of group comparison, F (1,176) = 2.49, p = 0.324, η^2=0.669, justice sensitivity has a significant main effect, F (1,176) = 270.1, p = 0.0364, η^2=0.996 while the interaction impact F(1,176) = 0.12, p = 0.72, η^2=0.001 is also non-significant. Self-esteem has non-significant difference, F = (1,176) = 1.21, p = 0.27, η^2 = 0.000 and short dark triads has also non-significant difference, F = (1,176) = 0.80, p = 0.7, η^2= 0.007.

Summary of Results

This study was aimed at investigating the impact of group comparison and justice sensitivity on schadenfreude by keeping self-esteem and dark triads as covariates. The results revealed that there was no significant impact of the group comparison on schadenfreude. This indicated that whether there was an in-group comparison or an out-group comparison, there was no impact on the schadenfreude.

The results also revealed that there was a significant impact of justice sensitivity on schadenfreude, and it was stronger when misfortune was taken as deserved, but the results also revealed that self-esteem and dark triads did not impact schadenfreude directly.

Discussion

The present study was aimed at investigating the impact of group comparison and justice sensitivity on schadenfreude by keeping self-esteem and dark triads as covariates. This chapter is about the discussion that is done by keeping in view the results and by using previous research.

The first hypothesis of the present study was that Schadenfreude would be higher when misfortune occurs to the students at the rival university (out-group). Although, many studies state that schadenfreude is higher when misfortune occurs to the students of the rival university as compare to the in group comparison as competitive situations increase disdain (Sun et al., 2024) and is low when misfortune occurs to an in group individual due to the in-group attachment (Ouwerkerk et al., 2016) but 2 way ANOVA analysis revealed that there is no significant difference between in-group and out-group comparison. Although there are still a few, there are still some studies that support this result. The effects of individualistic and collectivistic cultures on schadenfreude are different in the ways people show an emotional response to the misfortune experienced by other people. The individualistic cultures focus on and attach priority to individual achievements and autonomy, tend to promote schadenfreude, especially when individuals feel that others are responsible for their bad luck. Collectivistic culture, in turn, focuses on empathy and social harmony, which leads to a reduction in schadenfreude. Moreover, often members of an individualistic culture indulge in the pleasure of the misfortune of others, especially when they believe that the actions involved brought forth misfortune because of personal responsibility (Van Dijk et al., 2008). As this research was conducted in Pakistan, where there is a collectivistic culture, and in collectivistic cultures, sympathy and altruism are encouraged, hence reducing schadenfreude. Placing community and well-being first in a collectivistic culture allows people to be more empathetic towards others in distress and thus reduces the levels of schadenfreude (Van Dijk et al., 2008).

Friendship plays a crucial part in the life of a young adult, and there exists friendship between the students at different universities. According to research, only a good relationship with parents is not essential in the development of empathy and emotional support but peer support also plays a crucial role in it as emphatic friend circles leads to the development of empathy and due to empathy, they do not seek pleasure from the misfortune of others (Boele et al., 2019).

Previous research revealed that moral and ethical education has a great impact in decreasing the spread among the students. Such emotional control seems more important in the highly competitive or intergroup academic contexts. It is the aspect of being taught moral values and ethical reasoning that may have been internalized with the students, because a student may not be able to say that they are hostile to another university in the case of competition or comparison. The impact of moral development on the way individuals are disposed to the sufferings of others is greatly influenced when it is incorporated into education programs. Consequently, learners imparted with a values-based education tend to sympathize or remain neutral as opposed to seeking pleasure in the failures of colleagues or rivals (Cerit, 2023). Religion also plays an important role in mitigating negative emotions by giving us simple concepts as Allah Himself says in the Holy Quran: “Do not destroy yourself out of frustration about them” (Surah Fatir; verse: 8). This verse highlights that do not let yourself to be influenced by actions and behaviors.

The second hypothesis of the present study was that schadenfreude will be higher when the failure is perceived as deserved. According to previous research, there is a well-supported relationship between schadenfreude and perceived deservingness, and the results of the present research are consistent with the

previous literature. This phenomenon is influenced by factors like whether the individual himself contributes to the calamity and the personal status of the viewer. Under such conditions, when an observer believes that a person has achieved his success in an unfair way (due to inactivity, deceit, perceived unfairness), or when an observer views the failure of such a person as a way of punishment to this person morally, the resulting experience of schadenfreude is further psychologically justified and more satisfying. The phenomenon demonstrates that moral and fairness judgment acts as a mediator of schadenfreude elicitation. In these, the feeling is not just of envy or person-to-person competition, but of moral rationalization of wrong differences, or wrong acceptance of social norms. These results support a larger theoretical angle: that evaluations of judgment of deservingness, appraisals of effort, and moral judgment are key processes in the emotional experience of schadenfreude. This process is particularly relevant in achievement and competitive settings, in this case, academic institutions or work environments, where the concept of merit, righteousness, and justice runs deep in the social judgment (Feather, 2008).

Previous research indicates that moral judgments affect schadenfreude greatly. People with poor moral character are less sympathized with by society when they fail to deliver what is expected of them, particularly because they are too dishonest, arrogant, or even hypocritical. Instead, the schadenfreude is compounded by some people getting the notion that they deserve the bad luck that is befalling them (Brambilla & Riva, 2017). Such emotion is, in most instances, fueled by the belief that justice is being done and not just jealousy or rivalry. The hypocrisy, especially, is likely to increase the schadenfreude since it goes against the principles of justice and honesty in society. These findings suggest that individuals may be more willing to take pride in the failure of a person when he/she is perceived to be immoral. Therefore, moral deservingness essentially affects the schadenfreude (Brambilla & Riva, 2017).

According to the present study, there is no significant relationship between self-esteem and schadenfreude although many previous researches say that there is a negative relationship between self-esteem and schadenfreude (Van Dijk et al., 2011) but there are other researches that suggest that there is not a direct impact and these variables are uncorrelated but there are other factors that predict this relationship (Greenier, 2017). Among the main theoretical standpoints that undermine the presence of a passionately close connection between self-esteem and schadenfreude, the fact of social comparison instead of self-worth is highlighted. Smith et al. (2009) believe that it is more correct to interpret schadenfreude as an implication of envy, rivalry, or resentment in the social setting in which people tend to compare themselves to others. The study showed that negative feelings such as envy may cause enjoyment due to a misfortune caused to the competitor, regardless of the magnitude of self-esteem. This implies that high and low self-esteem can feel schadenfreude as soon as the object of their feeling is viewed as something that threatens them in their social status. A lower self-esteem does, therefore, not result in schadenfreude, but rather schadenfreude can and should be explicated in terms of interpersonal processes and comparative social processes. According to previous research, implicit self-esteem has an impact on schadenfreude rather than explicit self-esteem (Fujii & Sawada, 2014), and in the present study, the Rosenberg Self-esteem Scale was used, which measures explicit self-esteem.

The 2-way ANOVA analysis revealed that there is no significant relationship between dark triads and schadenfreude. Researches indicate that individuals exhibiting dark triads are likely to experience schadenfreude but not a single dark personality trait is related to malicious enjoyment in the live event which means that responses to fabricated situations may not correspond to schadenfreude events in real life (Greenier, 2017) and in the present research, hypothetical scenarios were used. Also, the relationship between dark triads and schadenfreude is often mediated by other factors such as moral disengagement, aggressive humor style, which means that it has not been studied directly (Zadegan et al., 2024).

Conclusions

The overall conclusion of the present study was that in group and out-group comparisons had no significant impact of on schadenfreude, while justice sensitivity had a significant impact on schadenfreude.

The self-esteem and dark triads also had no impact on schadenfreude.

Strengths of the Study

- The present study explored that impact of impact of group comparison and justice sensitivity while taking self-esteem, and dark triads as covariates by using 2x2 experimental research design which is rare in indigenous psychology research in Pakistan.
- A pilot study was conducted to validate the tools and procedures, and the study adhered to the ethical standards.
- The sample was comprised of young adults who were students of different universities, and in Pakistan schadenfreude has not been studied in student population,
- Standardized measuring tools were used in the present study, and a thorough demographic sheet was made. This increased the internal consistency of research. Although some scales had low reliability (e.g. Self-esteem) but the main scales demonstrated acceptable reliability.
- The present study challenges the prevailing assumptions from assumption from the Western literature by showing that there was no significant impact of group comparison on schadenfreude in collectivistic culture like Pakistan.
- The study was grounded in solid theoretical framework (Social Comparison and Social Identity Theory) and was supported by wide ranging literature review, enhancing the credibility of the present study.

Limitations and Suggestions

- In the present study, only explicit self-esteem was measured, ignoring implicit self-esteem, which can have a deeper impact on schadenfreude.
- The sample of the present study consisted of only university students, and due to the academic burden, they were quite exhausted and were not willing to take part in the present research. and also, there was no credit for participants. If they were given any credit, there were chances that they would show willingness.
- The scenarios were hypothetical, which may not cause future schadenfreude. In the future, it can be done by measuring both implicit and explicit self-esteem and using real scenarios instead of hypothetical scenarios.

Future Implications

- This study challenges the widely held belief that group comparison has an impact on schadenfreude and opens the door for future refinement, especially regarding the cultural context that plays an important role in developing schadenfreude.
- Chronic schadenfreude, especially when associated with dark triads, may be a marker for empathy deficits and moral disengagement.
- Therapists can use this understanding to explore deeper emotional or personality dysfunctions in individuals, especially in adolescents and adults who score highly on the dark triads.
- This study also highlights that incorporating moral and ethical education can reduce levels of schadenfreude.
- This study also highlights the importance of parenting which plays an important part in the life of a child, as schadenfreude starts developing at as early as the age of 4 years. So, education regarding parenting should be given in a collectivistic culture as it is given in individualistic culture.

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