

**THE ROLE OF CONTACT VALENCE IN INTERGROUP
PROCESSES: A STUDY IN MIZORAM.**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

LALPARMAWII KHIANGTE

MZU REGISTRATION NO.: 4276 of 2009-10

Ph.D. REGISTRATION No.: MZU/Ph.D./1061 of 31.10.2017



**DEPARTMENT OF PSYCHOLOGY
SCHOOL OF SOCIAL SCIENCES
AUGUST, 2025**

**THE ROLE OF CONTACT VALENCE IN INTERGROUP PROCESSES:
A STUDY IN MIZORAM**

BY
LALPARMAWII KHIANGTE
Department of Psychology

Supervisor
Prof. H.K. Laldinpuii Fente

Submitted
In partial fulfillment of the requirement of the Degree of Doctor of
Philosophy in Psychology of Mizoram University, Aizawl.

SUPERVISOR'S CERTIFICATE

This is to certify that the present research work titled, “The Role of Contact Valence in Intergroup Processes: A Study in Mizoram” is the original research work carried out by Ms. Lalparmawii Khiangte under my supervision. The work done is being submitted for the award of the Doctor of Philosophy in Psychology of Mizoram University.

This is to further certify that the research conducted by Ms. Lalparmawii Khiangte has not been submitted in support of an application to this or any other University or an Institute of Learning.

Date: 11/08/2025

Place: Aizawl

(Prof. H.K. LALDINPUII FENTE)

Supervisor

Department of Psychology

Mizoram University

DECLARATION
MIZORAM UNIVERSITY
AUGUST, 2025

I **LALPARMAWII KHIANGTE**, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the Mizoram University for the **Degree of Doctor of Philosophy in Psychology**.

(LALPARMAWII KHIANGTE)
Candidate

(Prof. ZOKAITLUANGI)
Head

(Prof. H.K. LALDINPUII FENTE)
Supervisor

ACKNOWLEDGEMENT

I offer my deepest gratitude to the Almighty God for His abundant blessings and guidance throughout this journey.

I extend my sincere and heartfelt appreciation to Prof. H.K. Laldinpui Fente, my supervisor at Mizoram University, for her exceptional expertise and unwavering belief in me even during times when I struggled to believe in myself. Her guidance and mentorship have shaped me into the best version of who I can be. I am truly thankful for the love, dedication and remarkable patience with which she has mentored me throughout this academic pursuit.

This work is lovingly dedicated to my late grandmother, Lalnuntluangi, whose support and encouragement inspired me to strive for higher education.

I am also profoundly thankful to my family for their constant support and understanding.

Finally, I wish to express my sincere appreciation to the staff of the Department of Psychology at Govt. Hrangbana College for their never ending support and understanding throughout my research journey, without which its completion would not have been possible.

Aizawl: The 11th August, 2025.

(LALPARMAWII KHIANGTE)

TABLE OF CONTENTS

	Page No.
List of Tables	i - iii
List of Figures	iv - v
List of Appendices	vi
Chapter I	
Introduction	1 - 25
Chapter II	
Statement of the Problem	26 - 34
Chapter III	
Methods and Procedure	35 - 40
Chapter IV	
Results and Discussion	
• Psychometric properties of the behavioural measures.....	41 - 52
• Effects of Diversity Levels on Intergroup Anxiety and Intergroup Attitude Among Young Adults in Mizoram.	53 - 62
• Role of Frequency of Intergroup Contact on Intergroup Anxiety and Intergroup Attitude	62 - 71
• Mediating role of Contact Quality and Negative Experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude in the three Outgroup Exposure Levels (diversity levels).....	72 - 100
• Role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (Neighbourhood and Workplace Exposure) and Intergroup Anxiety and Attitude.....	101 - 118

Chapter -V

Summary and Conclusion 119 – 131

Appendices..... 132 – 142

References 143 – 167

LIST OF TABLES

Table 1.1	Mean, Standard deviation, Skewness, Kurtosis for Contact Quantity and Contact Quality scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170)
Table 1.2	Mean, Standard deviation, Skewness, Kurtosis and Cronbach's Alpha for Feeling Thermometer scores; Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170)
Table 1.3	Mean, Standard deviation, Skewness, Kurtosis and Cronbach's Alpha for Intergroup Anxiety Scale (IAS) scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170)
Table 1.4	Mean, Standard deviation, Skewness, Kurtosis and Cronbach's Alpha for Negative Experiences Inventory (NEI) scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170)
Table 1.5	Mean, Standard deviation, Skewness and Kurtosis for Valenced Contact Negative Contact (VCNC) and Valenced Contact Positive Contact (VCPC) scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170).
Table 2.1	Results of Two-way Anova (2 Sex X 3 Diversity Levels) on Intergroup Anxiety, Intergroup Attitude, Contact Quantity, Contact Quality, Negative Experiences Inventory (NEI), Valenced Contact Negative Contact (VCNC), Valenced Contact Positive Contact (VCPC).
Table 2.2	Levene's Test of Equality of Error Variances
Table 2.3	Descriptive Statistics Mean, SD, Skewness, Kurtosis, and Standard Errors for Male and Female in Lawngtlai District, Aizawl District and Serchhip District.

Table 2.4	Results of LSD Post-Hoc depicting the mean differences in significant ‘diversity levels’ on Intergroup Attitude
Table 3.1.1	Correlation coefficients (Pearson’s r) for Lawngtlai district with correlational values for males above the diagonal and females below the diagonal
Table 3.1.2	Correlation coefficients (Pearson’s r) for Aizawl district with correlational values for males above the diagonal and females below the diagonal
Table 3.1.3	Correlation coefficients (Pearson’s r) for Serchhip district with correlational values for males above the diagonal and females below the diagonal
Table 3.2.1	Hierarchical regression analysis testing the predictability of Intergroup Anxiety towards ethnic outgroup members from age, educational qualification, occupation, family and Contact Quality in males.
Table 3.2.2	Hierarchical regression analysis testing the predictability of Intergroup Anxiety towards outgroup members from age, educational qualification, occupation, family and Contact Quality in females.
Table 3.2.3	Hierarchical regression analysis testing the predictability of Intergroup Attitude towards outgroup members from age, educational qualification, occupation, family and Contact Quality in males.
Table 3.2.4	Hierarchical regression analysis testing the predictability of Intergroup Attitude towards outgroup members from age, educational qualification, occupation, family and Contact Quality in females.
Table 4.1.1	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Anxiety in high diversity Lawngtlai district

Table 4.1.2	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in high diversity Lawngtlai district
Table 4.1.3	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Anxiety in medium diversity Aizawl district
Table 4.1.4	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in medium diversity Aizawl district
Table 4.1.5	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Anxiety in low diversity Serchhip district
Table 4.1.6	Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in low diversity Serchhip district
Table 5.1.1	Countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Neighbourhood Exposure and Intergroup Attitude
Table 5.1.2	Countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Workplace Exposure and Intergroup Attitude

LIST OF FIGURES

Figure 1	Countervailing pathways of the adapted ecological-contact hypothesis
Figure 2	Sample characteristics of a 3 X 2 (3 locations X 2 gender) factorial design
Figure 3	Mean plot of males and females in the three locations of intergroup exposure on Intergroup Anxiety
Figure 4	Mean plot of males and females in the three locations of intergroup exposure on Intergroup Attitude
Figure 5	Mediating model to test the mediating role of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup Anxiety in the three levels of outgroup exposure (diversity)
Figure 6	Mediating model to test the mediating role of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup Attitude in the three levels of outgroup exposure (diversity)
Figure 7	Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in high diversity Lawngtlai District
Figure 8	Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in high diversity Lawngtlai District
Figure 9	Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in medium diversity Aizawl District
Figure 10	Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in medium diversity Aizawl District

- Figure 11 Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in low diversity Serchhip District
- Figure 12 Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in low diversity Serchhip District.
- Figure 13 Mediating hypothetical model to test the countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Neighbourhood Exposure and Intergroup Attitude
- Figure 14 Mediating hypothetical model for testing the countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Workplace Exposure and Intergroup Attitude
- Figure 15 Path model showing effects of Neighbourhood Exposure on Intergroup Attitude through Negative Contact, Positive Contact and Intergroup Anxiety
- Figure 16 Path model showing effects of Workplace Exposure on Intergroup Attitude through Negative Contact, Positive Contact and Intergroup Anxiety

LIST OF APPENDICES

Appendix – 1	Specimen copy of General Intergroup Contact Quantity and Contact Quality (CQCQ; Islam & Hewstone ,1993)
Appendix – 2	Specimen copy of Feeling Thermometer (Converse, Dotson, Hoag & McGee, 1980)
Appendix – 3	Specimen copy of Intergroup Anxiety Scale (IAS; Paolini, S., Hewstone, M., Cairns, E., & Voci, A, 2004)
Appendix – 4	Specimen copy of Negative Experiences Inventory (NEI; Stephan, Stephan, Demitrakis, Yamada & Clason, 2000)
Appendix – 5	Specimen copy of Valenced Contact (Single-Item Scale) (VC; Barlow, Paolini & Pedersen, 2012)
Appendix – 6	Specimen copy Demographic Information Form

Chapter- I

INTRODUCTION

Psychologists have long been interested in the outcomes of social interactions among members of different groups which is termed as intergroup or cross-group interactions (Allport, 1954; Sherif, Harvey, White, Hood & Sherif, 1961; Tajfel, 1970; Tajfel & Turner, 1979). The term group represents a social category (e.g., race, religious affiliation, sexual orientation etc), with *ingroup* denoting a social category that can be used to categorize one's self and *outgroup* denoting other social categories (MacInnis & Gould, 2015). The term intergroup contact is used to describe individual differences in the quality and quantity of intergroup interactions, most typically operationalized as the amalgamation of past intergroup interactions (Barnard & Benn, 1987; Bettencourt, Brewer, Clunies Ross & O'Meara, 1989; Croak, & Miller, 1992; Dhont & Van Hiel, 2009; Hodson, Harry, & Mitchell, 2009; Islam & Hewstone, 1993; Johnson & Johnson, 1985; Page-Gould, 2012; Pettigrew, 1997; Shook & Fazio, 2008; Turner, Hewstone, & Voci, 2007; West & Hewstone, 2012; Wilder, 1984). There has been a paradoxical findings wherein intergroup interaction/contact is found to exacerbate intergroup bias, producing heightened stress, anxiety, or outgroup avoidance (Shelton, Dovidio, Hebl, & Richeson, 2009; Trawalter, Richeson, & Shelton, 2009) and at the same time intergroup contact, is also found to reduce intergroup bias, predicting lower intergroup anxiety and lower prejudice (Pettigrew & Tropp, 2006).

Intergroup Contact

Armed with the early work of nineteenth and twentieth century writers, Allport introduced the most influential statement of contact theory in *The Nature of Prejudice* in 1954 (Pettigrew & Tropp, 2005). Allport (1954) in his intergroup contact hypothesis endorses that positive impact of intergroup contact is achieved only in situations characterized by four key conditions: equal group status within the situation; common goals; intergroup cooperation; and the support of authorities, law, or custom (Pettigrew, 1998). Since then, many more works on similar line have followed, cementing Allport's finding that intergroup contact reduces ethnic/racial discrimination (Caspi, 1984; Vonofako, Hewstone, & Voci, 2007; Works, 1961; Yucker & Hurley, 1987). Studies by Pettigrew & Tropp (2006), also highlighted low negative association between intergroup contacts and prejudice, suggesting that

contact is beneficial for individuals, interpersonal relations, and society overall. However, wider research has also found that intergroup contact without the above-mentioned components is equally effective in reducing intergroup conflict (Pettigrew & Tropp, 2006). There are many contact studies which determine that intergroup contact is associated with less anxiety (Islam & Hewstone, 1993; Paolini, Hewstone, Cairns, & Voci, 2004; Voci & Hewstone, 2003) and more positive attitudes toward outgroups (Pettigrew & Tropp, 2006). Moreover, lower intergroup anxiety explains some of the relationship between contact and lower prejudice (Binder et al., 2009; Paolini et al., 2004; Pettigrew & Tropp, 2008; Voci & Hewstone, 2003), and lower prejudice also leads to increased contact (Binder et al., 2009).

While intergroup contact has many positive endorsers, it is equally important to note that there are some researchers who tends to associate intergroup contact with some form of intergroup bias (e.g., prejudice, intergroup anxiety, discriminatory behavior) (Barnard & Benn, 1987; Bettencourt et al., 1992; Clunies Ross & O'Meara, 1989; Johnson & Johnson, 1985; Wilder, 1984). One such concern would be the argument that intergroup contact fail to attain change towards societal growth at larger scale, for instance, it does not necessarily bring about active resistance towards policies or ideologies that promotes racism or other forms of group discrimination (Crane, 1986; Dixon, Durrheim, & Tredoux, 2005). On the contrary, it diminishes the little effort that socially disadvantaged groups have exerted upon their superior counterpart to bring about equality as a consequence of prolonged positive intergroup contact between the former and latter and diluting of line between the two (Dixon, Durrheim, & Tredoux, 2007).

Recent developments in the theory have expanded its scope beyond race and ethnicity to encompass a wide range of group divisions, including those based on religion, sexual orientation, nationality, disability, and political ideology. Moreover, variations such as extended contact, imagined contact, and virtual contact have been explored to understand how indirect interactions can also contribute to prejudice reduction (Turner et al., 2007; Wright et al., 1997). These developments illustrate the adaptability and continued relevance of the theory in contemporary, digitally interconnected, and often polarized societies.

Contact Quantity and Contact Quality

Within the framework of Intergroup Contact Theory, a distinction has emerged between two critical dimensions of contact: contact quantity and contact quality (Pettigrew & Troop, 2006). These dimensions are central to understanding how intergroup interactions influence attitudes, emotions, and behaviors toward outgroup members. While both forms of contact can contribute to the reduction of prejudice, they exert influence through different mechanisms and are not equally effective in all contexts (Pettigrew, 1998; Davies et al., 2011).

Contact quantity refers to the frequency or amount of interaction an individual has with members of an outgroup (Pettigrew & Troop, 2006; Dovidio, 2017). The underlying assumption is that more frequent contact increases familiarity and reduces anxiety stemming from novelty or uncertainty. According to mere exposure theory, repeated encounters with members of an outgroup, even in superficial contexts, can lead to increased comfort and reduced bias over time (Zajonc, 1968). Empirical studies support the idea that frequent intergroup contact is negatively associated with prejudice and positively associated with outgroup acceptance (Pettigrew & Tropp, 2006; Binder et al., 2009). However, the effect of contact quantity is not always straightforward. Research has shown that frequent contact alone is not sufficient to guarantee positive outcomes. If the interactions are negative, competitive, or conflict-laden, repeated contact may reinforce existing prejudices or worsen intergroup attitudes (Paolini et al., 2010; Barlow et al., 2012). Therefore, while contact quantity may offer opportunities for intergroup learning and stereotype disconfirmation, its impact is significantly influenced by the nature of the contact experience. Chesó, Zagefka, & Bjornsdottir (2024) examined both contact quantity and contact quality in the context of attitudes toward transgender individuals and found that both dimensions were associated with lower levels of prejudice, but quality of contact was a significantly stronger predictor of reduced prejudice than frequency alone. Their research underscores the importance of meaningful, respectful engagement over mere exposure.

Contact quality refers to the nature and characteristics of the interactions between individuals or groups from different social, cultural, ethnic, or demographic backgrounds. The nature of interactions can be positive or negative, where experiences of the former decrease prejudice while experiences of the latter increase prejudice (Lolliot et al., 2015). High-quality and positive contact is more likely to fulfill the optimal conditions outlined by Allport (1954), including equal status, common goals, and intergroup cooperation supported by social and institutional norms. Research consistently shows that quality of contact is a stronger and more reliable predictor of improved intergroup attitudes than frequency alone (Voci & Hewstone, 2003; Davies et al., 2011; Pettigrew & Tropp, 2006). Liu et al., (2024) used latent profile analysis to study Chinese ethnic minority adolescents and found that high contact quantity without corresponding quality did not significantly improve psychological capital or reduce prejudice. Profiles with both high quality and high quantity of contact demonstrated the greatest reduction in negative attitudes, confirming that quality amplifies the benefits of frequent contact. Puffer & Hodson (2024) explored how contact with Black and gay individuals influenced attitudes toward broader marginalized groups and found that quality contact was associated with more positive secondary transfer effects, such as improved attitudes toward other unrelated outgroups. High-quality and more positive contact reduces intergroup anxiety, fosters perspective-taking, and promotes empathic concern which are the key mediators in the pathway from contact to reduced prejudice (Turner et al., 2007; Tausch et al., 2007). It also facilitates self-disclosure, which humanizes outgroup members and allows individuals to perceive them as multifaceted individuals rather than as stereotypical group representatives (Pettigrew, 1998). In contrast, low-quality or negative contact, characterized by superficiality, conflict, or status inequality can be ineffective or even harmful to intergroup relations. Majumdar et al., (2024) examined asynchronous intergroup contact via social media. They found that both the frequency and the positivity (quality) of prior intergroup contact predicted reduced intergroup anxiety and improved attitudes. However, contact valence (positive vs. negative) was a stronger predictor than mere contact frequency.

The relative importance of contact quality over quantity is especially evident in diverse social settings such as schools, workplaces, and multicultural neighborhoods, where contact may be frequent but not necessarily positive or cooperative (Johnston & Glasford, 2018). For example, research by Schmid et al., (2014) found that positive intergroup contact was associated with long-term reductions in prejudice, while negative contact, even when frequent, reinforced bias. In a study focusing on system-level prejudice, Matthews et al., (2009) found that intergroup anxiety mediated the relationship between low-quality contact and increases in system justification and social dominance orientation. Repeated but low-quality contact over time was associated with entrenchment of hierarchy-supporting ideologies, emphasizing the danger of poorly managed diversity.

Diversity and Intergroup Contact

In increasingly multicultural societies, understanding how diversity influences intergroup relations has become a central concern in the social sciences. Intergroup Contact Theory, originally articulated by Gordon Allport (1954), provides one of the most robust theoretical frameworks for explaining how intergroup interactions can mitigate prejudice and improve intergroup attitudes. Within this framework, diversity is not only a demographic fact but a contextual variable that shapes the frequency, quality, and outcomes of intergroup contact. Diversity, particularly ethnic, racial, and cultural diversity, plays a dual role in relation to contact (Schlueter & Scheepers, 2010). On the one hand, diverse environments provide greater opportunities for intergroup encounters. On the other, the presence of diversity does not guarantee meaningful or positive interaction (Pettigrew & Troop, 2011). In fact, diversity can sometimes exacerbate anxiety, segregation, or competition if not managed properly (Putnam, 2007). Therefore, the quality of intergroup contact, rather than mere exposure is critical in determining whether diversity leads to social cohesion or division (Pettigrew, 1998).

Empirical studies have shown that in diverse schools, workplaces, and neighborhoods, positive and frequent contact is associated with reduced intergroup anxiety, lower levels of stereotyping, and increased empathy (Davies et al., 2011;

Schmid et al., 2014). However, if social environments are segregated or stratified, diversity may fail to produce these positive effects and may even heighten perceptions of threat or competition (Bergsieker et al., 2010). The relationship between diversity and contact outcomes is influenced by a range of moderating and mediating factors. Intergroup anxiety, social norms, institutional support, and perceived status differences can moderate the effectiveness of contact (Visintin, Green, Falomir-Pichastor & Berent, 2020). For example, if intergroup contact occurs in a context of perceived status inequality, it may reinforce rather than reduce prejudice (Tropp & Pettigrew, 2005). Similarly, group identification can mediate how diversity is experienced those strongly identified with their ingroup may feel more threatened in diverse settings and resist contact (Stephan, 2014; Abrams & Eller, 2017). In addition, research shows that longitudinal exposure to diversity, especially in integrated settings (e.g., mixed schools or cooperative workplaces), can gradually lead to attitude change, social trust, and civic engagement (Binder et al., 2009; Laurence et al., 2018). However, this effect is contingent on positive and sustained intergroup engagement. Superficial or negative encounters can reinforce biases and intergroup anxiety, particularly if they are frequent and emotionally salient (Paolini et al., 2010).

Integrated Threat Theory

Propounded by Stephan & Stephan (2000), the Integrated Threat theory included four threats that explain and predict negative/prejudicial attitudes towards outgroups: intergroup anxiety, negative stereotypes, realistic threats, and symbolic threats. Negative stereotypes are certain assumptions negatively valence attributed towards the outgroup by the in-group members. Realistic threats are threats relating to economic, political power, and physical or material wellbeing the in-group perceives from the out-group members. Symbolic threats represent threats that in-group perceives against the outgroup because of differences in morals, values, standards, beliefs, and/or attitudes between the in-group and the out-group (Stephan et al., 2000). Intergroup threat theory is a social psychological concept primarily concerned with how people perceive threats. These perceived threats can have real consequences, regardless of their accuracy. Thus, the theory focuses less on the

actual threat posed by outgroups, such as rising unemployment or immigration rates, and more on the extent to which individuals perceive threats to their own ingroup (Stephan et al., 2009). These threats reflect the in-group's culture or way of life (e.g., Croucher, 2017; Stephan, Boniecki, Ybarra, Bettencourt, Ervin, Jackson, McNatt, & Renfro, 2002; Tausch, Hewstone, & Roy, 2009). Nonetheless, intergroup anxiety remains the most consistent and powerful predictor of intergroup attitudes (Riek, Mania, & Gaertner, 2006).

The original four threats (realistic threats, symbolic threats, negative stereotypes, and intergroup anxiety) are reduced to two threats: realistic and symbolic threats in the revised theoretical version of intergroup threat (Stephan, Ybarra, & Rios Morrison, 2015). Negative stereotype now becomes a subset of both realistic threat and symbolic threat; it is a realistic threat when the negative stereotype poses a potential harm to the in-group and a symbolic threat when the negative stereotype undermines the culture, norms, or values of the in-group (Croucher, 2017). Within the scope of realistic threat, there is a concept called intergroup anxiety, which was considered a separate form of threat, but it is now seen as a subtype of threat specifically focused on apprehensions about interacting with out-group members (Croucher, 2017). These apprehensions can stem from various sources, including concerns about the outgroup exploiting the ingroup, worries about the outgroup perceiving the ingroup as prejudiced, and fears that the outgroup will challenge the values of the ingroup (Stephan & Stephan, 1985). Additionally, it is important to distinguish between group threats and individual threats. Group threats are directed at the entire in-group, whereas individual threats target individuals due to their membership in a particular group (Stephan et al., 2015).

According to Stephan et al., (2015), when in-groups view outgroups as threatening, these perceived threats can have various effects on behaviour, cognition and emotions. Behaviorally, these threats can result in actions such as discrimination, dishonesty, cheating, theft, protests, opposition to specific policies, prejudice, violence, conflict, harassment and in extreme cases, even acts as severe as murder, genocide or war. Cognitively, the perception of these threats can shape an individual's view of the out-group, leading to the development of negative

stereotypes, ethnocentrism (the belief in the superiority of one's own group), intolerance and hatred. Emotionally, threats from the out-group can trigger a range of negative emotions, including anger, anxiety, resentment, contempt, disgust, fear, vulnerability, guilt, rage, hatred, humiliation, dread, helplessness, despair, indignation, and panic (Croucher, 2017; Stephan et al., 2015). Two additional factors that contribute to intergroup threat are a history of conflict between groups and differences in group size. Groups that believe they have a long history of conflict with other groups are more likely to perceive intergroup threats (Shamir & Sagiv-Schifter, 2006; Stephan et al., 2002). Similarly, smaller groups relative to the outgroup tend to be more prone to perceiving intergroup threats (Campbell, 2006; Corneille, Yzerbyt, Rogier & Buidin, 2001; McLaren, 2003; Quillian, 1995; Schaller & Abeyesinghe, 2006). For instance, research has shown that members of a particular political party feel more threatened by an opposing party if they believe the opposing party makes up a larger portion of the population in their voting district (Corneille et al., 2001)

Moreover, differences in cultural values that have been historically established are likely to predict perceptions of threat. For instance, according to the concordance model of acculturation (Piontkowski, Rohman, & Florack, 2002; Rohman, Piontkowski, & Van Randenborgh, 2006) groups tend to view each other as threatening when they believe that their cultural values and characteristics differ from those of the outgroup (Zarate et al., 2004). The host culture may prefer that an immigrant group assimilate and abandon its own culture, fearing that the immigrant group wants to preserve its culture, which would be seen as a threat to the host culture's values. Conversely, immigrant groups often feel threatened by the prospect of adopting the values of the host culture, which may conflict with their own values (Crisp, Stone & Hall, 2006).

Intergroup Anxiety

Intergroup anxiety (Stephan & Stephan, 1985) has emerged as a crucial factor in understanding how intergroup contact can help alleviate the complexities of intergroup relations. According to Halperin et al., (2012), intergroup anxiety consists

of any negative emotion occurring at the prospect of engaging in contact with members outside of one's group. Stephan (2014) described intergroup anxiety as a type of anxiety that people experience during intergroup interaction which may be aroused by specific outgroup members or by outgroups in general. Intergroup anxiety often occurs in the process of ingroup interaction with outgroup members largely because of the fear of embarrassment, ridicule, rejection, exploitation or when both members of outgroup and ingroup have a history of dissension and have little or no prior personal contact (Stephan, Diaz-Looving, & Duran, 2000), are ethnocentric, are ignorant of one another, and also when they are interacting in unstructured or competitive circumstances where the outgroup has a higher status than the ingroup (Islam & Hewstone, 1993; Stephan et al., 1998).

Intergroup anxiety has both trait and state components, as discussed by Paolini, Hewstone, Voci, Harwood & Cairns (2006), who distinguish between chronic and episodic intergroup anxiety. On one hand, chronic intergroup anxiety can be a long-lasting and cross situational aspects of an individual's emotional responses to a specific outgroup or outgroups in general. It is important to note that individuals who experience intergroup anxiety may not necessarily feel anxious in other social situations. On the other hand, episodic intergroup anxiety is triggered during intergroup interactions and can vary depending on the specific features of the situation. When people are asked to report on the extent to which they anticipate or have experienced intergroup anxiety during such interactions, they are primarily describing the trait-like qualities of intergroup anxiety. In this case, they are likely reporting on a relatively enduring aspect of their relationships with the particular outgroup in question (Stephan, 2014).

Intergroup anxiety is known to have three interrelated components namely- affective, cognitive, and physiological (Stephan, 2014). The affective component is a central aspect of intergroup anxiety, often accompanied by cognitive and psychological elements. In terms of the affective component, intergroup anxiety is characterized by negative and aversive emotions. Individuals experiencing intergroup anxiety typically feel apprehensive, distressed, and uneasy (Stephan, 2014). Several studies support the idea that intergroup interactions can trigger anxiety-related

emotions. For instance, in one experiment, White participants reported higher levels of anxiety when engaging in interracial interactions compared to intraracial interactions (Amodio, 2009). Another study found that White individuals who scored high on intergroup anxiety reported greater anxiety when anticipating interactions with Black individuals as opposed to interactions with White individuals (Britt, Boniecki, Vescio, Biernat, & Brown, 1996). Additionally, a third study discovered that Whites reported more discomfort in their interactions with individuals from different racial or ethnic backgrounds, such as Blacks and Asian Americans, compared to their interactions with members of their own racial group (Littleford, Wright & Sayoc-Parial, 2005). Furthermore, research by Liu, Chua & Stahl (2010) revealed that intercultural negotiations resulted in more reported discomfort than intracultural negotiations.

From a cognitive perspective, intergroup anxiety often arises from the anticipation that interactions with outgroup members will lead to unfavourable outcomes. Specifically, individuals may have concerns about intergroup interaction for four primary reasons (Stephan & Stephan, 1985). First, people may worry about experiencing negative psychological consequences, such as embarrassment, frustration, misunderstanding, fear, confusion, irritation, or feelings of incompetence when interacting with outgroup members. Second, people may experience negative behavioural consequences, they may have concerns extending to potential negative directed towards them, including discrimination, physical harm, deception, exploitation, harassment or the fear of being contaminated by disease during intergroup interaction. Third, people may be concern about being negatively evaluated by the outgroup, which encompasses fears of rejection, negative stereotypes, disapproval, disrespect, ridicule, insults or being perceived as prejudiced. Fourth, people may also fear disapproval from their own group for associating with the outgroup members (Stephan, 2014).

Numerous correlational studies support the existence of this cognitive appraisal component in the intergroup anxiety. For example, research has shown that individuals who hold the most negative expectations about intergroup interactions, such as Hispanics and Whites, tend to report higher levels of anxiety about those

interactions (Butz & Plant, 2006; Plant and Devine, 2003). Additionally, the belief that interacting with an outgroup member will be challenging compared to interactions with ingroup members is linked to intergroup anxiety (Britt et al., 1996). Expecting rejection by outgroup members during intergroup interaction and perceiving outgroup members as hostile are also associated with higher levels of intergroup anxiety (Barlow, Louis & Terry, 2010; Butz & Plant, 2006). In summary, these studies suggest that individuals who hold negative expectations for intergroup interactions are more likely to experience heightened intergroup anxiety.

The physiological component of the intergroup anxiety is marked by measurable physiological responses that individuals experience in intergroup contexts. Research by Rankin & Campbell (1955) found that people in intergroup contexts often exhibit heightened galvanic skin responses, indicating increased electrical conductance of the skin, which is associated with emotional arousal. Littleford et al., (2005) discovered that individuals involved in intergroup interactions tend to experience elevated systolic blood pressure, indicating increased cardiovascular stress responses. In a study by Trawalter, Adam, Chase-Lansdale & Richeson (2012), participants who were concerned about appearing prejudiced demonstrated increased cortisol levels. Blascovich, Mendes, Hunter, Lickel & Kowai-Bell (2001) observed greater left ventricular contractility and vasoconstriction in intergroup contexts. However, this response decreased during cooperative intergroup interactions. In terms of the relationship between psychological and physiological variables, it appears that physiological arousal is a common accompaniment of intergroup interaction, as per the framework of Cacioppo & Tassinary (1990) that describes the connection between psychological and physiological factors.

A Theoretical Model of Intergroup Anxiety

The conceptual framework for understanding intergroup anxiety encompasses four main categories of antecedents and three categories of consequences (Stephan et al., 1985). The first set of antecedents pertains to individual personality traits and dispositional factors that increase the likelihood of experiencing anxiety during

intergroup encounters. These traits include ethnocentrism, prejudice, mistrust, low self-confidence, intolerance of ambiguity, limited cognitive complexity, low empathy, and tendencies toward hostility or aggression (Stephan, 2014). Individuals exhibiting such traits often anticipate difficulty, rejection, or negative evaluation when engaging with members of different social groups, which can heighten feelings of incompetence and distress in these interactions. Intergroup anxiety may also arise when these individuals perceive outgroup behavior as violating their personal values or norms, or when they feel a loss of control in intergroup settings (Stephan, 2014). Moreover, strong identification with one's own social group, be it ethnic, religious, national, or gender-based has been linked to elevated intergroup anxiety (Aberson & Gaffney, 2008; Corenblum & Stephan, 2001; Renfro et al., 2006; Stephan et al., 2002; Suzuki-Crumly & Hyers, 2004). Another significant antecedent involves individuals' attitudes and beliefs about outgroups. Pre-existing prejudice and negative stereotypes are consistently associated with increased intergroup anxiety (Aberson & Gaffney, 2008; Aberson & Haag, 2007; Berrenberg et al., 2002; Gordijn et al., 2008; Stephan et al., 1998, 1999, 2000, 2002, 2014). Additionally, a history of intergroup conflict and perceived group-based status disparities have been found to exacerbate feelings of anxiety in intergroup settings (Corenblum et al., 2001; Stephan et al., 2002).

The third antecedent relates to personal experiences with members of other groups. Prior intergroup contact, especially limited or negative experiences can influence anxiety levels. According to Pettigrew & Tropp (2008), low exposure to outgroups often results in a lack of understanding of their behaviors, values, and social norms, which may lead to anxiety and apprehension. A lack of familiarity reduces opportunities to humanize outgroup members and hinders empathy development. It can also foster fears of rejection during intergroup interactions (Stephan, 2014). Studies have further demonstrated that negative contact experiences are positively linked to intergroup anxiety (Aberson & Gaffney, 2008; Corenblum & Stephan, 2001; Rohmann et al., 2006; Stephan et al., 2000; Stephan et al., 2002). The final category of antecedents includes situational and environmental factors. The social context in which intergroup interaction occurs can significantly influence the

degree of anxiety experienced (Stephan, 2014). Situations characterized by competition, imbalanced group representation, or perceived status inequality tend to generate higher anxiety levels. Furthermore, unclear social roles, unfamiliar environments, and perceived lack of structure can intensify discomfort. Hostile or discriminatory behaviors such as incivility, disrespect, or aggression are known triggers for anxiety. Barriers to communication, such as language proficiency or accents, particularly in intercultural interactions, also correlate with elevated anxiety levels when they elicit negative emotional reactions (Spencer-Rodgers & McGovern, 2002). Research also indicates that intergroup encounters in unstructured or ambiguous settings tend to produce more anxiety than those in well-organized contexts (Avery, Richeson, Hebl, & Ambady, 2009). Similarly, the perception of not being in control during the interaction is positively related to intergroup anxiety (Johnson, 2006).

Intergroup anxiety often emerges in intergroup contexts and, to varying degrees, is present in most intergroup encounters. Its consequences span three main domains - cognitive, affective, and behavioral, and are not exclusively negative (Stephan, 2014). These domains interact in complex ways, shaping how individuals think, feel, and behave in intergroup situations.

Cognitive consequences. Intergroup anxiety significantly influences cognitive processes. It is closely associated with negative affect, which in turn triggers negative beliefs, attitudes, and stereotypes about outgroups. Through a connectionist framework (Stephan & Stephan, 1993), this link between emotion and cognition has been conceptualized as a feedback loop, where anxious individuals justify their discomfort by generating or reinforcing negative perceptions of the outgroup. For instance, anxious individuals may devalue outgroups to rationalize their unease. Moreover, anxiety during intergroup interactions consumes cognitive resources. Individuals often focus their attention on anticipated negative outcomes or remain hyper-vigilant, which depletes their mental capacity for processing information effectively (Hepson, Hadwin & Liversedge, 2019). Anxiety may also impair executive functioning and performance in cognitively demanding tasks, paralleling the effects of stereotype threat and increase error rates in tasks such as the Stroop or

"shooter bias" paradigms, where individuals are more likely to misidentify an outgroup member as threatening (Miller, Zielaskowski, & Plant, 2012; Aronson & McGlone, 2009).

These cognitive responses are shaped by antecedents of intergroup anxiety. For instance, individuals with prior negative attitudes toward an outgroup may experience anxiety that activates these attitudes during interaction. Similarly, when situational ambiguity (e.g., unclear roles or unfamiliar environments) is present, people may ruminate on how to behave appropriately, further burdening cognitive capacity (Stephan, 2014). Empirical evidence strongly supports the relationship between intergroup anxiety and negative cognitive outcomes. It has been consistently linked to unfavorable attitudes, endorsement of negative stereotypes, exaggerated perceptions of outgroup threat, and opposition to policies supporting outgroups (Berrenberg et al., 2002; Pettigrew & Tropp, 2008; Renfro et al., 2006; Stephan et al., 1998, 1999, 2000; Van Zomeren et al., 2007). Conversely, lower anxiety is associated with more positive stereotypes (Vezzali et al., 2010). High anxiety also increases the perceived homogeneity of outgroups, reducing the perception of variability and making them appear more dissimilar to the ingroup (Islam & Hewstone, 1993; Hutchison & Rosenthal, 2011; Swart et al., 2011; Britt et al., 1996).

Affective consequences. The emotional outcomes of intergroup anxiety are varied and situationally dependent. It typically evokes negative emotions such as fear, anger, shame, guilt, embarrassment, frustration, and even hatred, although the specific emotion depends on context (Stephan, 2014). For example, fear may arise from perceived physical threat, whereas anger may stem from anticipated unfair treatment. In interactions involving power asymmetries, high-status group members may feel guilt, while low-status members may experience resentment (Stephan, 2014). Intergroup anxiety can also be amplified by physiological arousal, which intensifies emotional responses. Although research on the emotional impact of intergroup anxiety remains limited, some studies show correlations with fear (Van Zomeren et al., 2007), anger (Butz & Plant, 2006; Plant et al., 2008), and negative affect more broadly (Binder et al., 2009). Given the central role of emotion in

shaping intergroup dynamics (Mackie, Mainer, & Smith, 2009), further exploration into this domain is warranted.

Behavioral consequences. Intergroup anxiety also manifests in both nonverbal and overt behavioral responses. The behavioral model posits that negative expectations and emotions make individuals more likely to behave defensively or avoidantly during intergroup encounters (Stephan, 2014). Nonverbal signs of anxiety include disrupted speech, elevated vocal pitch, restlessness, avoidance of eye contact, closed body posture, facial expressions of discomfort, and overall tension. These behaviors signal unease and may negatively affect the quality of interaction (Stephan, 2014). In more overt forms, intergroup anxiety can lead to avoidance, reduced openness, distracted engagement, inattention to social cues, and even hostile or discriminatory behavior. Behavioral responses may also vary depending on the source of anxiety (Stephan, 2014). For example, intergroup anxiety rooted in authoritarianism may result in aggressive behavior, while anxiety arising from low self-confidence may produce withdrawal or passivity. Additionally, those who wish to avoid appearing prejudiced may overcompensate by behaving overly polite or self-censoring their thoughts (Vorauer, 2006). These behaviors can trigger self-fulfilling prophecies: when ingroup members act defensively or negatively due to anxiety, outgroup members may reciprocate, reinforcing the original negative expectations and perpetuating the cycle of intergroup tension (Snyder, 2001).

Empirical studies support these behavioral patterns. Trawalter et al., (2008, 2012) found that White participants exhibited more nonverbal signs of stress such as leaning away, closed posture, and lack of eye contact during interracial versus same-race interactions. Conversely, Mendes & Koslov (2012) observed more overtly positive nonverbal behaviors such as smiling and nodding among Whites in interracial settings, accompanied by heightened physiological stress, indicating internal tension despite outward friendliness. This paradox can be attributed to individuals' efforts to manage impressions, especially when being observed or recorded. Shelton (2003) also found that White participants instructed to appear non-prejudiced during interracial interactions reported higher levels of anxiety, yet were liked more by their partners, possibly due to their effort to behave more positively.

These findings reveal that intergroup anxiety can simultaneously produce both positive and negative behavioral outcomes in the same context. Beyond nonverbal behavior, intergroup anxiety also negatively affects deeper forms of communication. It is linked to reduced self-disclosure, lower willingness for future contact, and diminished intercultural communication competence (Turner, Hewstone & Voci, 2007; Ulrey & Amason, 2001). These outcomes are likely driven by fear of rejection or misunderstanding. Notably, these behaviors may reinforce anxiety, indicating a bidirectional relationship that warrants further study (Stephan, 2014).

Intergroup Anxiety and Intergroup Contact

Numerous research studies have established a strong association between intergroup anxiety and intergroup contact. Specifically, lower-quality interactions between different groups have been consistently linked to higher levels of intergroup anxiety (Brown & Hewstone, 2005). Moreover, intergroup anxiety has been shown to predict bias against outgroups with supporting evidence from studies by Brown & Hewstone (2005), Paolini et al., (2006), Pettigrew & Tropp (2008) and Stephan & Stephan (2000). Furthermore, a significant body of research indicates that intergroup anxiety is positively correlated with negative attitudes toward outgroups, as demonstrated in studies by Riek, Mania, & Gaertner (2006) and Mak, Brown & Wadey (2014). Some investigations have even suggested that intergroup anxiety serves as a mediator in the relationship between intergroup contact and outgroup attitudes, as explored by Jasinskaja-Lahti, Mahonen & Liebkind (2011).

Notably, Binder et al., (2009) discovered that these effects were more pronounced among individuals belonging to the majority group within the context of their in-group. When intergroup anxiety decreases, there tends to be a greater willingness to engage in intergroup contact, as evidenced by Halperin et al., (2012). Additionally, Tawa and Kim's (2011) study found that individuals experiencing high levels of intergroup anxiety often justify their heightened in-group awareness by attributing race to a biological rather than social construct. The quantity and quality of contact also influence how an outgroup and its members are perceived as threatening. More positive interactions with the outgroup compared to negative ones

generally lead to a reduced perception of threat. Conversely, those who have had negative previous encounters with an outgroup tend to feel threatened by the prospect of future interactions, in accordance with findings from Stephan et al., (1999) and Stephan & Stephan (2000). Lastly, Allport (1954) emphasized that voluntary, cooperative, equal-status, individualized and positive intergroup contact can significantly improve intergroup relations, a concept supported by several studies indicating that such contact is associated with reduced feelings of threat (Aberson & Gaffney, 2008; Brown & Hewstone, 2005; Stephan & Stephan, 1996; Stephan et al., 1998, 2000; Valentova & Alieva, 2010).

Intergroup Attitude

An attitude can be defined as an assessment or judgment of an object, individual, group, idea, or any other entity. This evaluation can range from strongly negative to strongly positive, (Albarracin, Sunderrajan, Lohmann, Can & Jiang, 2018). Intergroup attitude refers to an individual's overall evaluative disposition whether positive, neutral, or negative toward members of a social group to which they do not belong (Tajfel & Turner, 1979). These attitudes encompass cognitive beliefs, emotional responses, and behavioral intentions directed at outgroup members (Brewer, 1999; Eagly & Chaiken, 1993).

One of the most fruitful theoretical approaches for investigating the origins of intergroup attitudes is **the social-identity perspective**, as put forth by Tajfel & Turner (1979) and extensively reviewed by scholars such as Hogg, Abrams & Brewer (2017). The core principle of this perspective is that in many social situations, people primarily perceive themselves and others in terms of their group affiliations, which is referred to as a "social identity". Building on this framework, Self-Categorization Theory (Turner et al., 1987) emphasizes the cognitive and motivational dimensions of group belonging and how these shape intergroup perceptions.

A central psychological mechanism in this theory is **social categorization**, the tendency to simplify social reality by grouping individuals into categories (Fiske & Taylor, 2013). This process leads to an overestimation of differences between

groups (intergroup differentiation) and underestimation of differences within groups (intragroup homogeneity), reinforcing biases and stereotypes (Tajfel, 1969; Powell & Spelke, 2013). Moreover, including the self in these categorizations intensifies ingroup loyalty and outgroup bias (Dovidio & Gaertner, 2010), which is evident even at a neurological level (Molenberghs, 2013). Ingroup favoritism often emerges even in minimal group contexts and does not necessarily involve active outgroup hostility (Brewer, 2017; Greenwald & Pettigrew, 2014). Individuals tend to reward and support ingroup members more (Buttelmann & Böhm, 2014; Balliet & De Dreu, 2014), and biases can persist despite exposure to contradictory evidence (Dovidio & Gaertner, 2010). Beyond basic identification, the strength of group attachment i.e. identity strength is linked to stronger intergroup biases. Highly identified individuals show more ingroup favoritism and competitive behavior (Swann & Buhrmester, 2015). A more extreme form, identity fusion, occurs when personal and social identities are deeply merged, fostering intense group loyalty and even self-sacrifice. Interestingly, attitudes themselves can also become the basis for categorization. Shared attitudes can form the foundation for opinion-based groups, which influence identity and behavior similarly to traditional social groups (Postmes et al., 2005; McGarty et al., 2009; Bizumic et al., 2017).

Social experiences, particularly intergroup contact, are pivotal in shaping intergroup attitudes. Both direct and indirect contact have robust effects on reducing prejudice (Dovidio et al., 2017; Tausch et al., 2010). Positive contact, especially cross-group friendships improves outgroup attitudes and can generalize beyond the specific group involved (Hayward et al., 2017). Moreover, living in integrated environments fosters positive intergroup norms, which independently predict lower prejudice (Christ et al., 2014). **Social influence** also plays a crucial role. People internalize group norms through informational (learning-based) and normative (approval-based) influences (Deutsch & Gerard, 1955). These are transmitted by parents (Degner & Dalege, 2013), peers (Sinclair et al., 2005), and broader social networks. Even indirect exposure such as witnessing prejudice or observing egalitarian behaviors can shift intergroup attitudes (Huntsinger et al., 2016; Paluck, 2011). Finally, the **functional relationship** between groups also shapes intergroup

attitudes. According to Realistic Group Conflict Theory (Campbell, 1965), perceived competition over resources heightens intergroup tension. This is supported by research showing that people view groups (versus individuals) as more competitive and less trustworthy (Wildschut & Insko, 2007). As such, perceptions of intergroup threat and competition can amplify prejudice and foster discriminatory behavior (Riek et al., 2006).

Implicit and Explicit Intergroup Attitudes: Theoretical and Empirical Perspectives

A growing body of research distinguishes between explicit and implicit intergroup attitudes, two constructs that capture different dimensions of prejudice. Explicit attitudes are consciously held beliefs and evaluations that individuals can report, whereas implicit attitudes operate automatically and often without awareness, potentially diverging from one's stated values (Dovidio et al., 2017). The development of implicit attitudes has been attributed to processes like early socialization, media exposure, and cultural representations, which may embed unconscious biases even in individuals who consciously endorse egalitarian principles. In contrast, explicit attitudes are typically measured through self-report instruments, which may be vulnerable to social desirability bias, particularly in contexts involving race, gender, or other sensitive social identities (Krosnick, Judd, & Wittenbrink, 2005). The differential predictive power of implicit and explicit attitudes is context-dependent. Implicit attitudes better forecast spontaneous, affect-driven behaviors, while explicit attitudes are more predictive of deliberate, reasoned actions, especially when individuals are motivated to align their behavior with social norms (Fazio & Olson, 2003; Wilson et al., 2000; Shepherd et al., 2017). This dual-attitude framework suggests that implicit bias often operates beneath conscious control, shaping behaviors that individuals may not even recognize as discriminatory. While individual-level biases may seem minor in isolation, their collective impact can lead to large-scale social inequalities. Even small discriminatory actions, when aggregated across time and populations, can systematically limit opportunities for historically marginalized groups (Greenwald, Banaji, & Nosek, 2015). Moreover, repeated exposure to subtle or overt prejudice can produce chronic psychological

stress and adverse health outcomes among stigmatized individuals (Richman, Pascoe, & Lattanner, 2018).

Recent studies have examined the regional aggregation of prejudice, revealing how the average level of bias within a geographic area can shape structural inequalities. For example, Leitner et al., (2016) found that in U.S. counties where White residents exhibited higher levels of explicit racial bias, Black residents had lower access to healthcare and higher rates of mortality from circulatory diseases even after controlling for demographic and economic variables. Similarly, implicit bias at the regional level has been linked to increased police violence against Black individuals (Hehman, Flake, & Calanchini, 2017) and diminished efficacy of public health interventions among minority groups (Reid et al., 2014). These effects are not limited to racial bias. For instance, Brandt (2011) reported that across 57 countries, higher national levels of sexist attitudes predicted greater increases in gender inequality over time. Such findings underscore the importance of viewing implicit and explicit attitudes not only as individual psychological constructs but also as societal forces with tangible implications for inequality, justice, and public health (Payne, Vuletich, & Lundberg, 2017).

Ethnic Identity & Outgroup Attitude

Prior research has uncovered that the level of ethnic identification can have both positive and negative correlations with attitudes toward outgroups. According to social identity theory (SIT, Tajfel & Turner, 1979;1986), ethnic identification is a social mechanism that serves to maintain positive self-regard. According to SIT, individuals strongly identify with their ingroup and tend to favour their ingroup over the outgroup in order to construct a positive social identity, which is ultimately connected to a positive personal identity. It has been observed that ethnic identity can sometimes be detrimental to outgroup attitudes because ingroup members might strive to view their ingroup more favourably than the outgroup to protect their own self-esteem. Brewer (1991) proposed that ingroup favouritism could lead to a perception of distinctiveness threat, which, in turn, increases hostility and prejudice towards the outgroup. Therefore, a strong sense of ethnic identity has been associated

with ingroup preference (Masson & Verkuyten, 1993), greater susceptibility to discrimination (Operario & Fiske, 2001), prejudice (Negy, Shieve, Jensen & Uddin, 2003), and negative attitudes toward outgroups (e.g., Mummendey, Klink & Brown, 2001). In contrast to the predictions of SIT, other research has indicated that ingroup identification does not invariably lead to hostility toward outgroups (Brewer, 1999). For instance, Phinney (1992) suggested that ethnic identity and orientation towards other groups are two distinct and unrelated constructs. Phinney et al., (2007) suggested that strong ethnic identification should be associated with more positive attitudes toward outgroups, as individuals with strong ethnic identification tend to have secure identities and can better understand other groups. Phinney, Ferguson & Tate (1997) demonstrated that greater confidence in one's ethnic group membership is linked to greater openness to other groups, ultimately resulting in more positive attitudes toward outgroups. Additionally, other research has shown the protective role of ethnic identification against the negative effects of perceived ethnic discrimination in ethnically diverse environments (Lee, 2005).

Earlier research has demonstrated that an escalation in group competition and hostility results in unfavourable attitudes and behaviours towards outgroups (Jackson & Esses, 2000). According to Social Identity Theory (SIT), individuals with a stronger sense of belonging to their own group should naturally hold fewer positive opinions about outgroups in comparison to their own group (Brewer, 1991). Ethnic identification is a process related to one's social identity, and it is likely to heighten the perception of intergroup conflict, which in turn should be linked to less positive attitudes towards outgroups (Jackson, 2002). Consequently, the idea that the connection between ethnic identity and attitudes towards outgroups can be explained by an increase in the perceived level of interethnic conflict. Individuals who strongly identify with their ethnic ingroup are more likely to be attentive to perceived threats and conflicts emanating from the outgroup toward their ingroup, leading them to experience higher levels of interethnic conflict compared to those with weaker ethnic ingroup identification. These elevated levels of perceived threat and intergroup conflict are associated with negative attitudes and behaviours towards outgroups (Riek et al., 2006).

The concept that strong group affiliation or identification is linked to a less favourable view of other groups has been a prevalent idea in the field of social sciences. This notion was originally introduced by William Sumner in 1906 and he coined the term “ethnocentrism” to describe it, suggesting that it was an inevitable and universal outcome of the existence of social groups. While Sumner (1906) primarily focused on this at the group level, other researchers like Adorno and his colleagues in 1950 extended it to individual differences, arguing that individuals with strong, unquestioning loyalty to their own group would also exhibit greater prejudice towards other groups and minorities. However, the ethnocentrism hypothesis has not been universally accepted. For instance, Allport (1954) proposed that group loyalty and attitudes towards other groups might be entirely unrelated. Berry (1984) argued that ethnocentrism, characterized by strong group attachment and hostility towards other groups, was just one pattern of intergroup relations, and that a multicultural pattern, in which group attachment was associated with acceptance of other groups was also possible. Nonetheless, as noted by Brewer (1999), despite Allport’s critique, most contemporary research on intergroup relations, prejudice and discrimination tends to tacitly accept the idea that favouritism toward one’s own group and negativity toward other groups are interconnected. Brewer (1999) also pointed out that one of the key reasons for the widespread acceptance of the idea of ethnocentrism in the social sciences is that it is either directly implied or appears to be implied by influential theoretical frameworks for understanding intergroup relations. For instance, functionalist approaches like Realistic Conflict Theory (RCT) and Sumner’s own structural-functional approach assume that intergroup relations often involve competition, which generates group cohesion and attachment due to negative interdependence between groups.

Social Identity Theory (SIT), proposed by Tajfel & Turner (1979), often leads to a similar inference. This theory suggests that when individuals identify strongly with a particular group, they are motivated to differentiate that group positively from others. While this intergroup bias does not necessarily entail negativity towards outgroups and can be achieved through positive ingroup distinctions or other strategies, the overall implication of the theory appears to be that intergroup relations

tend to be competitive. This implies that greater identification with one's ingroup is typically linked to a tendency to hold less favourable views of outgroups. This perspective is supported by various scholars (Brewer, 1999; Mummendey, Klink & Brown, 2001). The earliest and likely the most influential individual-level study of ethnocentrism appeared to support the idea that strong group attachment is associated with less favourable attitudes towards outgroups. Research by Adorno et al., (1950) revealed strong positive correlations between uncritical patriotism and anti-minority and anti-Black sentiments. These correlations were so pronounced that all three aspects were combined into a single ethnocentrism scale, which was highly correlated with anti-Semitism and other measures of prejudice. However, subsequent research has presented a more subtle perspective and has not consistently endorsed the ethnocentrism hypothesis. Many studies have found that identification with national, ethnic and other significant social groups is indeed correlated with less positive attitudes towards outgroups, but the correlations tend to be weaker than those initially reported by Adorno et al., in 1950. For example, studies by researchers such as Berry (1984), McFarland (1998), Pettigrew, Jackson, Brika, Lemaine, Meertens, Wagner & Zick (1998) and Ruttenberg, Zea & Sigelman (1996) have all reported such correlations, though they were typically lower.

On the other hand, some studies have found either insignificant or weak correlations. In a notable study of 30 ethnic groups in East Africa, Brewer & Campbell (1976) found that the correlation between positive regard for one's own group and social distance from outgroups was .00 across different groups. Hinkle & Brown (1990) reviewed 14 studies and found correlations between the strength of group identification and the degree of bias in favour of the ingroup against the outgroup that ranged from significantly positive to significantly negative, with an overall correlation close to zero (+.08). One possible explanation for the inconsistent findings regarding the relationship between ethnocultural group identification and attitudes towards outgroups is that group identification may not be unidimensional, as traditional social psychological theories have assumed, but multidimensional. People may identify with groups in diverse ways, and different dimensions of identification may have varying associations with outgroup attitudes.

In a more recent research, Jackson & Smith (1999) conducted a factor analysis of various measures related to group identification, commonly used in social identity and cross-cultural studies. They identified three factors that closely resembled three of Phinney's dimensions, specifically ingroup attachment or loyalty, group self-esteem or ingroup evaluation and involvement with the cultural and customs of the group (known as "allocentrism"). Only two studies have delved into how different dimensions of group identification might be related to intergroup bias and have reported somewhat varying results. Jackson & Smith's study in 1999 found that stronger group identification across all three dimensions (attachment, group self-esteem, allocentrism) appeared to be similarly associated with greater intergroup bias. In contrast, Ellemers et al., (1999) found that only one of the three ingroup identification dimensions was linked to greater intergroup bias. The findings from both of these studies are challenging to interpret because their dependent variable, intergroup bias, combined attitudes both the ingroup and the outgroup. Consequently, any association observed between identification and intergroup bias could be attributed to attitudes towards the ingroup, the outgroup, or both, making it more complex to draw definitive conclusions.

In increasingly diverse societies, fostering positive intergroup relations is both a social imperative and a theoretical challenge. Intergroup Contact Theory (Allport, 1954) remains one of the most influential frameworks in social psychology for understanding how structured interaction between members of different social groups can reduce prejudice and improve intergroup attitudes. According to the theory, when contact occurs under optimal conditions such as equal status, cooperative goals, and institutional support can lead to reductions in stereotypes and increase mutual understanding (Pettigrew & Tropp, 2006). However, in the context of growing ethnic, cultural, and social diversity, contact is not guaranteed to yield positive outcomes. Diversity merely increases the opportunity for contact; the quantity and, more crucially, the quality of these encounters determine whether attitudes will improve or deteriorate (Pettigrew, 1998; Davies et al., 2011). While frequent contact may normalize outgroup presence, only high-quality and positive

interactions, those that are cooperative, respectful, and sustained are shown to meaningfully reduce intergroup bias (Binder et al., 2009; Barlow et al., 2012).

A key psychological factor influencing this dynamic is intergroup anxiety, or the discomfort individuals feel in anticipation of interacting with members of other groups (Stephan & Stephan, 1985; Stephan, 2014). Elevated intergroup anxiety can undermine contact by increasing cognitive load, promoting avoidance, and reinforcing negative expectations, ultimately weakening intergroup attitudes (Tropp & Pettigrew, 2005). Conversely, when anxiety is low and contact is positive, individuals are more likely to develop favorable intergroup attitudes, including reduced prejudice, increased trust, and openness to future engagement (Pettigrew & Tropp, 2006; Davies et al., 2011). This study investigates how contact frequency and quality, within diverse contexts, interact with intergroup anxiety to shape overall intergroup attitudes, with the goal of identifying the conditions that most effectively support social cohesion in pluralistic societies.

Chapter-II

STATEMENT OF THE PROBLEM

Almost every society endures the challenges of multiculturalism and yet the value of diversity is highly contested (Shelley, 2020). In a broad sense, diversity refers to the presence of members of different groups within one's environment (Tropp & Bianchi, 2006). The different types of groups can vary from ethnicity to ability, and certain types will evidently be more salient, such as groups based on sexuality or race or religion. While diversity has the potential to mediate stereotypes and add cultural value, it is sometimes viewed as a societal problem, associated with tensions, segregation and a clashing of cultures. By focusing on diversity as a problem, however, many researches have neglected to fully understand how and when diversity is associated with positive outcomes or how these can be embraced (Shelley, 2020). In the context of Mizoram, ethnic diversity appears to be one of the most visible forms of difference as it is known as a land of multi-cultural, multi-lingual and multi-religious society with almost all tribes either culturally or linguistically linked but distinct and unique in its custom, languages, dances, folklores, rituals etc. (Khangte & Fente, 2023).

As societies are becoming increasingly diverse with globalization in a porous world, new tensions arise (Silva, Bezo, Laurence & Schmid, 2023) and hence, it has become increasingly important to understand the mechanisms underlying the process of intergroup relations. Several studies have drawn on two divergent theories, the "contact" and "threat" hypotheses, respectively. One of the earliest works on contact theory proposed by Gordon Allport (1954) - the 'contact hypothesis' states that the prejudice-reducing effects of contact with specific outgroup members generalize to the outgroup as a whole, thereby impacting on broader intergroup relations. Allport (1954) stressed that for contact to have the desired impact on intergroup attitude the conditions of equal group status, common goals, intergroup cooperation and support of the goals of intergroup contact by external authorities, law, or custom were key conditions. Pettigrew (1998) later proposed an additional key condition, arguing that the contact situation must allow the opportunity for friendships to develop (Hutchison & Rosenthal, 2011).

Since its original conception, a vast amount of research has investigated whether the proposed prerequisite conditions are sufficient, or indeed necessary, for

contact to reduce prejudice. In a meta-analysis of 515 laboratory and field studies, Pettigrew & Tropp (2006) demonstrated that even when the proposed prerequisite conditions are not in place, contact reduces prejudice. However, in those studies with optimal contact conditions, even lower levels of prejudice were reported (Hutchison & Rosenthal, 2011). A considerable body of research has also established that having positive contact with outgroup members can improve attitudes toward a minority group (Allport, 1954; Harwood, Hewstone, Paolini, & Voci, 2005; Pettigrew, 1998; Pettigrew & Tropp, 2006; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007), and reduce prejudice by simultaneously reducing negative affect like intergroup anxiety (Paolini, Hewstone, Cairns, & Voci, 2004; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007). This follows that greater opportunities for such contact in diverse areas should lead the majority group to develop lesser hostile attitudes towards those ethnic groups perceived as “different” due to their increased potential to engage in intergroup contact (Hutchison & Rosenthal, 2011). However, more recent research has shown that increases in the local outgroup size or contextual exposure can also result in increased opportunities for any type of intergroup contact, including negative intergroup encounters, which can fuel prejudice sentiment (Laurence & Bentley, 2018).

On the other hand, the “threat” hypothesis posits that increase in outgroup size increases majority-groups' perceptions that minority groups are a threat to their social and economic status (Hutchison & Rosenthal, 2011). Putnam (2007) also states that increase in diversity leads to contention over limited resources and may foster outgroup distrust and ingroup solidarity. This theory postulates that the more we are brought into physical proximity with people of another race or ethnic background, the more we stick to ‘our own’ and the less we trust the ‘other’ (Blalock, 1967; Blumer, 1958; Bobo, 1999; Bobo & Tuan, 2006; Brewer & Brown, 1998; Giles & Evans, 1986; Taylor, 1998; Quillian, 1995, 1996). Blalock (1967) also predicts that increase in majority group and decrease in minority group leads to a deterioration of attitudes toward the minority group, and to greater levels of prejudice. Threats is also seen to be related to immaterial (e.g., cultural or symbolic) resources. Individuals or groups might perceive that their values or beliefs are being

undermined by an outgroup's culture (Kinder & Sears, 1981), fostering sentiments of social disintegration and societal disaffection (Van der Brug et al., 2000).

The contact hypothesis theory has been criticized for failing to account for the mediating processes through which attitudinal change is generated (Bar-On, 1999; Maoz, 2002; Pettigrew, 1998; Ross, 2000) and whether contact effects generalize beyond the immediate contact situation. Consequently, research on the contact hypothesis has evolved to focus more on process or intervening variables during contact, and on wider contextual factors that may facilitate or impede the development of better relations (Hughes, 2007; Pettigrew, 1998). Moreover, other findings indicate that increasing outgroup populations in an environment tends to result in no difference in, or more negative, out-group attitudes (Dustmann & Preston, 2001; Putnam, 2007). This has led to criticisms of the efficacy of the contact hypothesis for reducing prejudice in increasingly diverse societies (Forbes, 2004; Putnam, 2007).

Such mixed evidence invites the question as to how higher exposure to outgroups affects prejudice and the role of contact in this relationship (Laurence, Schmid & Hewstone, 2017), since studies examining how the size of the outgroup population in an environment affects attitudes have not explored the role of contact-valence in this relationship, that is, how far contact experiences are positive or negative (Hewstone, 2015); and that studies largely only focus on the role of positive, intimate forms of contact, or generic (unvalenced) mixing. Excluding the notion of contact-valence may have precluded a proper understanding of the role of contact in the exposure/prejudice relationship (Laurence et al., 2017). However, higher outgroup exposure may increase opportunities for both positive and negative contact, and while the former can reduce prejudice the latter can increase it (Barlow et al., 2012). Such are the questions that this present study shall attempt to focus on in intergroup relations using the varied groups available for study in the State of Mizoram.

The term "valence of contact" refers to the positive or negative quality of interactions between individuals or groups, particularly in the context of intergroup

relations. The quality of intergroup contact for attitude-change formed a foundation of the contact hypothesis, highlighting that contact alone is insufficient to reduce prejudice. Only contact that occurs under certain "optimal" conditions is likely to promote positive attitude change, while contact under sub-optimal conditions can even exacerbate prejudice (Allport, 1954; Amir, 1969). The valence of contact is influenced by various factors, including how individuals are treated during their interactions with outgroup members. Positive contact may include being welcomed or receiving help, while negative contact may involve harassment or other forms of mistreatment (Aberson & Gaffney, 2008; Lolliot et al., 2015; Stephan et al. 2002; Pettigrew, 2008). The situational context plays a crucial role in determining whether contact is perceived positively or negatively (Allport 1954; Pettigrew, 2008).

Conforming to the literature on intergroup attitude mentioned above, studies have also shown that intergroup contact, while often reducing anxiety, can also increase anxiety in some situations. For example, when Whites interacted with African Americans, their responses sometimes reflected an increase in perceived threat (Blascovich et al., 2001; Littleford et al., 2005). This suggests that intergroup interactions can trigger anxiety, particularly if the individuals involved view the interaction as threatening or challenging. However, despite the potential to increase anxiety, the quantity of contact plays a significant role in reducing anxiety. Studies by Blascovich et al., (2001) suggest that individuals who have frequent contact experiences with outgroup members such as African Americans tend to show fewer threat responses compared to those with less frequent contact. This aligns with the idea that the more exposure individuals have to members of other groups, the more likely they are to experience less anxiety and perceive the interaction as less threatening.

In this regard, studies by Wagner et al., (2006) demonstrated how contextual-exposure affects negative intergroup attitude via positive and/or generic intergroup contact pathways, how positive and negative contact at the individual-level is associated with negative attitude (Paolini et al., 2010; Barlow et al., 2012); and how contextual exposure predicts frequency of positive and negative contact (Pettigrew, 2008). However, no research has yet combined these factors to examine how both

positive and negative contact influence inter-ethnic attitudes, which limits our understanding of how exposure affects prejudice and the role of contact in this process, with the exception of one recent study conducted by Laurence et al., (2017) who integrated the concept of contact-valence into exposure/contact/prejudice framework, positing that exposure may affect attitudes through both positive- and negative-contact pathways.

Laurence et al., (2017) in their study found that intergroup contact can drive a positive effect/suppress a negative effect of contextual ethnic diversity as prior studies show; however, this only occurs through more positively-valenced contact. At the same time, more negatively-valenced contact can drive a negative effect/suppress a positive effect of diversity. Therefore, underlying the overall effect of exposure on intergroup attitudes are dual, countervailing pathways of positive and negative intergroup contact. This study also has implications for the debate on how exposure affects attitudes more generally. As exposure increases, a minority of individuals can become even more hostile towards outgroups as a result of, and not due to a lack of, contact. Compared to individuals in low-exposure environments, those individuals experiencing high-exposure who report more frequent negative-contact have worse outgroup attitudes relative to those who have less frequent negative-contact or no contact at all. Therefore, diversity appears to also exert a polarizing effect on attitudes towards outgroups via increasing rates of contact, driving a minority of individuals towards greater hostility.

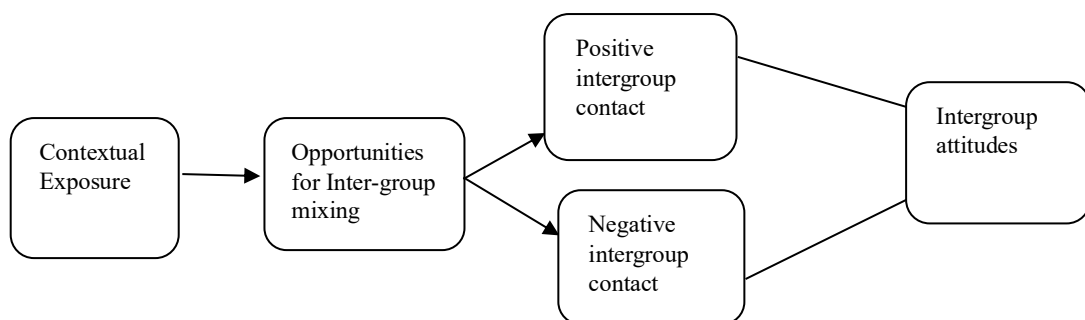


Figure 1. Countervailing pathways of the adapted ecological-contact hypothesis (Laurence et al., 2017)

Mizoram, the setting where this research is attempted, is the 23rd State of India located in the North Eastern region of the country. It shares its international borders in the East and South with Myanmar and Bangladesh to the West (Lodrick, 2023). It is the erstwhile Lushai Hills or Mizo Hills District which was formerly under the British rule. Mizo District was inaugurated on 23rd April 1953 and was alleviated to a Union Territory on the 21st January, 1972 (Rosanga, 2007) and then became a full-fledged State of the Indian Union on 20th February, 1987. At present, there are 11 districts in Mizoram, namely - Aizawl, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Serchhip, Siahla and the newly carved districts of Hnahthial, Khawzawl and Saitual.

The population of Mizoram is composed primarily of various tribes of Tibeto-Burman origin. Over time, these groups formed a cohesive socio-political identity under the broader umbrella term, collectively known as the Mizos, despite their diverse tribal and sub-tribal affiliations such as the Lushai, Hmar, Ralte, Lai/Pawi, Paite, and Mara/Lakher (Lalthangliana, 2005; Sangkima, 2000). The consolidation of these identities was influenced by shared linguistic, cultural, and administrative developments, especially during and after British colonial administration in the Lushai Hills.

In addition to the majority Mizo population, Mizoram is home to several ethnic minorities, including the Chakma, Riang (Bru), and Gorkha communities (Bareh, 2001; DOUNGEL, 2020; Lalrindiki, 2015). These groups have settled in various parts of the state and contribute to its multi-ethnic character. The demographic structure has been further shaped by internal social integration, inter-tribal relations, and the state's gradual incorporation into the Indian Union post-independence. Today, Mizoram reflects a complex population profile characterized by ethnic diversity, shared cultural heritage, and a relatively high degree of literacy and social cohesion. It is a heterogeneous society comprising of nine major and thirteen minor tribes or sub-tribes such as the Lusei, Pawi or Lai, Hmar, Lakher or Mara, Paite, Ralte, Chakma, Riang, Mogh or Mok or Thakma, with these tribes and sub-tribes being further divided into a number of clans (Verghese & Thanzawna, 1997) who followed various religious background. Thus, it can be said that Mizoram is a multi-cultural,

multi-lingual and multi-religious society with almost all tribes either culturally or linguistically linked but distinct and unique in its custom, languages, dances, folklores, rituals etc.

The divisions of such ethnic groups somewhat still persist which is of interest to study in relation to group processes. Besides these groups of sub-tribes or clans among the Mizo, several other grouping can be observed in the Mizo society based on

- 1) Citizenship - people living in Mizoram can be classified according to their citizenship i.e whether they are migrants (burmese, bangladeshi etc) or host citizens.
- 2) Linguistic - people can be grouped according to the major languages spoken as per census 2001 which are Mizo (650,605), Chakma (80,389), Lakher (34,731), Pawi (24,900), Kuki (21,040), Tripuri (17,580), Hmar (14,240), Paite (14,367) (Distribution of the 22 Scheduled Languages", 2014).
- 3) Local or non-local: There are numerous citizens who belongs to the mainland India such as the Santhals, Manipuri, Bengali, Assamese etc and the local people who are native of Mizoram.
- 4) Ethnic groups - Besides the local citizens of Mizoram there are also other ethnic group such as the Gorkhas, Chakmas and Brus.
- 5) Religious groups - According to 2011 census, the majority of people living in Mizoram are Christians (87.16%), following Buddhist (8.51%), Hindu (2.75%), Muslims (1.35%), Sikh (0.03%) and Jain (0.03%) ("Population by religion community - 2011". Census of India, 2011). The Christians can also be sub-grouped according to their denominations. It is assumed that Mizoram Presbyterian Church of India constitute the largest denomination followed by Baptist Church of Mizoram. Other Christian churches present in Mizoram include the United Pentecostal Church, the Salvation Army, the Seventh-day Adventist Church, Kohhran Thianghlum, Roman Catholic, Lairam Isua Krista Baptist Kohhran (LIKBBK), Congregational Church of India (Maraland), Evangelical Church of Maraland, Independent Church of India (ICI) and Evangelical Free Church of India (EFCI).

6) Gender - People can also be grouped according to their gender (male, female, gay, gender not specified).

7) Health related groups - According to health-related problems, people can also classify such as those patients who have communicable or non-communicable diseases, leprosy, HIV patients, cancer patients etc.

As may be seen above, Mizoram has numerous communities and groups according to demographic compositions based on citizenship, languages, local / non-local groups, ethnic groups, religious group, gender, sub-tribes and health related groups. It would be of great interest to study the different processes underlying intergroup relations. Prior studies (Oliver & Wong, 2003; Branton & Jones, 2005; Putnam, 2007; Bowyer, 2008; Legewie, 2013; Laurence, 2014) shows that diversity generates greater intergroup contact and that this greater mixing will either drive a positive overall effect of diversity (ecological-contact hypothesis) or counteract an otherwise negative effect of diversity.

There is also evidence that exposure exhibits both positive and negative associations with indicators of intergroup attitudes, emerging from two competing pathways: a positive, behavioral pathway via intergroup contact and a negative, psychological pathway via perceived-threat. The more frequent intergroup contact experienced at higher exposure appears to counteract an otherwise negative impact of exposure on attitudes, attributed to a pathway of perceived-threat (Laurence et al., 2017). Proving of such a theory of positive and negative asymmetry of contact would be the challenge of this study among the various groups in Mizoram. Thus, following the review of literature, the present study aims to explore the role of contact valence in understanding the overall intergroup processes among the different groups classified from the most diverse to the least diverse locations in Mizoram.

OBJECTIVES:

1. To examine whether diversity levels will have an impact on intergroup anxiety and intergroup attitude.
2. To elucidate the role of frequency of intergroup contact on intergroup anxiety and intergroup attitude.
3. To explore whether increasing diversity will exert both positive and negative indirect effects on intergroup anxiety and intergroup attitude via pathways of contact.
4. To explore the role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (high level of intergroup exposure) and intergroup anxiety and intergroup attitude.

HYPOTHESES:

1. Individuals having high diversity levels will have lower intergroup anxiety and more positive attitude than those with moderate or low levels of diversity.
2. Individuals with high levels of intergroup contact will have lower intergroup anxiety and more positive attitudes than individuals with low frequency of contact.
3. Increasing outgroup exposure will exert a positive indirect effect on intergroup anxiety and intergroup attitude via positive contact, but also a negative indirect effect via negative intergroup contact.
4. It is expected that only after controlling for positive intergroup contact in particular (and not all contact) will a negative effect of contextual-exposure emerge; and that any emergent negative effect of outgroup exposure on anxiety and attitude will (in part) be accounted for by the frequency of negative contact.

Chapter - III

METHODS AND PROCEDURE

Sample

To address the principal objective of this study i.e. to study the role of contact valence in intergroup processes, a representative sample of Mizo young adults (Santrock, 2016) comprising of 510 participants with their age ranging between 20 to 40 years (Mean age of 28 years) were obtained in equal proportion of male and female gender, purposefully selected from three district capitals of Mizoram following a multistage sampling procedure as given below: -

In the first stage of sampling, demographic composition and diversity of groups according to observed grouping criteria such as language, ethnicity, religion, religious denomination, gender and health related categories in the 8 district capitals of Mizoram was first ascertained from the secondary data available with the concerned departments and organizations as listed below:

1. Mother tongue data- Mizoram, Census of India, 2011.
2. Religion data- Mizoram, Census of India, 2011, Office of the Registrar General & Census Commissioner, India Ministry of Home Affairs, Government of India.
3. Statistical Handbook Mizoram, 2018; Statistics Report 2017-2018.
4. Mizoram Presbyterian Church; 51st General Conference Report Book, 2019.
5. United Pentecostal Church North East India.
6. District wise Time Series Church Statistics 2017-18, Seventh-day Adventists.
7. Report Book, 28th General Assembly, United Pentecostal Church. 2022.
8. Statistic Report from different Churches such as Baptist Church of Mizoram, Evangelical Church of Maraland, LIKBK, IKK, Roman Catholic Church, Salvation Army.
9. Statistic Report from Population Based Cancer Research (PBCR, 2016).
10. Statistic Report from The Office of the Project Director, State AIDS Control Society, Mizoram: Aizawl. 2018.

In the second stage, the district capitals were ranked from the most diverse to the least diverse on the different grouping criteria of languages, ethnicity, religion and religious denomination, gender and health related categories, according to the diversity of the groups. The results of such diversity on different criteria are given in Appendix VI- IX.

In the third stage, three district capitals in order of their diversity were selected for data collection. Out of the different grouping criteria mentioned above, ethnic diversity was found to be most relevant and salient to be used as the main criterion to reflect diversity levels of the eight districts. Three district capitals in order of their ethnic diversity were selected for data collection, the selection of which was based on the levels of intergroup exposure of the “ethnicity” grouping criterion that cuts across all locations from the highest to the lowest levels. As such, Lawngtlai district was highest in terms of ethnic diversity, followed by Aizawl district at medium level of ethnic diversity, and Serchhip district turned out to be the least ethnically diverse.

As parametric statistics were envisaged to be used in the analyses of the data, data were first screened, extreme outliers were deleted, mild outliers were winsorized and equal number of participants were randomly generated in *SPSS* for each cell of the design to ensure the statistical power of interpretation. The final sample thus retained was as follows: - 510 Mizo young adult participants comprising of 170 (Male = 85; Female = 85) from Lawngtlai District with Mean age of 29 years; 170 (Male = 85; Female = 85) from Aizawl District with Mean age of 26 years; and 170 (Male = 85; Female = 85) from Serchhip District with Mean age of 28 years.

To ensure sample representativeness and maintenance of homogeneity, a detailed demographic information such as age, sex, educational qualification, citizenship, occupation, type of family, permanent residence area, ethnicity, religion, religious denomination, native language was taken. Following Laurence et al., (2017) percentage of levels of intergroup exposure in the neighbourhood and workplace was also recorded with the aim to maintain homogeneity of sample and be taken as covariates.

Among 510 respondents, 50% constitute the male population and the remaining 50% are females. The percentage of young adult respondents who studied till matriculation level was 4.1%, while .4% did not attend school at all. 28.2% reported to have completed 12th Standard, while 64.1 % studied till graduation level and 3.1% completed their Master's degree and above. Amongst the respondents, 36.5% were students, 15.3% work in Private business, 31.8% work under government services while 4.7% reported as having their own income one way or another, and 11.8% reported as having no source of income. 60.6% of the respondents lived in joint families, 27.3%% lived in nuclear families and 12.2% of the respondents reported as living alone.

From the respondents, 87.7% reported Mizo as their mother tongue, 9.1% reported Lai as their mother tongue, 1.2% Mara, .6% Gorkha, .2% Bru, .2% Paite, .4% Pawi, .8% Hmar, .2% Chakma, .2% Lakher, .2% Simte, .2% Pang. Out of the respondents, 77.3% reported as belonging to Mizo ethnic group, 16.5% belongs to Lai/Pawi ethnic group, 1.2% belongs to Hmar, 2% belongs to Mara ethnic group, .6% belongs to Paite, .6% belongs to Gorkha ethnic group, .2% belongs to Bru, .2% belongs to Chakma, Hindi, Tlumang, Simte and Bawm respectively.

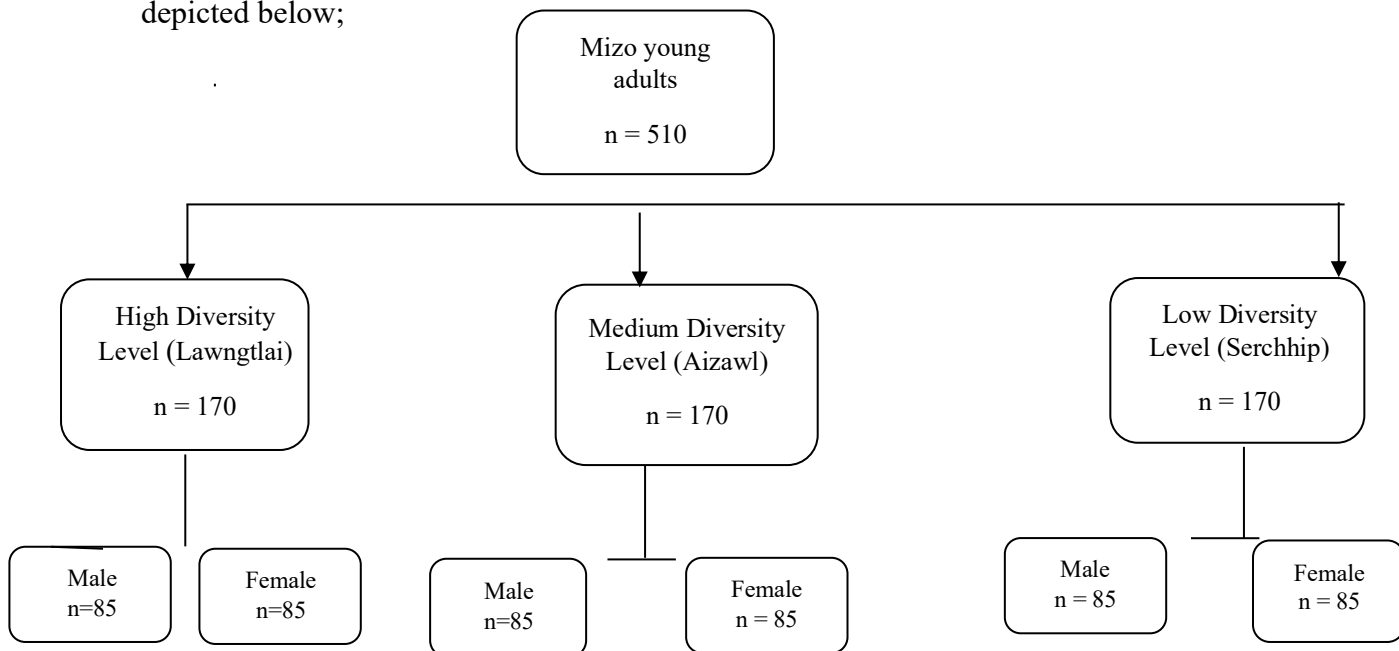
From the sample collected, 99% of the respondents were Christians, .2% were Hindu and .8% reported as having no religion. Among religious denomination, 53.7% belongs to Mizoram Presbyterian Church, 14.7% belongs to Baptist Church of Mizoram, 13.7 % belongs to LIKBK, 6.9% belongs to UPC-NE, 3.3% belongs to Roman Catholic, 2.2% belongs to Salvation Army, 1.4% belongs to ECM, .8% belongs to UPC-Mizoram, .8% belongs to IKK, .6% Seventhday Adventist, .2% belongs to CBC, ICI, MITPC respectively, the remaining 1.3% reported as having no denomination.

Design of the Study

To address the objectives, the study incorporated two-way classification of variables 'Diversity Levels' (3 districts in order of their diversity) and 'Sex' (male and female) as depicted below. Between-group factorial design is used with a view to study the relationships of the independent variables (Levels of Diversity, Frequency

of Intergroup Contact, Contact Valence, Neighbourhood and Workplace Exposure) and dependent variables (Intergroup Anxiety, Intergroup Attitude) underlying intergroup processes.

Figure 2: Sample characteristics of a 3 X 2 (3 Districts x 2 Sex) factorial design as depicted below;



Procedure

Data collection was conducted using Google Forms during the COVID-19 pandemic, as in-person interaction and travel across the state were not feasible due to public health restrictions. The survey was disseminated digitally via WhatsApp to participants across the three districts of Lawngtlai, Aizawl, and Serchhip. WhatsApp was selected as the primary communication channel given its widespread use and accessibility during the lockdown, when most individuals were confined to their homes. Clear and concise instructions were provided alongside the questionnaire to ensure proper understanding and participation. Additionally, numerous follow-up telephone calls were made to encourage responses. Participants were assured of both confidentiality and anonymity in line with ethical standards. As emphasized in the APA Ethical Principles of Psychologists and Code of Conduct, researchers are

obligated to “protect the confidentiality of all information obtained in the course of their work” and to ensure that “participation is voluntary, informed, and conducted with full respect for individuals’ rights and dignity” (American Psychological Association, 2017, Standards 3.10, 4.01).

Tools

The following psychological measures were used for the study: -

i) General Intergroup Contact Quantity and Contact Quality Scale (COCO; Islam & Hewstone, 1993)

General Intergroup Contact Quantity and Contact Quality Scale developed by Islam & Hewstone (1993) is a 10-item scale, using five items each for quantity and quality of intergroup contacts. While the five quantity items ask respondents how much contact they have had with the chosen outgroup in a variety of settings, the five contact quality items assess the overall valence of the contact experience. Higher scores on the contact quantity measure indicate having had more contact experiences with the chosen outgroup. Higher scores on the contact quality scale indicate having had more pleasant contact with the chosen outgroup.

ii) Feeling Thermometer (Converse, Dotson, Hoag & McGee, 1980)

Feeling Thermometer is used to assess attitude towards a variety of social groups. It is a 10-point thermometer-like picture running from 0 to 10. On the thermometer, 0 was labeled as ‘cold’, 5 as ‘neutral’ and 10 was labelled as ‘warm’. Respondents were then asked: ‘Please rate how YOU feel about the following groups on a thermometer that runs from zero to ten degrees. The higher the number, the warmer or more favorable you feel. The lower the number, the colder or less favorable you feel. How do you feel about people from another ethnic group?’.

iii) Intergroup Anxiety Scale – Short Form (IAS; Paolini, S., Hewstone, M., Cairns, E., & Voci, A, 2004).

Intergroup Anxiety Scale (IAS) – *Short Form* is a 6-item scale by which intergroup anxiety is assessed. It is administered by asking participants to imagine how they would feel if they were the only member of their ingroup interacting with

people from (an) other social group(s). It covers a wide range of adjectives that describe one's feeling during an intergroup encounter.

iv) Negative Experiences Inventory (NEI; Stephan, Stephan, Demitrakis, Yamada & Clason, 2000)

NEI is a 17-item scale measuring negative contact which was developed by Stephan et.al. (2000) who posited it to be an antecedent to intergroup threat. Negative contact was measured by asking respondents to report how often they had experienced various examples of negative contact with out-group members. It is a 9-point likert-type rating scale, ranging from never to very frequently, with higher scores representing more negative contact.

v) Valenced Contact (Single-Item Scale) (VC; Barlow, Paolini & Pedersen, 2012)

Valenced Contact assesses both positive and negative contact. The two single items of valence contact viz. Positive and Negative Valence were rated on a 7-point rating scale. Higher scores on the single negative contact item represent more negative contact experiences. Similarly higher scores on the positive contact item represent more positive contact.

Chapter-IV

RESULTS AND DISCUSSION

To address the main objective of elucidating the role of intergroup contact (levels of exposure (diversity, frequency and valence) on intergroup attitudes and intergroup anxiety among young adults in Mizoram, demographic composition and diversity of groups according to the possible grouping criteria of language, ethnicity, religion, religious denomination, gender and health related categories in the eight district capitals of Mizoram (Aizawl, Lunglei, Siaha, Champhai, Kolasib, Serchhip, Lawngtlai and Mamit districts) were first ascertained from various secondary data available with the governments, non-government organisations, as well as various religious institutions and organisations as listed in the Appendix VI-IX. According to the diversity of the grouping variables, the eight district capitals were ranked from the most diverse to the least diverse on the different grouping criteria as mentioned. Out of the different grouping criteria mentioned above, ethnicity was revealed as the main criterion to reflect diversity of the eight districts as it appeared to be most salient. The results of such diversity on different criteria are given in Appendix VI-IX. Three district capitals in order of their diversity were selected for data collection, the selection of which was based on the levels of intergroup exposure of the “ethnicity” grouping criterion that cuts across all locations from the highest to the lowest levels. As such, Lawngtlai District was highest in terms of ethnic diversity, followed by Aizawl District at medium level of diversity, and Serchhip District turned out to be the least ethnically diverse.

Thus, according to the levels of ethnic diversity of the population of the districts which were determined from the secondary data, data were then collected in the three districts of Mizoram. Lawngtlai District represented highest ethnic diversity, Aizawl District represented medium level of ethnic diversity, and Serchhip District represented lowest level of ethnic diversity. Participant-wise scores on the specific items of all the behavioral measures of i) intergroup contact quantity and contact quality scale (Contact Quantity and Contact Quality Scale, Islam & Hewstone, 1993), ii) intergroup attitude (Feeling Thermometer, Converse et al., 1980), iii) intergroup anxiety (Intergroup Anxiety Scale, Paolini et al., 2004), iv) negative experiences (Negative Experiences Inventory, Stephan et al., 2000) and intergroup contact valence (Valenced Contact, Barlow et al., 2012) were first

prepared in SPSS (Statistical Package for Social Sciences, Version 22) for statistical analyses. As parametric statistics were envisaged to be used, data were first screened, extreme outliers were deleted, mild outliers were winsorized to maintain equal sample size in each cell of the design (3 districts x 2 sex). The following diagnostic tests of assumptions that underlie the application of parametric tests were first checked and were found generally acceptable: linearity, normality (skewness/kurtosis), homogeneity of variance (Levene's statistic) /homoscedasticity and independence of errors as applicable for the eight groups in the study namely, Lawngtlai District - males and females, Aizawl District – males and females, Serchhip District – males and females. However, given the robustness of the parametric methods used, and considering the equal sample sizes randomly generated using *SPSS* for each cell of the design, non-significance level of diagnostic test of parametric assumptions were set at a lenient .01 level, following Fields (2016). These exercises in data screening yielded a total sample size of 510 participants, with 170 participants in each cell of the design (3 districts x 2 sex).

Psychometric Properties of the Behavioural Measures

Psychometric adequacy of each of the behavioural measures were first ascertained which included (i) item-total coefficients of correlation (and the relationship between the specific items of the sub-scales as an index of internal consistency), (ii) reliability coefficients (Cronbach's Alpha of sub-scales and full scales), (iii) relationships between the scales to relate the constructs in the target population. Further, the Mean and SD values were included for comparison of the test scores between the groups, and the Skewness and Kurtosis with Standard Errors of both the full-fledged scales and the sub scales to check the data distributions for further statistical analyses. It may be noted that none of the Skew and Kurtosis (presented in the ensuing tables) were greater than twice the Standard Error (Miles & Shevlin (2001). This was followed by statistical analyses of the data using SPSS 22 to address each of the objectives and hypotheses set forth for the study.

The results of psychometric properties of the measures used in this study are given below: -

i. General Intergroup Contact Quantity and Contact Quality Scale (CQCQ; Islam & Hewstone ,1993)

General Intergroup Contact Quantity and Contact Quality Scale developed by Islam & Hewstone (1993) is a 10-item scale, using five items each for quantity and quality of intergroup contacts. While the five quantity items ask respondents how much contact they have had with the chosen outgroup in a variety of settings, the five contact quality items assess the overall valence of the contact experience. Higher scores on the contact quantity measure indicate having had more contact experiences with the chosen outgroup. Higher scores on the contact quality scale indicate having had more pleasant contact with the chosen outgroup.

Item-total coefficients of correlation for the Contact Quantity scale ranged from .68 to .78 for male and .62 to .71 for female. For the Contact Quality scale, they ranged from .70 to .82 for male and .63 to .77 for female. Analysis of Reliability Coefficients (Table 1.1) shows a high range of .79 to .82 over all levels of analyses for the three districts. A similar review of reliability report on CQCQ among Hindu and Muslim students attending a Bangladeshi University by Islam & Hewstone (1993) shows Cronbach's alpha values of .90 and .82 for Hindus and Muslims, respectively. In Lawngtlai District, the mean Contact Quantity scores are 19.24 for males and 18.45 for females. In Aizawl District, males have a mean score of 17.52, while females have a higher mean of 19.07. In Serchhip District, the mean Contact Quantity scores are 14.83 for males and 14.47 for females. The mean scores of Contact Quality in Lawngtlai District are 21.30 for males and 21.35 for females. In Aizawl District, males have a mean score of 21.56, whereas females show a notably higher mean of 23.61. The mean scores in Serchhip District are 18.32 for males and 19.08 for females.

The inter-scale relationship between Contact Quantity and Contact Quality was found to be significantly positive for all groups ranging from .56 to .74. This finding is also in line with numerous studies which have reported a significant

positive correlation between contact quantity and contact quality ranging from $r = .36$ (Tausch, Hewstone et al., 2007; Voci & Hewstone, 2003) to $r = .49$ (Tausch, Tam et al. 2007). A specimen copy of the CQCQ can be seen in Appendix-I. Descriptive statistics of Mean, SD, Skewness and Kurtosis with their Standard Errors, Cronbach's Alphas, inter-scale Coefficients of correlation of CQCQ are also given in Table 1.1.

Table 1.1: Mean, Standard Deviation, Skewness, Kurtosis and Cronbach's Alpha for Contact Quantity and Contact Quality scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n= 170)

Groups	General Intergroup Contact Quantity and Contact Quality (CQCQ)	Contact Quantity (CQTY)		Contact Quality (CQLT)	
	Gender	Male	Female	Male	Female
LAWNGTLAI DISTRICT	Mean	19.24	18.45	21.30	21.35
	SD	8.52	8.47	8.47	7.27
	Skewness	.163	.134	-.197	-.284
	Std.Error	.261	.261	.251	.261
	Kurtosis	-.858	-1.164	-.784	-.854
	Std.Error	.517	.517	.517	.517
	Cronbach's alpha	.812	.819	.814	.801
	Interscaler CQTY		1	.732**	.635**
	CQLT	.732**	.664**	1	

AIZAWL DISTRICT	Mean	17.52	19.07	21.56	23.61
	SD	8.68	9.16	7.71	7.20
	Skewness	.305	.073	-.205	-.374
	Std.Error	.261	.261	.261	.261
	Kurtosis	-1.16	-1.26	-.627	-.475
	Std.Error	.517	.517	.517	.517
	Cronbach's alpha	.81	.81	.80	.80
	Interscaler CQTY		1	.734**	.724**
	CQLT	.734**	.724**	1	
SERCHHIP DISTRICT	Mean	14.83	14.47	18.32	19.08
	SD	7.53	7.46	7.36	7.27
	Skewness	.478	.579	-.116	.080
	Std.Error	.261	.261	.261	.261
	Kurtosis	-.535	-.259	-.722	-.572
	Std.Error	.517	.517	.517	.517
	Cronbach's alpha	.80	.80	.79	.80
	Interscaler CQTY		1	.747**	.563**
	CQLT			1	

ii. Feeling Thermometer (Converse, Dotson, Hoag & McGee, 1980)

Feeling Thermometer is used to assess attitude towards a variety of social groups. It is a 10-point thermometer-like picture running from 0 to 10. On the thermometer, 0 was labeled as ‘cold’, 5 as ‘neutral’ and 10 was labelled as ‘warm’. Respondents were then asked: ‘Please rate how YOU feel about the following groups on a thermometer that runs from zero to ten degrees. The higher the number, the warmer or more favorable you feel. The lower the number, the colder or less favorable you feel. How do you feel about people from another ethnic group?’. The Mean score ranged between 5.24 and 6.48 on a 10-point scale which is indicative of a neutral attitude towards ethnic outgroup members across the three districts of Lawngtlai District ($M=5.67$ for males; $M=5.68$ for females), Aizawl District ($M=6.01$ for males and $M=6.48$ for females) and Serchhip District ($M=5.24$ for males and $M=5.52$ for females). A specimen copy of the Feeling Thermometer can be seen in Appendix-II. Descriptive statistics of Mean, SD, Skewness, Kurtosis, and Standard Errors of the Feeling Thermometer are put together in Table 1.2.

Table 1.2: Mean, Standard deviation, Skewness, Kurtosis of Feeling Thermometer scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n= 170)

Groups	Scale	Feeling Thermometer	
	Gender	Male	Female
LAWNGTLAI DISTRICT	Mean	5.67	5.68
	SD	2.39	2.00
	Skewness	-.091	.067
	Std.Error	.261	.261
	Kurtosis	-.068	.949
	Std.Error	.517	.517

AIZAWL DISTRICT	Mean	6.01	6.48
	SD	2.38	1.93
	Skewness	-.431	-.209
	Std.Error	.261	.261
	Kurtosis	.062	.365
	Std.Error	.517	.517
SERCHHIP DISTRICT	Mean	5.24	5.52
	SD	2.33	1.65
	Skewness	-.622	.292
	Std.Error	.261	.261
	Kurtosis	.305	1.36
	Std.Error	.517	.517

iii. Intergroup Anxiety Scale – Short Form (IAS; Paolini et al., 2004)

Intergroup Anxiety Scale (IAS) – Short Form is a 6-item scale by which intergroup anxiety is assessed. It is administered by asking participants to imagine how they would feel if they were the only member of their ingroup interacting with people from (an) other social group(s). It covers a wide range of adjectives that describe one's feeling during an intergroup encounter. Intergroup anxiety has been found to be the most significant mediator between contact and attitudes (Pettigrew & Troop, 2008). Stephan and Stephan originally used 10-point rating scales but other studies have successfully used 7-point rating scales (e.g., Islam & Hewstone, 1993). The Mean values of IAS in Lawngtlai District ($M=28.36$ for males and $M=32.02$ for females), Aizawl District ($M=28.50$ for males and $M=32.30$ for females), Serchhip District ($M=29.49$ for males and $M=32.63$) generally falls within average.

Item-total coefficient correlation of IAS for males ranged from .204 to .437 while for females, they ranged from .206 to .537. As shown in Table 1.3, reliability coefficients ranged between .71 to .74 over all the levels of analyses from the three districts which is in line with the original findings by Stephan and Stephan (1985) and studies by Islam & Hewstone (1993). A specimen copy of the IAS can be seen in Appendix-III. Descriptive statistics of Mean, SD, Skewness and Kurtosis with their Standard Errors and Cronbach's alpha are put together in Table 1.3.

Table 1.3: Mean, Standard Deviation, Skewness, Kurtosis and Cronbach's Alpha for Intergroup Anxiety Scale (IAS) scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n= 170).

Groups	Scale	Intergroup Anxiety Scale (IAS)	
	Gender	Male	Female
LAWNGTLAI DISTRICT	Mean	28.36	32.02
	SD	8.73	9.42
	Skewness	-.545	-.408
	Std.Error	.261	.261
	Kurtosis	.060	-.333
	Std.Error	.517	.517
	Cronbach's Alpha	.714	.709
AIZAWL DISTRICT	Mean	28.50	32.30
	SD	8.16	7.85
	Skewness	-.499	-.702
	Std.Error	.261	.261
	Kurtosis	.445	1.44
	Std.Error	.517	.517
	Cronbach's Alpha	.726	.739
SERCHHIP DISTRICT	Mean	29.49	32.63
	SD	8.50	9.14

Skewness	-.142	-.467
Std.Error	.261	.261
Kurtosis	-.656	.568
Std.Error	.517	.517
Cronbach's Alpha	.716	.742

iv. Negative Experiences Inventory (NEI; Stephan, C.W., Stephan, W.G., Demitrakis, K.M., Yamada, A.M., & Clason, D.L., 2000)

NEI is a 17-item scale measuring negative contact which was developed by Stephan et al., (2000) who posited it to be an antecedent to intergroup threat. It uses a 9-point Likert-type rating scales, ranging from never to very frequently, with higher scores representing more negative contact. The mean values of NEI for males in Lawngtlai District is ($M=30.40$) and for females ($M=28.21$), in Aizawl District ($M=33.37$) for males and ($M=29.05$) for females, whereas in Serchhip District, the mean values are ($M=30.07$) for males and ($M=28.28$) for females.

Item-total coefficient correlation for the NEI ranged from .174 to .746 for males and .173 to .707 for females. The reliability coefficients (Cronbach's Alpha) ranged between .74 and .75 over all the levels of analyses from the three locations, indicating the robustness of the scale. Studies by Stephan et.al., 2000 also showed high Cronbach alpha coefficients across different samples. A specimen copy of the NEI can be seen in Appendix-IV. Descriptive statistics of Mean, SD, Skewness and Kurtosis with their Standard Errors and Cronbach's alpha are also given in Table 1.4.

Table 1.4: Mean, Standard deviation, Skewness, Kurtosis and Cronbach's Alpha for Negative Experiences Inventory (NEI) scores for Lawngtlai District ($n=170$); Aizawl District ($n=170$) and Serchhip District ($n=170$).

Groups	Scale	Negative Experiences Inventory (NEI)	
	Gender	Male	Female
LAWNGTLAI DISTRICT	Mean	30.40	28.21
	SD	12.42	11.88
	Skewness	.946	1.46
	Std.Error	.261	.261
	Kurtosis	.068	1.850
	Std.Error	.517	.517
	Cronbach's Alpha	.749	.753
AIZAWL DISTRICT	Mean	33.37	29.05
	SD	13.82	11.80
	Skewness	.677	1.51
	Std.Error	.261	.261
	Kurtosis	-.595	2.14
	Std.Error	.517	.517
	Cronbach's Alpha	.756	.750
SERCHHIP DISTRICT	Mean	30.07	28.28
	SD	11.47	10.36
	Skewness	1.15	.910
	Std.Error	.261	.261
	Kurtosis	1.169	-.098
	Std.Error	.517	.517
	Cronbach's Alpha	.744	.749

v. Valenced Contact (Single-Item Scale) (VC; Barlow, F.K., Paolini, S., Pedersen, A., 2012)

Valenced Contact assesses both positive and negative contact. The two single items of valence contact viz. Positive and Negative Valence were rated on a 7-point

rating scale. Higher scores on the single negative contact item represent more negative contact experiences. Similarly higher scores on the positive contact item represent more positive contact.

Mean values for Valenced Contact (Negative Contact) ranged from 1.49 to 1.71 across the different districts, which indicate participants rarely experienced negative contact with ethnic outgroup members. Mean values for Valenced Contact (Positive Contact) ranged from 4.81 to 5.45 across the different districts, indicating participants frequently experienced positive contact with ethnic outgroup members. Barlow et al., (2012) also reported the mean value for positive contact as $M = 4.97$ ($SD = 1.36$), and for negative contact as $M = 3.01$ ($SD = 1.40$). A specimen copy of the Valence Contact can be seen in Appendix-V. Descriptive statistics of Mean, SD, Skewness and Kurtosis with their Standard Errors for the three districts are also given in Table 1.5.

Table 1.5: Mean, Standard Deviation, Skewness and Kurtosis for Valenced Contact Negative Contact (VCNC) and Valenced Contact Positive Contact (VCPC) scores for Lawngtlai District (n=170); Aizawl District (n=170) and Serchhip District (n=170).

Groups	Gender (VC)	Valenced Contact Negative Contact (VCNC)		Valenced Contact Positive Contact (VCPC)	
		Male	Female	Male	Female
LAWNGTLAI DISTRICT	Mean	1.71	1.68	5.20	5.29
	SD	.94	.91	1.30	1.27
	Skewness	1.11	1.157	.143	-.005
	Std.Error	.261	.261	.261	.261
	Kurtosis	.161	.311	-1.450	-1.340
	Std.error	.517	.517	.517	.517
AIZAWL	Mean	1.61	1.70	5.45	5.22

DISTRICT	SD	.74	.93	1.09	1.17
	Skewness	.771	1.25	-.004	-.046
	Std.Error	.261	.261	.261	.261
	Kurtosis	-.771	.635	-1.30	-.996
	Std.error	.517	.517	.517	.517
SERCHHIP DISTRICT	Mean	1.61	1.49	4.87	4.81
	SD	.93	.95	1.18	1.32
	Skewness	1.29	1.75	.654	.482
	Std.Error	.261	.261	.261	.261
	Kurtosis	.418	1.67	-.779	-1.024
	Std.error	.517	.517	.517	.517

In summary, the psychometric checks of the behavioural measures for use in the target population generally showed acceptable results. The General Intergroup Contact Quantity and Quality Scale (Islam & Hewstone, 1993) demonstrated high reliability ($\alpha = .79-.82$), with item-total correlations ranging from .62 to .82. Results indicated that both contact quantity and quality were significantly higher in ethnically diverse districts compared to less diverse ones, and the two constructs were strongly correlated ($r = .56-.79$). Attitudes toward ethnic outgroups, measured using a Feeling Thermometer, revealed overall neutral affect ($M = 5.24-6.48$ on a 10-point scale). The Intergroup Anxiety Scale (IAS) – *Short Form* showed moderate reliability ($\alpha = .70-.74$), consistent with prior findings, with item-total correlations between .206 and .537. Negative intergroup interactions were assessed using the Negative Experience Inventory (Stephan et al., 2000), which demonstrated acceptable reliability ($\alpha = .74-.75$). Finally, Valenced Contact ratings indicated infrequent negative contact ($M = 1.49-1.71$) and moderately frequent positive contact ($M = 4.81-5.45$), suggesting that participants generally reported more favorable intergroup experiences.

Effects of Diversity Levels on Intergroup Anxiety and Intergroup Attitude Among Young Adults in Mizoram.

The first objective of the study attempted to highlight the impact of diversity levels on intergroup anxiety and intergroup attitude. Consequently, the hypothesis that followed was: Individuals having high diversity levels will have more positive attitude and lower intergroup anxiety than those with moderate or low diversity levels.

It may be noted at this juncture that even though “Sex” effect was not explicitly stated as part of the study's objectives, it was initially analyzed in order to explore potential sex-related differences that might provide valuable insights into the overall findings due to the naturally distinguishing behavioural differences of the two sexes, male and female.

Therefore, the effects of ‘Diversity Levels and Sex’, as well as their interaction effects on intergroup anxiety and attitude were addressed using Two-Way ANOVA (3 Diversity Levels x 2 Sex). The levels of diversity were determined through a multistage sampling procedure, as outlined in the first paragraph of Chapter 4. The results of Two-Way ANOVA (3 Diversity Levels x 2 Sex) on intergroup anxiety and intergroup attitude are put together in Table 2.1. Consequent Levene’s statistics are given in Table 2.2. Their corresponding descriptive statistics for Mean, SD and N for each cell of the design are given in Table 2.3. In order to ensure that the requirements for parametric testing were met, Skewness, Kurtosis and Homogeneity of variances (Levene’s statistics) were examined carefully. The results for Skewness and Kurtosis did not violate the demands for normal distribution, and the Levene’s statistics was at the cut-off point set for diagnostic statistics at 0.01 level (Andy Fields, 2016).

The results of the Two-Way ANOVA (3 Diversity Levels x 2 Sex) given in Table 2.1 indicated significant effect of diversity levels on intergroup attitude. However, the result was non-significant on intergroup anxiety. The LSD Post-hoc mean test was employed (Table 2.4) to find out which groups differed in their Mean score of Intergroup Attitude. Results indicate that individuals having medium

(Aizawl District $M= 6.01$, $SD= 2.38$ for males and $M= 6.48$, $SD= 1.93$ for females) and higher levels (Lawngtlai District $M= 5.67$, $SD= 2.39$ for males and $M= 5.58$, $SD= 2.00$ for females) of diversity levels have more positive or favorable attitude towards other ethnic group members than those having low level of intergroup exposure (Serchhip District $M= 5.24$, $SD= 2.33$ for males and $M= 5.52$, $SD= 1.65$ for females).

In addition to the main dependent variables of intergroup anxiety and attitude, significant differences in quantity and quality of contacts and Valenced Contact Positive Contact (VCPC) were also seen as preliminary assessment to support contacts in different levels of diversity. As would be expected, Mean values of Contact Quantity in least ethnic diverse location, Serchhip District ($M= 18.32$ for males and $M= 19.08$ for females) was found to be relatively lower than moderate diverse location, Aizawl District ($M=21.56$ for males and $M=23.61$ for females) and highly ethnic diverse locations of Lawngtlai Districts ($M=21.30$ for males and $M=21.35$ for females), which clearly indicates that people living in least ethnic diverse location has lower frequency of intergroup encounters than people living in moderate and highly ethnic diverse districts. Mean values of Contact Quality for least diverse location (Serchhip District) were also relatively lower ($M=18.32$ for males and $M=19.08$ for females) than moderate and highly diverse locations of Aizawl District ($M=21.56$ for males and $M=23.61$ for females) and Lawngtlai Districts ($M=21.30$ for males and $M=21.35$ for females) indicating that people living in moderate and high ethnic diverse locations experienced more positive intergroup encounter than those living in least ethnic diverse location. The mean values of Valenced Contact Positive Contact (VCPC) in least ethnic diverse location, Serchhip District ($M= 4.87$ for males and $M= 4.81$ for females) were also found to be lower than moderate and highly diverse locations of Aizawl District ($M=5.45$ for males and $M=5.22$ for females) and Lawngtlai Districts ($M=5.20$ for males and $M=5.29$ for females) which reveals that people living in moderate and high ethnic diverse locations experienced more positive and pleasant contact with ethnic outgroup member than those living in low diverse location.

Many studies have supported this finding and adapted the individual-level contact hypothesis that individuals residing in ethnically diverse areas with greater outgroup proportions often display more positive intergroup attitudes compared to those in homogenous areas (Oliver & Wong, 2003; Branton & Jones, 2005; Putnam, 2007; Bowyer, 2008; Legewie, 2013; Laurence, 2014). Legewie (2013) and Laurence (2014) similarly highlight how diversity in social environments encourages intergroup mixing, leading to more favorable perceptions of outgroup members. Schmid et al., (2014) and Wagner et al., (2006) delve into how the proportional presence of ethnic diversity in a region affects intergroup relations. Their findings demonstrate that diverse environments can facilitate the development of trust and reduce intergroup prejudice when conditions such as equal status, shared goals, and institutional support are met. These conditions ensure that exposure to diversity does not merely coexist with prejudice but actively contributes to reducing it.

However, the findings revealed no significant effect of the level of intergroup exposure on intergroup anxiety. This indicates that individuals with varying levels of intergroup exposure or diversity do not significantly differ in intergroup anxiety. This result aligns with previous research showing that the effects of diversity on intergroup relations can be mixed (Van de Meer & Tolsma, 2014), reflecting two opposing perspectives.

The first perspective, commonly associated with the contact hypothesis, suggests that diversity fosters inter-ethnic tolerance and social solidarity. According to this view, increased interaction with people of other ethnic and racial backgrounds reduces ethnocentric attitudes and promotes outgroup trust and solidarity (Allport, 1954; Pettigrew & Tropp, 2005; Putnam, 2007). Numerous studies support this perspective, demonstrating that exposure to diversity through intergroup contact can reduce prejudice and improve attitudes toward outgroup members (Dovidio et al., 2017; Pettigrew & Tropp, 2006; Schmid et al., 2014). For instance, Pettigrew and Tropp (2008) conducted a meta-analysis of 515 studies and concluded that intergroup contact generally leads to more positive intergroup attitudes, particularly under optimal conditions such as equal status, shared goals, and institutional support.

On the other hand, the second perspective, outlined by Putnam (2007), argues that ethnic diversity can erode social solidarity and trust, leading to negative outcomes. In ethnically heterogeneous communities, increased perceptions of threat and fear may result in reduced intergroup relations. This perspective aligns with group threat theory (Blalock, 1967; Blumer, 1958), which posits that diverse contexts imply heightened competition over scarce resources, triggering feelings of threat among majority groups. Such feelings of threat may elicit anti-minority attitudes, thereby promoting tension and intergroup anxiety.

The contrast between these perspectives highlights the complexity of diversity's impact. Research supporting the contact hypothesis shows that under the right conditions, diversity fosters positive intergroup relations (Pettigrew & Tropp, 2005). For example, Schmid, et al., (2014) found that increased diversity was associated with reduced prejudice through positive intergroup contact. Conversely, studies grounded in group threat theory reveal that diversity can also exacerbate intergroup tensions when perceived as a threat (Putnam, 2007; Stephan & Stephan, 2000). Evidence from minority-majority contexts suggests that when competition over resources is salient, diversity may amplify intergroup anxiety (Schlueter & Scheepers, 2010).

In the present study, however, contextual exposure or diversity did not significantly influence intergroup anxiety. This finding may suggest that the relationship between diversity and intergroup anxiety is contingent on additional factors, such as the quality of intergroup contact, individual predispositions, or the broader sociopolitical context. For instance, research by Tropp and Page-Gould (2015) emphasizes the role of high-quality, meaningful interactions in mitigating anxiety, whereas low-quality or superficial contact might fail to produce similar effects (Brown & Hewstone, 2005). Similarly, studies by Laurence et al., (2019) found that community-level factors, such as norms of inclusion and institutional support, can moderate the effects of diversity on intergroup attitudes.

The results of Two-Way ANOVA (3 Diversity Levels x 2 Sex) on intergroup anxiety and intergroup attitude indicated significant independent 'Sex' effect on

Intergroup Anxiety as shown in Table 2.1. There were, however, no significant effects of ‘Sex’ on Intergroup Attitude. As may be seen from results in Table 2.3, the mean scores of females on intergroup anxiety in various districts viz. Lawngtlai District ($M= 32.02$, $SD= 9.42$), Aizawl District ($M = 32.30$, $SD= 7.85$), Serchhip District ($M= 32.63$, $SD= 9.14$) were significantly higher than the mean scores of males in various districts viz. Lawngtlai District ($M= 28.36$, $SD= 8.73$), Aizawl District ($M= 28.50$, $SD= 8.16$), Serchhip District ($M= 29.49$, $SD= 8.50$).

These results indicate that Mizo females experience higher intergroup anxiety toward ethnic outgroup members than Mizo males, aligning with broader psychological research on gender differences in intergroup interactions. Women are generally more sensitive to social cues and relational dynamics, which contributes to heightened anxiety, especially in socially challenging situations (Matud, 2004). They tend to internalize emotions, making them more prone to worry and fear in social situations, as suggested by Christiansen et al., (2022). This internalized anxiety manifests as vigilance and apprehension during intergroup interactions. Research also shows that women engage in deeper self-reflection and are more concerned about how others perceive them, further contributing to their higher social anxiety (Li et al., 2022). Additionally, while women may have higher implicit prejudice due to their sensitivity, in contrast, men often externalize their emotions through defensive behaviors, which may mask their anxiety. Men are also more likely to express explicit prejudice openly, often due to cultural norms that condone such behavior (Ekehammar et al., 2003). These tendencies make intergroup interactions more emotionally taxing for women, while men are more likely to suppress their emotions or adopt behaviors that minimize anxiety.

Besides the main dependent variable, significant independent ‘sex’ effect on Negative Experiences was also observed where males generally scored higher than females in all the three levels of diversity. No significant interaction effect was observed between ‘Diversity Levels x Sex’ on the dependent variables of intergroup anxiety and attitude.

Table 2.1 Results of Two-way Anova (3 Diversity Levels x 2 Sex) on Intergroup Anxiety, Intergroup Attitude, Contact Quantity, Contact Quality, Negative Experiences Inventory (NEI), Valenced Contact Negative Contact (VCNC), Valenced Contact Positive Contact (VCPC).

Tests of Between Subjects Effects Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
DIVERSITY LEVELS	Intergroup Anxiety	70.086	2	35.043	.468	.627	.002
	Intergroup Attitude	64.953	2	32.476	7.122	.001	.027
	Contact Quantity	1752.404	2	876.202	13.305	.000	.050
	Contact Quality	989.129	2	494.565	8.926	.000	.034
	Negative Experiences Inventory (NEI)	444.153	2	222.076	1.540	.215	.006
	Valenced Contact Negative Contact (VCNC)	1.957	2	.978	1.183	.307	.005
	Valenced Contact Positive Contact (VCPC)	24.004	2	12.002	7.942	.000	.031
SEX	Intergroup Anxiety	1591.767	1	1591.767	21.247	.000	.040
	Intergroup Attitude	8.284	1	8.284	1.817	.178	.004
	Contact Quantity	1.129	1	1.129	.017	.896	.000
	Contact Quality	31.129	1	31.129	.562	.454	.001
	Negative Experiences Inventory (NEI)	974.559	1	974.559	6.758	.010	.013
	Valenced Contact Negative Contact (VCNC)	.049	1	.049	.059	.808	.000
	Valenced Contact Positive Contact (VCPC)	.567	1	.567	.375	.541	.001
DIVERSITY LEVELS* SEX	Intergroup Anxiety	10.227	2	5.114	.068	.934	.000
	Intergroup Attitude	4.522	2	2.261	.496	.609	.002

	Contact Quantity	118.482	2	59.241	.900	.407	.004
	Contact Quality	12.847	2	6.424	.116	.891	.000
	Negative Experiences Inventory (NEI)	157.141	2	78.571	.545	.580	.002
	Valenced Contact Negative Contact (VCPC)	.969	2	.484	.585	.557	.002
	Valenced Contact Positive Contact (VCPC)	2.310	2	1.155	.764	.466	.003

Table 2.2: Levene's Test of Equality of Error Variances

Dependent	F	df1	df2	Sig.
Intergroup Anxiety	1.321	5	504	.254
Intergroup Attitude	2.767	5	504	.018
Contact Quantity	1.262	5	504	.279
Contact Quality	2.587	5	504	.025
Negative Experiences Inventory (NEI)	2.445	5	504	.033
Valenced Contact Negative Contact (VCNC)	.812	5	504	.542
Valenced Contact Positive Contact (VCPC)	2.073	5	504	.067

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Design: Intercept + Diversity + Gender + Diversity*Gender

Table 2.3: Descriptive statistics Mean, SD, Skewness, Kurtosis, and Standard Errors for Male and Female in Lawngtlai District, Aizawl District and Serchhip District.

Sex		Dependent Variable	N	Mean	Std. Deviation	Skewness	SD Error	Kurtosis	SD Error
Male	Lawngtlai District	Intergroup Anxiety	85	28.36	8.73	-.545	.261	.060	.517
	Aizawl District	Intergroup Anxiety	85	28.50	8.16	-.499	.261	.445	.517
	Serchhip District	Intergroup Anxiety	85	29.49	8.50	-.142	.261	-.656	.517
Female	Lawngtlai District	Intergroup Anxiety	85	32.02	9.42	-.408	.261	-.333	.517
	Aizawl District	Intergroup Anxiety	85	32.30	7.85	-.702	.261	1.44	.517
	Serchhip District	Intergroup Anxiety	85	32.63	9.14	-.467	.261	.568	.517
Male	Lawngtlai District	Intergroup Anxiety	85	28.36	8.73	-.545	.261	.060	.517
	Aizawl District	Intergroup Anxiety	85	28.50	8.16	-.499	.261	.445	.517
	Serchhip District	Intergroup Anxiety	85	29.49	8.50	-.142	.261	-.656	.517
Female	Lawngtlai District	Intergroup Anxiety	85	32.02	9.42	-.408	.261	-.333	.517
	Aizawl District	Intergroup Anxiety	85	32.30	7.85	-.702	.261	1.44	.517
	Serchhip District	Intergroup Anxiety	85	32.63	9.14	-.467	.261	.568	.517

Table 2.4 LSD depicting the mean differences in significant ‘diversity levels’ on Intergroup Attitude.

Dependent Variable	(I) Diversity	(J) Diversity	Mean Difference (I-J)	Std. Error	Sig.
Intergroup Attitude	Serchhip	Aizawl	-.8588*	.23163	.000
		Lawngtlai	-.2882	.23163	.214
	Aizawl	Serchhip	.8588*	.23163	.000
		Lawngtlai	.5706*	.23163	.014
	Lawngtlai	Serchhip	.2882	.23163	.214
		Aizawl	-.5706*	.23163	.014

Figure 3: Mean plot depicting the mean score of males and females in the three districts of Diversity on Intergroup Anxiety.

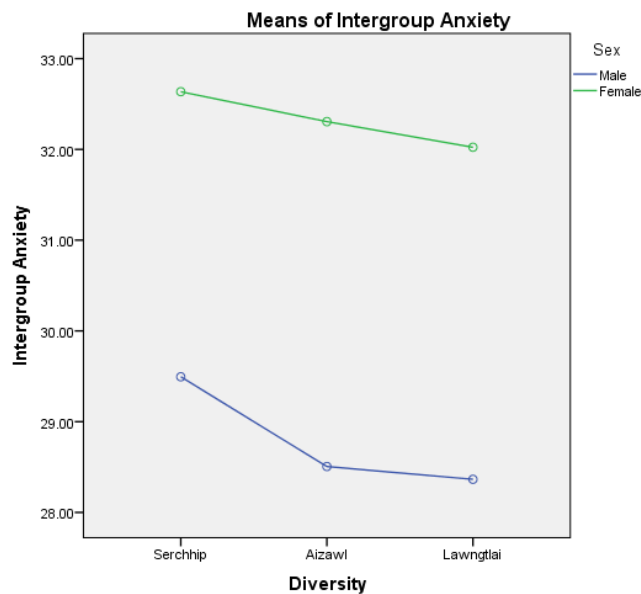
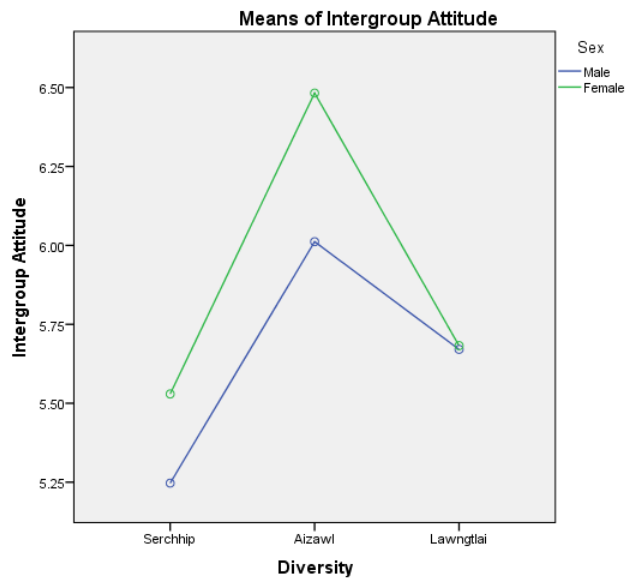


Figure 4: Mean plot depicting the mean score of males and females in the three districts of Diversity on Intergroup Attitude.



Role of Frequency of Intergroup Contact on Intergroup Anxiety and Intergroup Attitude

Prior to analyzing the role of frequency of Intergroup Contact on Intergroup Anxiety and Intergroup Attitude, the relationship between intergroup attitude, contact quantity, contact quality, intergroup anxiety, intergroup negative experiences, negative contact and positive contact in males and females were computed employing Pearson's correlation coefficient. The bivariate correlations between the scores for the seven measures - Contact Quantity, Contact Quality, Intergroup Attitude (Feeling Thermometer), Intergroup Anxiety (IAS), Negative Experiences Inventory (NEI), Valenced Contact Negative Contact (VCNC) and Valenced Contact Positive Contact (VCPC) for all the levels of analyses were determined, and put together in Tables 3.1 – 3.3 in the three districts for males and females.

The correlational analyses across the three districts (Tables 3.1 – 3.3) provide strong support for the contact hypothesis (Allport, 1954), indicating that both the quantity and quality of intergroup contact are positively associated with favorable intergroup attitudes across the two genders. Among males, contact quality and quantity were robustly correlated with attitude in Lawngtlai District ($r = .559, p < .01$; $r = .527^{**}, p < .01$), Aizawl District ($r = .585, p < .01$; $r = .470^{**}, p < .01$), and Serchhip District ($r = .362, p < .01$; $r = .355^{**}, p < .01$). Similarly, among females, contact quality and quantity also emerged as significantly correlated with attitudes in Lawngtlai District ($r = .467, p < .01$; $r = .391^{**}, p < .01$), Aizawl District ($r = .498, p < .01$; $r = .424^{**}, p < .01$), and Serchhip District ($r = .420, p < .01$; $r = .299^{**}, p < .01$). In all districts and for both genders, contact quantity and quality were positively interrelated, with correlations ranging from $r = .574^{**}$ to $r = .781^{**}$, reinforcing claims by Brown & Hewstone (2005) that both dimensions are deeply interconnected.

Consistent with Integrated Threat Theory (Stephan & Stephan, 1985), intergroup anxiety was negatively correlated with intergroup attitudes, particularly among females. In Lawngtlai District, anxiety was significantly and negatively related to attitudes for both males ($r = -.237, p < .01$) and females ($r = -.283^{**}, p < .01$). In Aizawl District, this relationship was stronger among females ($r = -.418^{**}, p < .01$) than males ($r = -.265^{**}, p < .05$). In Serchhip District, this relationship was weaker and non-significant for both genders.

Positive Contact Valenced Contact (VCPC) showed consistent positive associations with attitudes, particularly among females in Lawngtlai District ($r = .407, p < .01$) and Aizawl District ($r = .291, p < .01$), and with contact quality in both Aizawl District ($r = .404^{**}$) and Serchhip District ($r = .404^{**}$). These results are aligned with the valenced contact framework (Paolini et al., 2010), which posits that positive emotional experiences during contact have enduring attitudinal effects. Among males, Positive Contact (VCPC) also significantly correlates with attitudes in Lawngtlai District ($r = .375, p < .01$) and contact quality in both Aizawl District ($r = .486, p < .01$) and Serchhip District ($r = .258, p < .05$).

In contrast, Negative Contact Valenced Contact (VCNC) was more strongly associated with Negative Experiences Inventory (NEI) than with attitude, particularly for males in Lawngtlai District ($r = .604, p < .01$) and Serchhip District ($r = .479^{**}, p < .01$), and females in Lawngtlai District ($r = .331, p < .01$) and Serchhip District ($r = .429^{**}, p < .01$). These findings highlight the asymmetric effects of contact valence, where negative contact intensifies anxiety and negative experiences but does not reduce attitudes as strongly, a trend consistent with research by Barlow et al., (2012).

Table 3.1.1: Correlation coefficients (Pearson's r) for Lawngtlai District with correlational values for males above the diagonal and females below the diagonal.

	Intergroup up Attitude	Contact Quantity	Contact Quality	Intergroup Anxiety (IAS)	Negative Experiences (NEI)	Valenced Contact (VCNC)	Valenced Contact (VCPC)
Intergroup Attitude	1	.527**	.559**	-.237**	.021	-.052	.375**
Contact Quantity	.391**	1	.743**	-.098	.249*	.090	.451**
Contact Quality	.467**	.635**	1	-.196	.049	.026	.486**
Intergroup Anxiety (IAS)	-.283**	-.207	-.326**	1	.293**	.158	-.128
Negative Experiences (NEI)	-.245**	.027	-.244*	.076	1	.604**	.025
Valenced Contact (VCNC)	-.147	.260*	.142	.057	.331**	1	-.214*
Valenced Contact (VCPC)	.407**	.393**	.318**	-.280**	-.083	-.185	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 3.1.2: Correlation coefficients (Pearson's r) for Aizawl District with correlational values for males above the diagonal and females below the diagonal.

	Intergroup Attitude	Contact Quantity	Contact Quality	Intergroup Anxiety (IAS)	Negative Experiences (NEI)	Valenced Contact (VCNC)	Valenced Contact (VCPC)
Intergroup Attitude	1	.470**	.585**	-.265*	.052	.036	.189
Contact Quantity	.424**	1	.781**	-.176	.041	.071	.367**
Contact Quality	.498**	.754**	1	-.242*	.117	.083	.322**
Intergroup Anxiety (IAS)	-.418**	-.363**	-.337**	1	.175	.035	-.107
Negative Experiences (NEI)	-.164	.238*	.071	.117	1	.537**	-.126
Valenced Contact (VCNC)	-.157	.257*	.101	-.015	.392**	1	-.013
Valenced Contact (VCPC)	.291**	.378*	.364**	-.254*	-.038	-.048	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 3.1.3: Correlation coefficients (Pearson's *r*) for Serchhip District with correlational values for males above the diagonal and females below the diagonal

	Intergroup Attitude	Contact Quantity	Contact Quality	Intergroup Anxiety (IAS)	Negative Experiences (NEI)	Valenced Contact (VCNC)	Valenced Contact (VCPC)
Intergroup Attitude	1	.355**	.362**	.009	-.052	-.026	.197
Contact Quantity	.299**	1	.747**	-.025	.334*	.134	.258*
Contact Quality	.420**	.574**	1	.014	.194	.113	.157
Intergroup Anxiety (IAS)	-.199	-.145	-.006	1	.293**	.134	-.065
Negative Experiences	-.069	.010	.072	.065	1	.479**	-.081

(NEI)							
Valenced Contact (VCNC)	.066	.122	.160	.056	.429**	1	-.121
Valenced Contact (VCPC)	.019	.360**	.404**	-.079	.063	.093	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

In order to further address the second objective of elucidating the predictability of Intergroup Anxiety and Intergroup Attitude from Contact Quantity among young adults in Mizoram, hierarchical regression analyses were conducted controlling for demographic variables such as age, educational qualification, occupation and family in the first step, and Contact Quantity entered in the second step as the predictor variable. It was hypothesized that: Individuals with high levels of intergroup contact will have lower intergroup anxiety and more positive attitude than individuals with low frequency of contact regardless of diversity levels or location.

Frequency of intergroup contact was measured in terms of contact quantity by using General Contact Quantity and Contact Quality Scale (Islam & Hewstone ,1993). After having ensured that the assumptions of multiple regression (outliers, linearity, multivariate normality, multicollinearity and homoscedasticity of residuals) were suitably addressed, scores for the predictor variables – Contact Quantity was entered in the two steps of the hierarchical regression model for the intergroup attitude criterion and intergroup anxiety criterion separately.

3.1 Prediction of Intergroup Anxiety by contact quantity in males and females.

To examine the predictability of Intergroup Anxiety from Contact Quantity, hierarchical regression analyses was employed. Intergroup Anxiety was entered as the criterion variable, demographic variables such as age, educational qualification

and family were controlled in the first step, followed by Contact quantity in the second step as the predictor for males and females.

3.1 (a) Prediction of *Intergroup Anxiety* by age, educational qualification, occupation, family, contact quantity in males.

The results presented in Table 3.2.1 of the hierarchical regression analysis show that contact quantity accounted for 3.6% of the variance in intergroup anxiety among males. Contact quantity ($\beta = -.132, p = .014$) exhibited significant effects on intergroup anxiety. suggesting that contact quantity significantly predict intergroup anxiety in males.

The negative beta coefficients for contact quantity ($\beta = -.132, p = .014$) imply an inverse relationship with intergroup anxiety. Specifically, lower levels of contact quantity are associated with increased intergroup anxiety toward ethnic outgroup members.

Table 3.2.1: Hierarchical regression analysis testing the predictability of intergroup anxiety towards ethnic outgroup members from contact quantity in males.

Predictors	B	SE B	Beta	Sig
Step 1				
Constant	26.806	2.560		.000
Age	.169	.057	.171	.003
Edn Qual	-.990	.686	-.078	.150
Occupation	-.440	.375	-.068	.242
Family	.455	.662	.037	.493
Step 2				
(Constant)	29.238	2.724		.000
Age	.154	.057	.156	.007
Edn Qual	-.819	.684	-.065	.232
Occupation	-.504	.373	-.078	.178
Family	.482	.657	.039	.464
Contact Quantity	-.132	.053	-.134	.014

Note: $R^2 = .022$ for Step 1 ($p = .023$); $\Delta R^2 = .036$ for Step 2 ($p = .014$);

• 95% bias corrected and accelerated confidence intervals reported in parentheses, confidence intervals and standard errors based on 1000 bootstrap samples.

3.1 (b) Prediction of *Intergroup anxiety* by contact quantity in females.

Results of hierarchical regression analysis given in Table 3.2.2 demonstrated that contact quantity accounted for 7.3% of the total variance in Intergroup Anxiety towards ethnic outgroup members among females. The significant main effect of contact quantity ($\beta = -.312$, $p = .00$) with its negative beta indicate that decrease in contact quantity led to increase in intergroup anxiety towards ethnic outgroup members among females.

Table 3.2.2 Hierarchical regression analysis testing the predictability of intergroup anxiety towards ethnic outgroup members from contact quantity in females.

Predictors	B	SE B	Beta	Sig
Step 1				
Constant	32.681	2.576		.000
Age	-.035	.073	-.031	.634
Edn Qual	-.236	.796	-.017	.767
Occupation	.198	.414	.030	.633
Family	.062	.720	.005	.930
Step 2				
(Constant)	39.577	2.760		.000
Age	-.063	.070	-.056	.366
Edn Qual	.027	.763	-.002	.972
Occupation	.083	.397	.013	.835
Family	-.495	.696	-.038	.478
Contact Quantity	-.312	.056	-.297	.000

Note: $R^2 = .010$ for Step 1 ($p = .974$); $\Delta R^2 = .073$ for Step 2 ($p = .000$);

- 95% bias corrected and accelerated confidence intervals reported in parentheses, confidence intervals and standard errors based on 1000 bootstrap samples

3.2 Prediction of Intergroup Attitude by contact quantity in males and females.

To examine the predictability of Intergroup Attitude from Contact Quantity, hierarchical regression analysis was employed. After controlling demographic

variables such as age, educational qualification, occupation and family in the first step, Contact Quantity was entered as the predictor variable in the second step for males and females.

3.2 (a) Prediction of *Intergroup Attitude* by contact quantity in *males*.

The results given in Table 3.2.3 of hierarchical regression analysis indicated that Contact Quantity score accounted for 21% of the variance in predicting Intergroup Attitude for males. Significant main effect of contact quantity ($\beta = .453$, $p = .000$) with its positive beta indicated that increase in contact quantity is associated with increase in positive attitude towards ethnic outgroup members.

Table 3.2.3: Hierarchical regression analysis testing the predictability of Intergroup Attitude towards ethnic outgroup members from Contact Quantity in males.

Predictors	B	SE B	Beta	Sig
Step 1				
Constant	5.371	.735		.000
Age	-.009	.016	-.030	.600
Edn Qual	.429	.197	.118	.030
Occupation	-.164	.108	-.089	.129
Family	-.097	.190	-.028	.610
Step 2				
(Constant)	3.020	.705		.000
Age	.005	.015	.019	.720
Edn Qual	.263	.177	.073	.138
Occupation	-.102	.097	-.055	.292
Family	-.124	.170	-.035	.467
Contact Quantity	.127	.014	.453	.000

Note: $R^2 = .011$ for Step 1 ($p = .106$); $\Delta R^2 = .210$ for Step 2 ($p = .000$);

- 95% bias corrected and accelerated confidence intervals reported in parentheses, confidence intervals and standard errors based on 1000 bootstrap samples

3.2 (b) Prediction of *Intergroup Attitude* by contact quantity in *females*.

The results given in Table 3.2.4 of hierarchical regression analysis displayed 21.2% contribution of Contact Quantity in predicting Intergroup Attitudes for females. The significant main effect of Contact quantity scores ($\beta = .422, p = .000$) with its positive beta implies that increase in contact quantity is associated with increase in positive attitude towards ethnic outgroup members among females.

Table 3.2.4: Hierarchical regression analysis testing the predictability of Intergroup attitude towards ethnic outgroup members from contact quantity in females.

Predictors	B	SE B	Beta	Sig
Step 1				
Constant	5.371	.735		.000
Age	-.009	.016	-.030	.600
Edn Qual	.429	.197	.118	.030
Occupation	-.164	.108	-.089	.129
Family	-.097	.190	-.028	.610
Step 2				
(Constant)	3.020	.705		.000
Age	.005	.015	.019	.720
Edn Qual	.263	.177	.073	.138
Occupation	-.102	.097	-.055	.292
Family	-.124	.170	-.035	.467
Contact Quantity	.127	.014	.453	.000

Note: $R^2 = .011$ for Step 1 ($p = .106$); $\Delta R^2 = .210$ for Step 2 ($p = .000$);

- 95% bias corrected and accelerated confidence intervals reported in parentheses, confidence intervals and standard errors based on 1000 bootstrap samples

To summarize, results from hierarchical regression analyses conducted to explain the second hypothesis of examining the role of frequency of intergroup contact on intergroup anxiety and intergroup attitudes for the two groups (male and female) of Mizo young adults revealed significant predictions.

Contact quantity was found to significantly negatively predicted intergroup anxiety towards ethnic outgroup members among males and females. Similarly, contact quantity significantly positively predict intergroup attitude towards ethnic outgroup members among males and females of Mizo young adults. These results confirmed the importance of contact quantity in improving intergroup relations and reducing tension (Pettigrew & Tropp, 2006; Turner, Crisp & Lambert, 2007; Voci & Hewstone, 2003).

A large body of research associates the benefits of intergroup contact with improved attitudes toward ethnic minorities and other outgroup members (Aberson & Haag, 2007). The contact hypothesis (Allport, 1954) asserts that interaction with outgroup members under optimal conditions of shared goals, cooperation, equal status, and institutional support can foster positive attitudes toward other groups. This hypothesis is considered one of the most effective strategies for reducing prejudice and intergroup conflict (Dovidio, Gaertner & Kawakami, 2003; Pettigrew & Tropp, 2006). Supporting this, a meta-analysis of 515 studies by Pettigrew & Tropp (2006) strongly validated that intergroup contact positively impacts attitudes toward outgroup members (Castiglione, Licciardello, Rampullo & Campione, 2013; Swart et al., 2011).

Research also supports the notion that intergroup contact reduces prejudice by lowering negative emotions, such as intergroup anxiety, while promoting positive affect (Paolini, Hewstone, Cairns & Voci, 2004; Pettigrew & Tropp, 2008). In a longitudinal study, Binder et al., (2009) found that frequent contact with outgroup members predicted lower intergroup anxiety over time. Similarly, Swart et al., (2011) observed that positive experiences in interracial friendships significantly reduced anxiety and increased empathy, contributing to long-term attitudinal change. These findings underscore the transformative potential of sustained, high-quality contact. A meta-analysis by Pettigrew & Tropp (2008) found that higher levels of intergroup contact are linked to lower intergroup anxiety, with a mean correlation of -0.29 . Brown et al., (2001) similarly confirmed that improved contact quantity and quality reduced intergroup anxiety among the French.

In conclusion, the current findings add to the robust literature on the contact hypothesis, confirming that contact quantity is vital in reducing intergroup anxiety and improving attitudes.

Mediating role of Contact Quality and Negative Experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude in the three Outgroup Exposure Levels (diversity levels).

In examining the **third** objective of exploring the mediating role of contact quality and negative experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude in the three Outgroup Exposure Levels (diversity levels), it was hypothesized that increasing outgroup exposure (diversity) will exert a positive indirect effect on intergroup anxiety and intergroup attitude via positive contact, but also a negative indirect effect via negative intergroup contact. In order to test the mediating role of contact quality and negative experiences on the relationship between contact quantity and intergroup anxiety as well as attitude, the data was first categorized in accordance with the highest diverse, medium diversity and lowest ethnic diversity as mentioned in the first paragraph of Chapter 4. Scores on contact quality scale (CQCQ) (positive contact) and negative experiences (NEI) (negative contact) were entered as the mediating variable (M) in the relationship between contact quantity (entered as an independent variable / predictor) and intergroup anxiety (criterion) and intergroup attitude (criterion) which were entered separately as criterion variables in the three levels of outgroup exposure (diversity levels) separately. Assumptions underlying multiple regression analysis like linearity, independent errors, normality, homoscedasticity and multicollinearity were generally satisfied. Further, mean centering of variables and bootstrapping (5000) were all automatically ensured by the *PROCESS* macro, v4.2 (Hayes, 2022) software.

Figure 5: Mediation model to test the mediating role of **Contact Quality** and **Negative Experiences** on the relationship between **Contact Quantity** and **Intergroup Anxiety in the three levels of outgroup exposure (diversity)**.

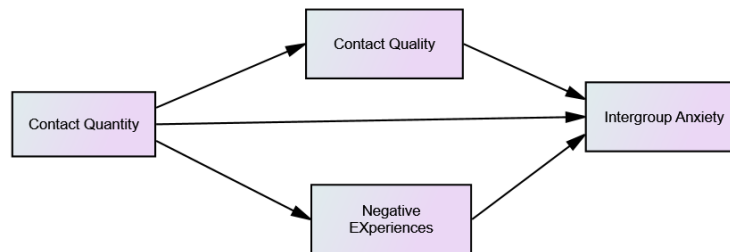
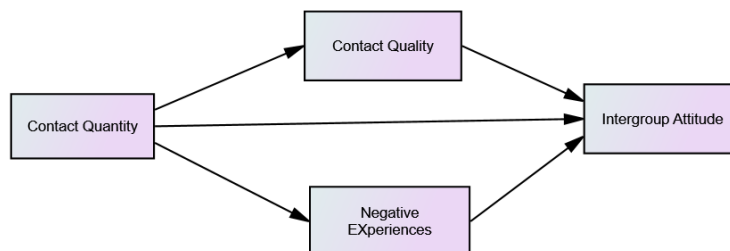


Figure 6: Mediation model to test the mediating role of **Contact Quality** and **Negative Experiences** on the relationship between **Contact Quantity** and **Intergroup Attitude in the three levels of outgroup exposure (diversity)**.



The results for mediation analyses are presented as shown in the following order.

4.1 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in **high** diversity Lawngtlai District.

4.2 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Attitude in **high** diversity Lawngtlai District.

4.3 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in **medium** diversity Aizawl District.

4.4 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Attitude in **medium** diversity Aizawl District.

4.5 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in **low** diversity Serchhip District.

4.6 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Attitude in **low** diversity Serchhip District.

*4.1 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in high diversity Lawngtlai District.*

4.1 Results of mediation analyses of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in high diversity Lawngtlai District given in Table 4.1.1 indicates that Contact Quantity significantly predicted Contact Quality, explaining 47.7% of the variance ($R^2 = .48$; $b = .65$; $t(168) = 12.38$; $p = .0001$; 95% CI [0.55, 0.76]). The model predicting Negative Experiences from Contact Quantity was non-significant, explaining only 2% of the variance ($R^2 = .021$; $b = .021$; $t(168) = 1.89$; $p = .061$; 95% CI [-0.01, 0.42]). When Contact Quantity, Contact Quality and Negative Experiences were included in the model predicting Anxiety, Contact Quality was a significant negative predictor, ($b = -0.25$; $t(167) = -2.02$, $p = .045$, 95% CI [-0.49, -0.005]) with an effect size of ($\beta = -.21$). Contact Quantity was not a significant predictor ($b = -0.04$; $t(167) = -0.32$, $p = .753$, 95% CI [-0.27, 0.19]) with an effect size of ($\beta = -.03$). Negative Experiences

approached significance, but was not statistically significant ($b = 0.11$; $t(167) = 1.91$, $p = .059$, 95% CI $[-0.004, 0.23]$) with an effect size of ($\beta = .15$). This suggests that higher Contact Quality is associated with lower anxiety.

The direct effect of Contact Quantity on Intergroup Anxiety was not statistically significant ($b = -0.04$; $t = -0.32$; $p = .753$, 95% CI $[-.2669, .1934]$). Without controlling for Contact Quality and Negative Experiences, the total effect of Contact Quantity on Anxiety was negatively significant ($b = -0.17$; $t = -2.11$; $p = .037$) with a standardized coefficient of $\beta = -0.16$. The **indirect effect** of Contact Quantity on Intergroup Anxiety through Contact Quality was negatively significant ($b = -0.16$; 95% bootstrap CI $[-0.30, 0.00]$). The **indirect effect** via Negative Experiences was not significant ($b = 0.02$; 95% bootstrap CI $[-0.002, 0.06]$). Thus, Contact Quality fully mediates the relationship between Contact Quantity and Intergroup Anxiety, but the mediation is weak and marginally significant.

The negative indirect effect via Contact Quality on the relationship between Contact Quantity and Intergroup Anxiety suggest that higher contact quality (positive) is associated with lower intergroup anxiety. The mediation analysis reveals that Contact Quality fully mediates the relationship between Contact Quantity and Intergroup Anxiety since the direct effect is non-significant while the indirect effect is significant. This suggests that Contact Quantity influences Intergroup Anxiety indirectly by affecting Contact Quality.

Table 4.1.1 Mediation analysis of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup Anxiety in Lawngtlai District.

OUTCOME VARIABLE:

C.QUAL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6908	.4773	33.6536	153.3783	1.0000	168.0000	.0000

Model

coeff	se	t	p	LLCI	ULCI
-------	----	---	---	------	------

constant	9.0520	1.0866	8.3304	.0000	6.9068	11.1971
C.QUAN	.6512	.0526	12.3846	.0000	.5474	.7550

Standardized coefficients

	coeff
C.QUAN	.6908

OUTCOME VARIABLE:

NExpercs

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1440	.0207	145.9676	3.5593	1.0000	168.0000	.0609

Model

	coeff	se	t	p	LLCI	ULCI
constant	25.4108	2.2630	11.2287	.0000	20.9432	29.8784
C.QUAN	.2066	.1095	1.8866	.0609	-.0096	.4228

Standardized coefficients

	coeff
C.QUAN	.1440

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2873	.0826	79.8205	4.9795	3.0000	166.0000	.0025

Model

	coeff	se	t	p	LLCI	ULCI
constant	32.8757	2.6681	12.3216	.0000	27.6079	38.1436
C.QUAN	-.0368	.1166	-.3155	.7528	-.2669	.1934
C.QUAL	-.2475	.1228	-2.0160	.0454	-.4899	-.0051
NExpercs	.1123	.0590	1.9050	.0585	-.0041	.2287

Standardized coefficients

	coeff
C.QUAN	-.0338
C.QUAL	-.2142
NExpercs	.1479

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Anxiety

```

Model Summary
R          R-sq      MSE      F      df1      df2      p
.1604      .0257    83.7550    4.4386    1.0000   168.0000   .0366

Model
      coeff      se      t      p      LLCI      ULCI
constant  33.4890   1.7142  19.5360   .0000   30.1048   36.8732
C.QUAN    -.1748    .0830   -2.1068   .0366   -.3385   -.0110

Standardized coefficients
      coeff
C.QUAN   -.1604

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y
Effect      se      t      p      LLCI      ULCI      c_cs
-.1748      .0830   -2.1068   .0366   -.3385   -.0110   -.1604

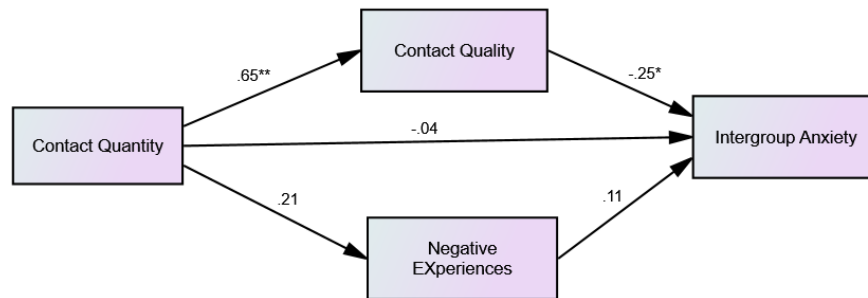
Direct effect of X on Y
Effect      se      t      p      LLCI      ULCI      c'_cs
-.0368      .1166   -.3155   .7528   -.2669   .1934   -.0338

Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      -.1380      .0803      -.2880      .0329
C.QUAL      -.1612      .0757      -.3013      .0011
NExpercs    .0232      .0171      -.0017      .0635

Completely standardized indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      -.1267      .0733      -.2604      .0306
C.QUAL      -.1480      .0689      -.2734      .0010
NExpercs    .0213      .0157      -.0016      .0586

```

Figure 7: Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in high diversity Lawngtlai District. *Notes: Unstandardized coefficients are shown*



4.2 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between **Contact Quantity** and **Intergroup Attitude** in high diversity Lawngtlai District.

4.2 Results of mediation analyses of Contact Quality and Negative Experiences on the relationship between Contact Quantity and **Intergroup Attitude** in high diversity Lawngtlai District given in Table 4.1.2 indicates that the model predicting Contact Quality from Contact Quantity was significant, explaining 47.7% of the variance ($R^2 = .48$; $b = .65$; $t(168) = 12.38$; $p = .0001$; 95% CI [0.55, 0.76]). The model predicting Negative Experiences from Contact Quantity was non-significant, explaining only 2.1% of the variance ($R^2 = .021$; $b = .021$; $t(168) = 1.89$; $p = .061$; 95% CI [-0.01, 0.42]). When Contact Quantity, Contact Quality and Negative Experiences were included in the model predicting Attitude, Contact Quantity significantly predicted Attitude ($b = 0.06$; $t(167) = 2.53$, $p = .012$, 95% CI [0.01, 0.11]) with an effect size of ($\beta = .24$). Contact Quality also significantly predicted Attitude ($b = 0.10$; $t(167) = 3.77$, $p = .0001$, 95% CI [0.05, 0.15]) with an effect size of ($\beta = .35$). Negative Experiences was not a significant predictor ($b = -0.02$; $t(167) = -1.52$, $p = .13$, 95% CI [-0.04, 0.01]) with an effect size of ($\beta = -.10$).

The direct effect of Contact Quantity on Intergroup Attitude was statistically significant but was notably reduced ($b = 0.05$; $t = 2.53$; $p = .012$, 95% CI [0.005, 0.10]), with a standardized coefficient of $\beta = .20$. The total effect of Contact Quantity on Intergroup Attitude was also significant ($b = 0.12$; $t = 6.77$; $p < .001$). The **indirect effect** of Contact Quantity on Attitude through Contact Quality was significant ($b = 0.06$; 95% bootstrap CI [0.03, 0.10]; $\beta = .24$). The **indirect effect** of Contact Quantity on Intergroup Attitude through Negative Experiences was non-significant ($b = -0.004$; 95% bootstrap CI [-0.01, 0.002]; $\beta = -.015$). These findings support a partial mediation model: Contact Quality partially mediates the relationship between Contact Quantity and Intergroup Attitude. While contact quantity directly affects intergroup attitudes, a significant portion of its impact is transmitted indirectly through contact quality but not negative experiences. This suggests that intergroup attitudes are shaped not only by the amount of contact but more strongly by the positive quality of contact.

Table 4.1.2 Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in Lawngtlai District (high diversity).

OUTCOME VARIABLE:						
C.QUAL						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.6908	.4773	33.6536	153.3783	1.0000	168.0000	.0000
Model						
	coeff	se	t	p	LLCI	ULCI
constant	9.0520	1.0866	8.3304	.0000	6.9068	11.1971
C.QUAN	.6512	.0526	12.3846	.0000	.5474	.7550
Standardized coefficients						
	coeff					
C.QUAN	.6908					

OUTCOME VARIABLE:						
NExpercs						
Model Summary						

R	R-sq	MSE	F	df1	df2	p
.1440	.0207	145.9676	3.5593	1.0000	168.0000	.0609

Model

	coeff	se	t	p	LLCI	ULCI
constant	25.4108	2.2630	11.2287	.0000	20.9432	29.8784
C.QUAN	.2066	.1095	1.8866	.0609	-.0096	.4228

Standardized coefficients

	coeff
C.QUAN	.1440

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5491	.3015	3.4387	23.8825	3.0000	166.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.0176	.5538	5.4489	.0000	1.9242	4.1110
C.QUAN	.0612	.0242	2.5298	.0123	.0134	.1090
C.QUAL	.0961	.0255	3.7704	.0002	.0458	.1464
NExpercs	-.0186	.0122	-1.5188	.1307	-.0427	.0056

Standardized coefficients

	coeff
C.QUAN	.2362
C.QUAL	.3496
NExpercs	-.1029

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4629	.2143	3.8220	45.8169	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.4151	.3662	9.3261	.0000	2.6922	4.1380
C.QUAN	.1199	.0177	6.7688	.0000	.0850	.1549

Standardized coefficients

	coeff
C.QUAN	.4629

```

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****
Total effect of X on Y
      Effect      se      t      p      LLCI      ULCI      c_cs
      .1199      .0177      6.7688      .0000      .0850      .1549      .4629

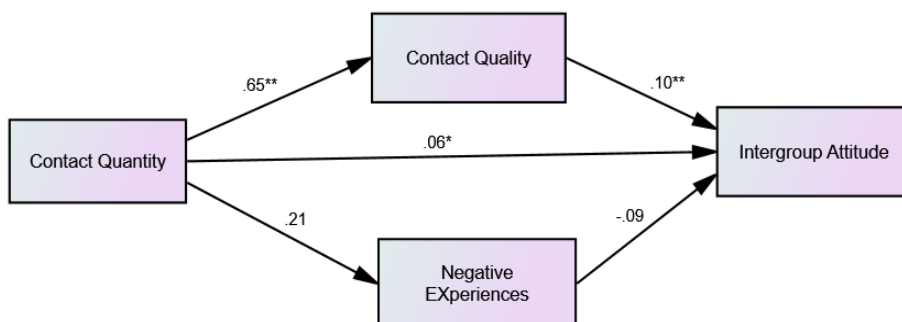
Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI
c'_cs
      .0612      .0242      2.5298      .0123      .0134      .1090
.2362

Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      .0587      .0187      .0225      .0962
C.QUAL      .0626      .0178      .0279      .0985
NExpercs    -.0038      .0039      -.0134      .0017

Completely standardized indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      .2267      .0694      .0888      .3614
C.QUAL      .2415      .0653      .1121      .3688
NExpercs    -.0148      .0150      -.0517      .0066

```

Figure 8: Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in high diversity Lawngtlai District. *Notes: Unstandardized coefficients are shown*



*4.3 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in medium diversity Aizawl District.*

4.3 Results of mediation analyses of Contact Quality and Negative Experiences on the relationship between Contact Quantity and **Intergroup Anxiety** in medium diversity Aizawl District given in Table 4.1.3 indicates that Contact Quantity significantly predicted Contact Quality, explaining 59% of the variance ($R^2 = .59$; $b = .64$; $t(168) = 15.55$; $p < .001$; 95% CI [0.56 ,0.72]. The standardized coefficient was $\beta = .77$. Contact Quantity did not significantly predict Negative Experiences ($R^2 = .012$; $b = .64$; $t(168) = 1.44$; $p = .151$; 95% CI [-0.06 ,0.41]. The standardized coefficient was $\beta = .11$. When Contact Quantity, Contact Quality and Negative Experiences were included in the model predicting Anxiety, Contact Quality was a significant negative predictor, ($b = -0.24$; $t(167) = -1.74$, $p = .08$, 95% CI [-0.51, 0.03]) with an effect size of ($\beta = -.20$). Negative experiences was also a significant predictor ($b = 0.08$; $t(167) = -1.77$, $p = .08$, 95% CI [-0.01, 0.18]) with an effect size of ($\beta = .13$).

After accounting for Contact Quality and Negative Experiences, the direct effect of Contact Quantity on Intergroup Anxiety was not statistically significant ($b = -.09$; $t = -0.82$; $p = .413$, 95% CI [-.32, .13]). The total effect of Contact Quantity on Intergroup Anxiety was negatively significant ($b = -0.23$; $t = -3.13$; $p = .002$) with a standardized coefficient of $\beta = -.23$. The **indirect effect** of Contact Quantity on Intergroup Anxiety through Contact Quality was not significant ($b = -0.15$; 95% bootstrap CI [-0.35, 0.05]). The **indirect effect** via Negative Experiences was also non-significant ($b = 0.01$; 95% bootstrap CI [-0.01, 0.05]). These findings suggest no mediation effect of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup anxiety.

These results indicate that while greater contact quantity is significantly associated with lower intergroup anxiety (total effect), this relationship becomes non-

significant when controlling for contact quality and negative experiences (direct effect). Contact quantity was found to significantly predict higher contact quality, and contact quality was marginally associated with lower anxiety. However, the indirect effect of contact quantity on anxiety through contact quality and negative experiences did not reach statistical significance, suggesting that contact quality and negative experiences does not significantly mediate this relationship under conventional thresholds.

Thus, the findings do not provide strong evidence that the effect of intergroup contact quantity on anxiety is significantly transmitted through contact quality and negative experiences, although the direction of effects aligns with theoretical expectations.

Table 4.1.3 Mediation analysis of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup Anxiety in medium diversity, Aizawl District.

OUTCOME VARIABLE:

C.QUAL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7682	.5902	19.8396	241.9117	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	10.2119	.8258	12.3657	.0000	8.5816	11.8422
C.QUAN	.6409	.0412	15.5535	.0000	.5595	.7222

Standardized coefficients

	coeff
C.QUAN	.7682

OUTCOME VARIABLE:

NExprcs

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1105	.0122	167.8462	2.0780	1.0000	168.0000	.1513

Model						
	coeff	se	t	p	LLCI	ULCI
constant	28.0652	2.4020	11.6840	.0000	23.3232	32.8073
C.QUAN	.1728	.1198	1.4415	.1513	-.0638	.4094

Standardized coefficients

	coeff
C.QUAN	.1105

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2979	.0887	62.5091	5.3885	3.0000	166.0000	.0015

Model

	coeff	se	t	p	LLCI	ULCI
constant	34.7270	2.4143	14.3840	.0000	29.9603	39.4936
C.QUAN	-.0939	.1145	-.8203	.4132	-.3200	.1321
C.QUAL	-.2378	.1369	-1.7363	.0844	-.5082	.0326
NExprcs	.0833	.0471	1.7699	.0786	-.0096	.1763

Standardized coefficients

	coeff
C.QUAN	-.0951
C.QUAL	-.2009
NExprcs	.1319

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2349	.0552	64.0387	9.8143	1.0000	168.0000	.0020

Model

	coeff	se	t	p	LLCI	ULCI
constant	34.6376	1.4837	23.3456	.0000	31.7085	37.5667
C.QUAN	-.2319	.0740	-3.1328	.0020	-.3781	-.0858

Standardized coefficients

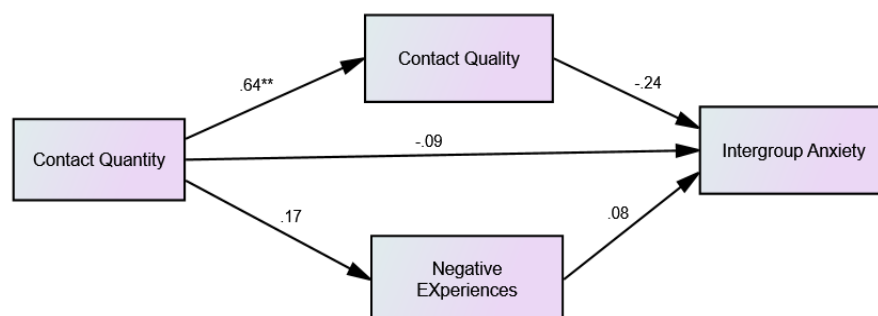
	coeff
C.QUAN	-.2349

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c_cs
-.2319	.0740	-3.1328	.0020	-.3781	-.0858	-.2349
Direct effect of X on Y						
Effect	se	t	p	LLCI	ULCI	c'_cs
-.0939	.1145	-.8203	.4132	-.3200	.1321	-.0951
Indirect effect(s) of X on Y:						
	Effect	BootSE	BootLLCI	BootULCI		
TOTAL	-.1380	.1042	-.3413	.0692		
C.QUAL	-.1524	.1011	-.3500	.0524		
NExprcs	.0144	.0143	-.0086	.0478		
Completely standardized indirect effect(s) of X on Y:						
	Effect	BootSE	BootLLCI	BootULCI		
TOTAL	-.1398	.1034	-.3341	.0734		
C.QUAL	-.1544	.1000	-.3423	.0545		
NExprcs	.0146	.0147	-.0087	.0491		

Figure 9: Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in medium diversity Aizawl District. *Notes: Unstandardized coefficients are shown*

4.4 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between **Contact Quantity** and **Intergroup Attitude** in medium diversity Aizawl District.



4.4 Results of mediation analyses of Contact Quality and Negative Experiences on the relationship between Contact Quantity and **Intergroup Attitude** in medium diversity Aizawl District given in Table 4.1.4 indicates that the model predicting Contact Quality from Contact Quantity was significant, explaining 59% of the variance ($R^2 = .59$; $b = .64$; $t(168) = 15.55$; $p < .001$; 95% CI [0.56, 0.72]), with standardized coefficient $\beta = .77$, indicating that higher contact quantity leads to higher contact quality. The model predicting Negative Experiences from Contact Quantity was non-significant, explaining only 1% of the variance ($R^2 = .012$; $b = .017$; $t(168) = 1.44$; $p = .151$; 95% CI [-0.06, 0.41]), with standardized effect of $\beta = .11$. When Contact Quantity, Contact Quality and Negative Experiences were included in the model predicting Intergroup Attitude, Contact Quality significantly predicted Attitude ($b = 0.16$; $t(167) = 4.96$, $p < .001$, 95% CI [0.09, 0.22]) with an effect size of ($\beta = .50$) suggesting that higher contact quality was associated with more positive attitudes. Contact Quantity and Negative Experiences were not significant predictors.

The direct effect of Contact Quantity on Intergroup Attitude was not significant when controlling for contact quality ($b = 0.02$; $t(167) = .85$; $p = .396$, 95% CI [-0.0295, 0.0742]), with a standardized coefficient of $\beta = .08$. The total effect of Contact Quantity on Intergroup Attitude was significant ($b = 0.12$; $t(168) = 6.62$; $p < .001$; 95% bootstrap CI [0.08, 0.15]), with a medium standardized effect ($\beta = .45$), indicating that, overall, contact quantity is positively associated with intergroup attitude. The **indirect effect** of Contact Quantity on Intergroup Attitude through Contact Quality was significant ($b = 0.10$; 95% bootstrap CI [0.05, 0.14]), with an effect size of $\beta = .38$. The **indirect effect** via Negative Experiences was non-significant ($b = -0.003$; 95% bootstrap CI [-0.011, 0.001]) with an effect size of $\beta = -.01$.

These findings suggest a full mediation model, whereby the effect of contact quantity on intergroup attitude is entirely transmitted through contact quality. Although the indirect effect through negative experiences was not significant, the

overall indirect effect was significant, and the direct effect was rendered non-significant when accounting for both mediators. The positive indirect effect of contact quality on intergroup attitude indicates that higher-quality intergroup contact is associated with improved attitudes toward ethnic outgroup members, and this relationship operates significantly through contact quality.

Table 4.1.4 Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in Aizawl District.

OUTCOME VARIABLE:

C.QUAL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7682	.5902	19.8396	241.9117	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	10.2119	.8258	12.3657	.0000	8.5816	11.8422
C.QUAN	.6409	.0412	15.5535	.0000	.5595	.7222

Standardized coefficients

	coeff
C.QUAN	.7682

OUTCOME VARIABLE:

NExprs

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1105	.0122	167.8462	2.0780	1.0000	168.0000	.1513

Model

	coeff	se	t	p	LLCI	ULCI
constant	28.0652	2.4020	11.6840	.0000	23.3232	32.8073
C.QUAN	.1728	.1198	1.4415	.1513	-.0638	.4094

Standardized coefficients

	coeff
C.QUAN	.1105

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5644	.3186	3.2907	25.8668	3.0000	166.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.9876	.5539	5.3935	.0000	1.8940	4.0813
C.QUAN	.0224	.0263	.8516	.3956	-.0295	.0742
C.QUAL	.1558	.0314	4.9569	.0000	.0937	.2178
NExprcs	-.0180	.0108	-1.6629	.0982	-.0393	.0034

Standardized coefficients

	coeff
C.QUAN	.0854
C.QUAL	.4961
NExprcs	-.1072

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4547	.2067	3.7851	43.7839	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.0740	.3607	11.2945	.0000	3.3619	4.7862
C.QUAN	.1191	.0180	6.6169	.0000	.0836	.1546

Standardized coefficients

	coeff
C.QUAN	.4547

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.1191	.0180	6.6169	.0000	.0836	.1546	.4547

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.0224	.0263	.8516	.3956	-.0295	.0742	.0854

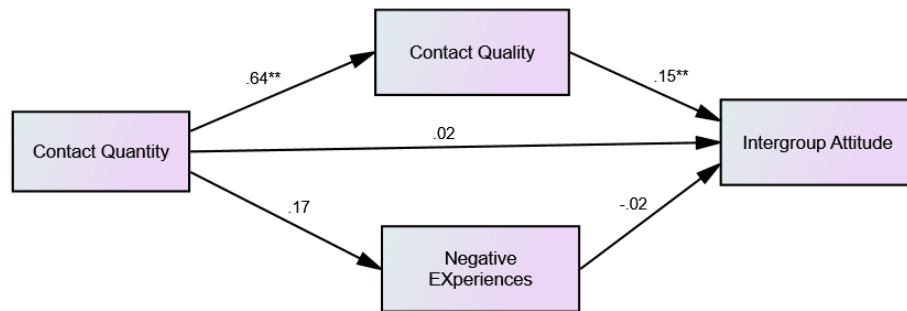
Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0967	.0239	.0499	.1439
C.QUAL	.0998	.0234	.0533	.1457
NExprcs	-.0031	.0031	-.0105	.0014

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.3693	.0876	.1942	.5374
C.QUAL	.3811	.0856	.2077	.5459
NExprcs	-.0118	.0120	-.0409	.0055

Figure 10: Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in medium diversity Aizawl District. *Notes: Unstandardized coefficients are shown*



4.5 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Anxiety in low diversity Serchhip District.

4.5 Results of mediation analyses of Contact Quality and Negative Experiences on the relationship between Contact Quantity and **Intergroup Anxiety** in low diversity Serchhip District given in Table 4.1.5 indicates that Contact Quantity significantly predicted Contact Quality, explaining 43.4% of the variance ($R^2 = .43$; $b = .64$; t

(168) = 11.35; $p < .001$; 95% CI [0.53, 0.76]. Contact Quantity also significantly predicted Negative Experiences explaining only 3.3% of the variance ($R^2 = .033$; $b = .27$; $t(168) = 2.40$; $p = .018$; 95% CI [0.05, 0.49]). When both Contact Quantity and Contact Quality were included in the model predicting Intergroup Anxiety, Contact Quality was not a significant predictor, ($b = .15$; $t(167) = 1.22$, $p = .225$, 95% CI [-.09, .039]) with an effect size of ($\beta = .12$). However, Negative Experiences significantly predicted higher intergroup anxiety ($b = 0.15$, $t = 2.38$, $p = .018$, 95% CI [0.03, 0.27]), with an effect size, $\beta = .18$.

After accounting for Contact Quality and Negative Experiences, the direct effect of Contact Quantity on Intergroup Anxiety was negatively significant ($b = -.24$; $t = -2.01$; $p = .046$, 95% CI [-.48, -.00]). The total effect of Contact Quantity on Intergroup Anxiety was non-significant ($b = -0.11$; $t = -1.16$; $p = .25$) with a standardized coefficient of $\beta = -.09$. The indirect effect of Contact Quantity on Intergroup Anxiety through Contact Quality was non-significant ($b = 0.10$; 95% bootstrap CI [-0.04, 0.24]). The indirect effect via Negative Experiences was statistically significant ($b = 0.04$, 95% CI [0.002, 0.096]). These findings suggest that Contact Quantity may reduce Intergroup anxiety indirectly by decreasing negative experiences in low diversity Serchhip District.

Although the total effect of contact quantity on intergroup anxiety was not statistically significant, the direct effect became significant when mediators were included in the model, suggesting a suppression effect. This indicates that the relationship between contact quantity and intergroup anxiety is partially mediated by negative experiences (but not by contact quality). Specifically, contact quantity appears to reduce anxiety indirectly through reduced negative experiences and directly by itself when controlling for the mediators.

Table 4.1.5 Mediation analysis of Contact Quality and Negative Experiences on the relationship between Contact Quantity and Intergroup Anxiety in low diversity Serchhip District.

OUTCOME VARIABLE:

C.QUAL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6589	.4342	30.3843	128.9060	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	9.2737	.9321	9.9488	.0000	7.4335	11.1139
C.QUAN	.6437	.0567	11.3537	.0000	.5318	.7556

Standardized coefficients

	coeff
C.QUAN	.6589

OUTCOME VARIABLE:

NExprcs

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1820	.0331	116.4095	5.7548	1.0000	168.0000	.0175

Model

	coeff	se	t	p	LLCI	ULCI
constant	25.2756	1.8245	13.8532	.0000	21.6736	28.8776
C.QUAN	.2662	.1110	2.3989	.0175	.0471	.4853

Standardized coefficients

	coeff
C.QUAN	.1820

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2224	.0495	77.4752	2.8801	3.0000	166.0000	.0376

Model

	coeff	se	t	p	LLCI	ULCI
constant	27.4532	2.4484	11.2129	.0000	22.6192	32.2871
C.QUAN	-.2435	.1213	-2.0065	.0464	-.4831	-.0039
C.QUAL	.1501	.1232	1.2182	.2249	-.0932	.3934
NExprcs	.1498	.0629	2.3802	.0184	.0255	.2741

Standardized coefficients

coeff

C.QUAN -.2035
C.QUAL .1226
NExprcs .1832

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0894	.0080	79.8936	1.3539	1.0000	168.0000	.2462

Model

	coeff	se	t	p	LLCI	ULCI
constant	32.6322	1.5115	21.5890	.0000	29.6482	35.6162
C.QUAN	-.1070	.0919	-1.1636	.2462	-.2885	.0745

Standardized coefficients

	coeff
C.QUAN	-.0894

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
-.1070	.0919	-1.1636	.2462	-.2885	.0745	-.0894

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
-.2435	.1213	-2.0065	.0464	-.4831	-.0039	-.2035

Indirect effect(s) of X on Y:

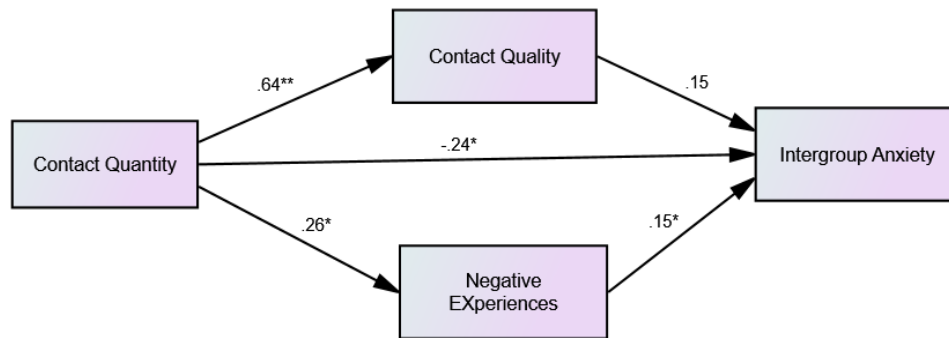
	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1365	.0748	-.0053	.2867
C.QUAL	.0966	.0712	-.0406	.2410
NExprcs	.0399	.0245	.0023	.0955

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1141	.0625	-.0043	.2408
C.QUAL	.0808	.0596	-.0336	.2047
NExprcs	.0333	.0201	.0019	.0775

Figure 11: Path model showing effects of Contact Quantity on Intergroup Anxiety through Contact Quality and Negative Experiences in low diversity Serchhip District.

Notes: *Unstandardized coefficients are shown*



4.6 Mediating role of **Contact Quality** and **Negative Experiences** on the relationship between Contact Quantity and Intergroup Attitude in low diversity Serchhip District.

4.6 Results of mediation analyses of Contact Quality and Negative Experiences on the relationship between Contact Quantity and **Intergroup Attitude** in low diversity Serchhip District given in Table 4.1.6 indicates that the model predicting Contact Quality from Contact Quantity was significant, explaining 43.4% of the variance ($R^2 = .43$; $b = .64$; $t(168) = 11.35$; $p < .001$; 95% CI [0.53, 0.76]), The standardized coefficient was $\beta = .65$, indicating a large effect size. This indicates that higher contact quantity leads to higher contact quality. Contact Quantity also significantly predicted Negative Experiences explaining only 3.3% of the variance ($R^2 = .033$; $b = .27$; $t(168) = 2.40$; $p = .018$; 95% CI [0.05, 0.49]), the standardized coefficient was $\beta = .18$, indicating a small to moderate effect. The positive regression coefficient indicates that higher levels of contact quantity are associated with higher levels of negative experiences. When both Contact Quantity, Contact Quality and Negative

Experiences were included in the model predicting Attitude, Contact Quality significantly predicted Attitude ($b = 0.08$; $t(167) = 3.20$, $p = .002$, 95% CI [0.03 ,0.13]) with an effect size of ($\beta = .30$) suggesting that higher contact quality was associated with more positive attitudes. Negative Experiences had a marginally non-significant negative effect on attitude, ($b = -0.02$, $t = -1.82$, $p = .071$, 95% CI [-0.05, 0.00], $\beta = -.13$).

The direct effect of Contact Quantity on Intergroup Attitude was not significant when controlling for contact quality and negative experiences ($b = 0.03$; $t(167) = 1.59$; $p = .114$, 95% CI [-0.01, 0.09]), with a standardized coefficient of $\beta = .15$. The total effect of Contact Quantity on Intergroup Attitude was significant ($b = 0.09$; $t(168) = 4.45$; $p < .001$; 95% bootstrap CI [0.05, 0.13]), with a medium standardized effect ($\beta = .32$), indicating that, overall, contact quantity is positively associated with intergroup attitude. The indirect effect of Contact Quantity on Intergroup Attitude through Contact Quality was significant ($b = 0.05$; 95% bootstrap CI [0.02, 0.09]). The indirect effect through Negative Experiences was not significant ($b = -0.006$, 95% CI [-0.023, 0.001]). These findings suggest a full mediation model, whereby the effect of contact quantity on intergroup attitude is entirely transmitted through contact quality. The positive indirect effect of contact quality on intergroup attitude indicating that higher-quality intergroup contact is associated with improved attitude towards ethnic outgroup members, and this relationship operates significantly through the mediator, contact quality. Negative experiences, while predicted by contact quantity, did not significantly mediate the relationship between contact quantity and intergroup attitude.

Table 4.1.6 Mediation analysis of Contact Quality and Negative Experiences in the relationship between Contact Quantity and Intergroup Attitude in low diversity Serchhip District.

OUTCOME VARIABLE:

C.QUAL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6589	.4342	30.3843	128.9060	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	9.2737	.9321	9.9488	.0000	7.4335	11.1139
C.QUAN	.6437	.0567	11.3537	.0000	.5318	.7556

Standardized coefficients

	coeff
C.QUAN	.6589

OUTCOME VARIABLE:

NExprcs

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1820	.0331	116.4095	5.7548	1.0000	168.0000	.0175

Model

	coeff	se	t	p	LLCI	ULCI
constant	25.2756	1.8245	13.8532	.0000	21.6736	28.8776
C.QUAN	.2662	.1110	2.3989	.0175	.0471	.4853

Standardized coefficients

	coeff
C.QUAN	.1820

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4150	.1722	3.4526	11.5132	3.0000	166.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.9376	.5169	7.6184	.0000	2.9171	4.9580
C.QUAN	.0407	.0256	1.5882	.1141	-.0099	.0913
C.QUAL	.0833	.0260	3.2041	.0016	.0320	.1347
NExprcs	-.0241	.0133	-1.8169	.0710	-.0504	.0021

Standardized coefficients

	coeff
C.QUAN	.1503
C.QUAL	.3008
NExprcs	-.1305

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3248	.1055	3.6865	19.8124	1.0000	168.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.1002	.3247	12.6281	.0000	3.4592	4.7412
C.QUAN	.0879	.0197	4.4511	.0000	.0489	.1269

Standardized coefficients

	coeff
C.QUAN	.3248

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.0879	.0197	4.4511	.0000	.0489	.1269	.3248

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.0407	.0256	1.5882	.1141	-.0099	.0913	.1503

Indirect effect(s) of X on Y:

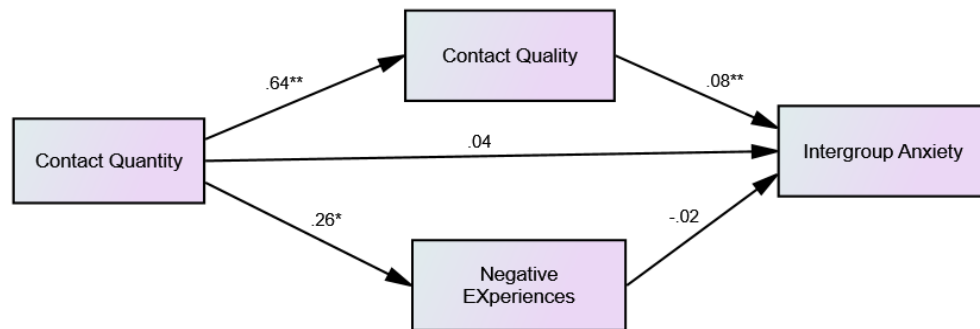
	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0472	.0181	.0129	.0852
C.QUAL	.0536	.0171	.0223	.0889
NExprcs	-.0064	.0062	-.0225	.0010

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.1745	.0646	.0496	.3067
C.QUAL	.1982	.0598	.0829	.3213
NExprcs	-.0237	.0224	-.0816	.0035

Figure 12: Path model showing effects of Contact Quantity on Intergroup Attitude through Contact Quality and Negative Experiences in low diversity Serchhip District.

Notes: Unstandardized coefficients are shown



To summarize, mediation analyses were conducted examining the role of Contact Quality and Negative Experiences in the relationship between Contact Quantity and two key intergroup outcomes: Anxiety and Attitude, among young adults in Mizoram, India. The study included three districts varying in ethnic outgroup diversity: Lawngtlai District (high diversity), Aizawl District (medium diversity), and Serchhip District (low diversity). The results suggest meaningful variation in mediation patterns across contexts, reinforcing the importance of sociocultural diversity in shaping the psychological impact of intergroup contact.

In Lawngtlai District, a **full mediation** model was observed for intergroup anxiety. Contact Quality fully explained the relationship between Contact Quantity and Anxiety, reinforcing the argument that positivity and cooperation, hallmarks of high-quality contact are key to reducing intergroup anxiety (Stephan & Stephan, 1985; Islam & Hewstone, 1993). Negative Experiences, however, did not meaningfully mediate either outcome, suggesting that in high-diversity settings, the

predominance of routine, positive contact may neutralize the psychological impact of occasional negative interactions.

Where intergroup exposure is frequent and varied, the findings supported a **partial mediation** model for intergroup attitudes. Contact Quantity influenced attitudes both directly and through Contact Quality. This suggests that while frequency of contact matters, the development of meaningful, positive-quality interactions significantly enhances attitudinal outcomes. These results align with Pettigrew and Tropp (2008), who emphasize the importance of equal-status, cooperative contact in reducing prejudice and enhancing positive attitude.

In the moderately diverse context of Aizawl, neither Contact Quality nor Negative Experiences significantly mediated the relationship for Intergroup Anxiety. Although the direction of effects was consistent with theoretical expectations (i.e., quality reduces anxiety), the lack of statistical significance may reflect the emotional resilience of anxiety as a construct, which is less responsive to subtle shifts in interaction dynamics unless contact is deeply engaging or repeated (Paolini et al., 2004; Stephan, 2014). This suggests that in moderately diverse environments, routine contact may not be emotionally intensive enough to reduce anxiety on its own.

Contact Quantity impacted intergroup attitudes entirely through Contact Quality, supporting a **full mediation** model. This finding reinforces previous research showing that attitude change is driven more by positivity and high-quality of contact than by how often such contact occurs (Turner et al., 2007). When individuals perceive intergroup interactions as equal, respectful, and cooperative, attitudinal improvements follow, even in environments with medium diversity.

In Serchhip District, Negative Experiences emerged as a **significant mediator**, while Contact Quality did not. Thus, a **partial mediation** was observed. This highlights a key vulnerability in low-diversity settings: negative interactions are more salient and influential when contact is rare, likely due to the lack of balancing positive experiences (Stephan & Stephan, 2014). In such contexts, even limited negative contact can reinforce outgroup distrust and elevate anxiety, underscoring the

importance of carefully managed intergroup exposure where interaction quality is prioritized.

A **full mediation** model was again observed for Intergroup Attitudes, with Contact Quality fully accounting for the impact of Contact Quantity. This implies that even infrequent contact can lead to positive attitude change, provided it is of high quality. Such findings are supported by Voci and Hewstone (2003), who argue that meaningful intergroup contact can counterbalance low exposure, particularly in homogenous environments where opportunities for contact are scarce but potentially impactful.

Therefore, these results support the hypothesis in principle, but only partially in practice. The positive indirect effect via positive contact (Contact Quality) is robust and widely supported, especially for attitudes whereas, the negative indirect effect via negative contact (Negative Experiences) is situational, it is observed only under low-diversity conditions for anxiety, not consistently across all settings or outcomes. Thus, the interpretation partially proves the hypothesis — context (level of diversity) moderates the presence and strength of indirect pathways.

These findings reaffirm the theoretical backbone of Intergroup Contact Theory, that quality trumps quantity (Pettigrew & Tropp, 2006). While quantity of contact provides the opportunity, it is positive, structured, and emotionally resonant interactions that transform intergroup relations. The selective influence of Negative Experiences, especially on anxiety in homogenous contexts, also highlights a key challenge: negative contact can be disproportionately damaging where intergroup exposure is rare and normatively unsupported.

Mizoram is predominantly inhabited by the Mizo ethnic group, characterized by strong in-group ties, shared norms, and a collectivistic cultural orientation. In such societies, intergroup contact, though increasing due to migration and social change may still be filtered through deep-rooted in-group loyalties. While this fosters cohesion, it also raises the risk of social exclusion if intergroup contact is superficial or negative (Pettigrew & Tropp, 2006). Thus, quality of contact becomes paramount

in such settings, serving as the key mechanism for improving both attitudes and anxiety-related outcomes toward outgroups.

In conclusion, the present study advances theoretical understanding by demonstrating that Contact Quality (positive contact) is a key mechanism through which contact quantity influences intergroup anxiety and intergroup attitude. Increasing exposure to external influences and the presence of diverse ethnic minorities and migrant populations, intergroup interactions are becoming more common. In such a context, the quality of contact rather than mere exposure is crucial for fostering positive intergroup attitudes and social harmony. This emphasizes the need to go beyond mere exposure to diversity and focus on fostering high-quality intergroup interactions to improve attitudes. Conversely, the role of Negative Contact was more context-dependent and less consistent. While it did not significantly mediate intergroup attitudes in any district, its effect on intergroup anxiety was notable in the low-diversity setting of Serchhip District, where limited intergroup exposure appeared to magnify the emotional impact of adverse encounters. This supports prior literature suggesting that in homogeneous societies, even infrequent negative contact can reinforce fear, suspicion, and social distance (Stephan & Stephan, 2014). Therefore, while negative experiences may not shape long-term attitudes, they can exert a disproportionate influence on affective responses, particularly in settings where positive intergroup interactions are scarce.

Future research should explore how different dimensions of contact quality (e.g., emotional warmth, intimacy, and frequency of interactions) influence intergroup attitudes in various cultural and organizational contexts. Additionally, examining the role of individual differences (e.g., openness to experience, intergroup anxiety, and social dominance orientation) could provide deeper insights into the mechanisms underlying the diversity-attitude relationship.

The Role of Countervailing Positive and Negative (Valenced) Contact in understanding the overall association between Diversity (Neighbourhood and Workplace Exposure) and Intergroup Anxiety and Attitude.

To examine the fourth objective of studying the role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (neighbourhood and workplace exposure) and intergroup anxiety and attitude, mediation analyses were computed and the hypothesis framed was: It is expected that only after controlling for positive intergroup contact in particular (and not all contact) will a negative effect of contextual-exposure emerge; and that any emergent negative effect of intergroup exposure on anxiety and attitude will (in part) be accounted for by the frequency of negative contact. In order to test the mediating role of both positive and negative contact on the relationship between diversity (neighbourhood and workplace exposure) and intergroup anxiety and attitude, negative contact, positive contact and intergroup anxiety were entered together as the mediating variables. Neighbourhood Exposure and Workplace Exposure were entered separately as independent variables over all units of analyses. Intergroup attitude was entered separately as dependent variable over all units of analyses. Assumptions underlying multiple regression analysis like linearity, independent errors, normality, homoscedasticity and multicollinearity were generally satisfied, with mean centering of variables and bootstrapping (5000) were all automatically ensured by the software *PROCESS* macro, v4.2 (Hayes, 2022) software.

Figure 13. Mediating hypothetical model for testing the countervailing role of **Negative Contact, Positive Contact and Intergroup Anxiety** on the relationship between **Neighbourhood Exposure** and **Intergroup Attitude**

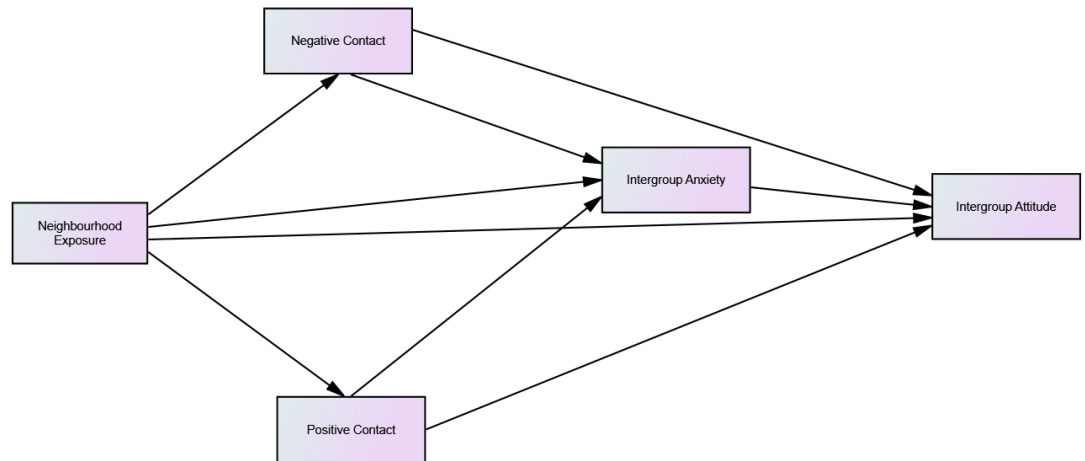
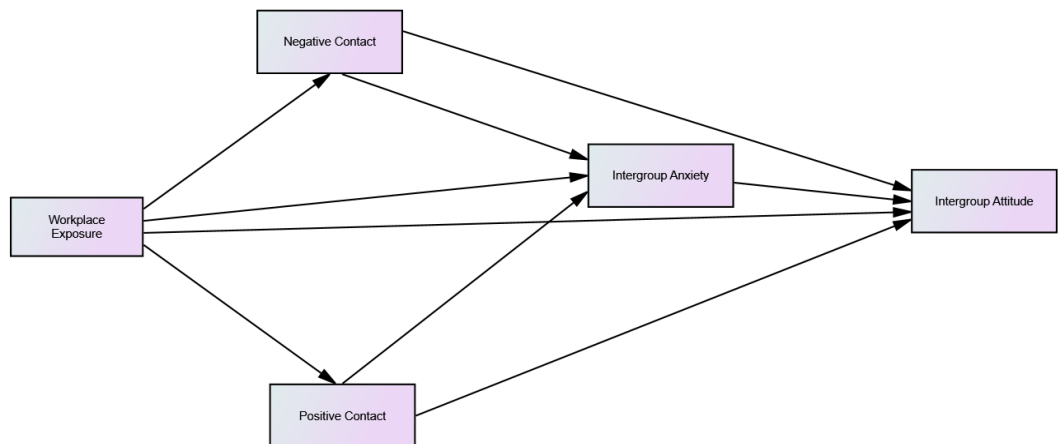


Figure 14. Mediating hypothetical model for testing the countervailing role of **Negative Contact**, **Positive Contact** and **Intergroup Anxiety** on the relationship between **Workplace Exposure** and **Intergroup Attitude**.



5.1 Countervailing role of **Negative Contact**, **Positive Contact** and **Intergroup Anxiety** on the relationship between Neighbourhood Exposure and Intergroup Attitude

5.2 Countervailing role of **Negative Contact, Positive Contact and Intergroup Anxiety** on the relationship between Workplace Exposure and Intergroup Attitude

5.1 Countervailing role of **Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Neighbourhood Exposure and Intergroup Attitude.**

The study assessed the countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety in the relationship between Neighbourhood Exposure and Intergroup Attitude. For the first model, Neighbourhood Exposure does not significantly predict Negative Contact ($b = .0009$; $p = .735$; 95% CI $[-.0045, .0064]$). The model also has low explanatory power ($R^2 = .015$) indicating that Neighbourhood exposure does not significantly influence Negative Contact. In the second model, Neighbourhood Exposure does not significantly predict Positive Contact ($b = -0.0038$, $p = .316$; 95% CI $[-.0113, .0037]$). For the second model, the $R^2 = .0020$, indicating that Neighbourhood exposure accounted for .20% of the variation in positive contact. The third model evaluates whether Neighbourhood exposure, Negative contact and Positive Contact influence Intergroup anxiety. Result indicates a small but statistically significant portion of the variance in Anxiety, where ($R^2 = .0285$, $F(3, 506) = 4.94$, $p = .002$) explaining 2.85% of the total variation. Positive Contact emerged as a significant negative predictor of Intergroup Anxiety ($b = -1.0934$, $p < .001$) indicating that as positive contact increases, intergroup anxiety decreases. Neighbourhood exposure ($b = .0043$, $p = .871$) and Negative contact ($b = .5426$, $p = .203$) has no significant effect on Intergroup anxiety. The final regression model examines how Neighbourhood exposure, Negative contact, Positive Contact and Intergroup Anxiety predict Attitude. The model reveals ($R^2 = .1013$, $F(4, 505) = 14.23$, $p < .001$) indicating that the model explains 10.13% of the variance in Attitude. Positive Contact has significant effect ($b = .4143$, $p < .001$) and Intergroup anxiety has significant negative effect ($b = -0.0413$, $p < .001$). This indicates that higher positive contact is associated with a more positive Attitude, while higher

Anxiety predicts a more negative Attitude. Neighbourhood Exposure and Negative Contact were not significant predictors of attitude.

The total effect of Neighbourhood exposure on Attitude is non-significant ($b = .0074$, $p = .262$, (95% CI [-.0056 - .0205]). The total indirect effect of Neighbourhood exposure on Attitude through the set of mediating variables (Negative contact, Positive contact and Intergroup anxiety) was non-significant, $b = -.0020$, 95% CI [-.0063, .0013], indicating that the mediators do not substantially carry the effect of Neighbourhood exposure to Attitude.

The specific indirect effect of Neighbourhood exposure on Attitude via Negative contact was non-significant ($b = .0000$; 95% CI [-.0008, .0005]. The specific indirect effect of Neighbourhood exposure on Attitude via Positive contact was non-significant ($b = -.0016$; 95% CI [-.0052, .0014]. The specific indirect effect of Neighbourhood exposure on Attitude via Intergroup Anxiety was non-significant ($b = -0.0002$; 95% CI [-.0027, .0022]. The specific indirect effect of Neighbourhood exposure on Attitude via the sequence of mediators, Negative Contact and Intergroup Anxiety was non-significant ($b = .0000$; 95% CI [-.0002, .0001]. The specific indirect effect of Neighbourhood exposure on Attitude via the sequence of mediators, Positive Contact and Intergroup Anxiety was non-significant ($b = -.0002$; 95% CI [-.0007, .0002].

Table 5.1.1 Countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Neighbourhood Exposure and Intergroup Attitude.

OUTCOME VARIABLE:

NContact

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0150	.0002	.8264	.1146	1.0000	508.0000	.7351

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.6293	.0467	34.9128	.0000	1.5376	1.7209

NExpsr	.0009	.0028	.3386	.7351	-.0045	.0064
--------	-------	-------	-------	-------	--------	-------

Standardized coefficients

	coeff
NExpsr	.0150

OUTCOME VARIABLE:

PContact

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0445	.0020	1.5492	1.0065	1.0000	508.0000	.3162

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.1756	.0639	81.0003	.0000	5.0500	5.3011
NExpsr	-.0038	.0038	-1.0032	.3162	-.0113	.0037

Standardized coefficients

	coeff
NExpsr	-.0445

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1687	.0285	75.7075	4.9399	3.0000	506.0000	.0022

Model

	coeff	se	t	p	LLCI	ULCI
constant	35.2534	1.8522	19.0334	.0000	31.6145	38.8923
NExpsr	.0043	.0267	.1625	.8710	-.0482	.0568
NContact	.5426	.4258	1.2744	.2031	-.2939	1.3790
PContact	-1.0934	.3110	-3.5163	.0005	-1.7043	-.4825

Standardized coefficients

	coeff
NExpsr	.0071
NContact	.0560
PContact	-.1546

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3182	.1013	4.2288	14.2260	4.0000	505.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.8730	.5734	8.4981	.0000	3.7464	5.9996
NExpsr	.0094	.0063	1.4931	.1360	-.0030	.0218
NContact	-.0307	.1008	-.3043	.7610	-.2287	.1673
PContact	.4143	.0744	5.5694	.0000	.2681	.5604
Anxiety	-.0413	.0105	-3.9334	.0001	-.0620	-.0207

Standardized coefficients

	coeff
NExpsr	.0631
NContact	-.0129
PContact	.2387
Anxiety	-.1683

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0498	.0025	4.6659	1.2606	1.0000	508.0000	.2621

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.7076	.1109	51.4716	.0000	5.4897	5.9255
NExpsr	.0074	.0066	1.1228	.2621	-.0056	.0205

Standardized coefficients

	coeff
NExpsr	.0498

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.0074	.0066	1.1228	.2621	-.0056	.0205	.0498

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.0094	.0063	1.4931	.1360	-.0030	.0218	.0631

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	-.0020	.0019	-.0063	.0013
Ind1	.0000	.0003	-.0008	.0005
Ind2	-.0016	.0017	-.0052	.0014
Ind3	-.0002	.0012	-.0027	.0022
Ind4	.0000	.0001	-.0002	.0001
Ind5	-.0002	.0002	-.0007	.0002

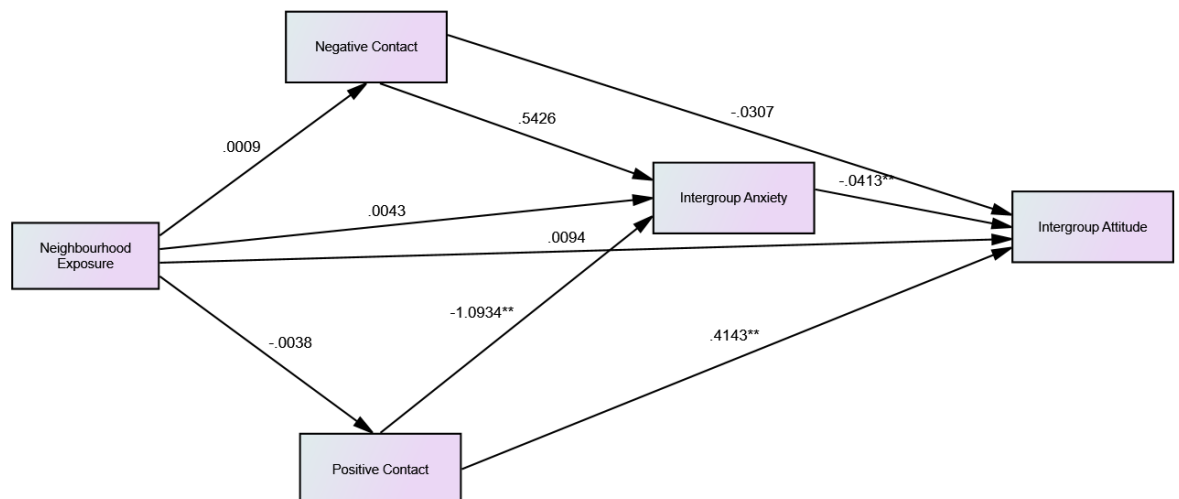
Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	-.0133	.0126	-.0398	.0092
Ind1	-.0002	.0019	-.0049	.0031
Ind2	-.0106	.0107	-.0336	.0096
Ind3	-.0012	.0080	-.0177	.0144
Ind4	-.0001	.0005	-.0013	.0009
Ind5	-.0012	.0014	-.0043	.0011

Indirect effect key:

Ind1 NExpsr	->	NContact	->	Attitude		
Ind2 NExpsr	->	PContact	->	Attitude		
Ind3 NExpsr	->	Anxiety	->	Attitude		
Ind4 NExpsr	->	NContact	->	Anxiety	->	Attitude
Ind5 NExpsr	->	PContact	->	Anxiety	->	Attitude

Figure 15: Path model showing effects of Neighbourhood Exposure on Intergroup Attitude through Negative Contact, Positive Contact and Intergroup Anxiety. *Notes: Unstandardized coefficients are shown*



To summarize, a mediation analysis was conducted using *PROCESS* macro-Model 80 (Hayes, 2022) to examine whether the relationship between Neighbourhood Exposure (NExpsr) and Intergroup Attitudes (Attitude) was mediated by Negative Contact (VCNC), Positive Contact (VCPC), and Intergroup anxiety. The analysis was based on a sample of 510 participants. The result indicates that the direct effects of Positive Contact (VCPC) on Attitude was positively significant indicating that more positive contact predicted more positive attitudes. This finding is consistent with Pettigrew and Tropp's (2006) meta-analysis, which demonstrated that positive contact is a robust predictor of reduced prejudice across a range of contexts. The direct effects of Intergroup Anxiety on Attitude were also negatively significant indicating higher anxiety predicted more negative attitudes. This supports the core argument of Integrated Threat Theory (Stephan & Stephan, 2000), which identifies intergroup anxiety as a potent emotional driver of prejudice. The total effect of Neighbourhood Exposure on Attitude was non-significant, indicating no simple predictive relationship between residing in a more diverse neighborhood and holding more positive outgroup attitudes. This aligns with research suggesting that mere proximity or passive exposure is often insufficient to reduce prejudice (Paolini et al., 2010; Dixon et al., 2010).

The indirect effects of Negative Contact, Positive Contact and Anxiety on Attitude were also non-significant. Hence, the relationship between Neighbourhood Exposure and Attitude was not mediated by Negative Contact, Positive Contact and Anxiety. While the absence of indirect effects may appear counterintuitive in light of robust literature on the contact–attitude link (e.g., Pettigrew & Tropp, 2008; Christ et al., 2014), it underscores an important implication: contact effects depend not merely on frequency or opportunity, but on actual interaction quality and salience. Research has shown that incidental exposure, such as simply living near outgroup members, may fail to translate into meaningful intergroup engagement (McKeown & Dixon, 2017). In particular, Dixon et al. (2005) warn that structural desegregation without interpersonal interaction may maintain or even exacerbate intergroup boundaries.

Furthermore, the absence of mediation via intergroup anxiety contradicts some prior findings (Stephan & Stephan, 1985; Tausch et al., 2007), but could suggest that anxiety may be contextually activated and not always shaped by environmental exposure alone. The cross-sectional nature of the data may also obscure temporal dynamics in which prolonged or meaningful intergroup relationships reduce anxiety over time.

Merely being exposed to ethnic outgroup members in one's neighborhood does not automatically lead to more positive attitudes toward them. Instead, it is the quality of the interaction that matters. When neighborhood exposure leads to positive contact experiences, more favorable attitudes emerge. In other words, exposure alone is not enough, positive, meaningful engagement with outgroup members is key to improving intergroup attitudes. Additionally, higher anxiety leads to more negative attitudes, emphasizing the importance of emotional factors in shaping perceptions.

Although intergroup contact theory (Allport, 1954) posits that increased exposure to outgroup members can reduce prejudice, contemporary evidence increasingly suggests that mere neighbourhood exposure to ethnic outgroups is insufficient for improving intergroup attitudes. Rather, the impact of exposure is indirect, operating through the mediating mechanism of positive, meaningful intergroup contact.

Meta-analytic findings by Pettigrew and Tropp (2006) established that contact quality, not just proximity, is the critical driver in reducing prejudice. This is echoed by Schlueter and Scheepers (2010), who found that the size of the outgroup population within a neighbourhood does not significantly affect intergroup attitudes unless such diversity translates into constructive social interaction. Similarly, Binder et al. (2009) demonstrated longitudinally that positive contact predicts reductions in prejudice over time, whereas simple co-residence does not.

Moreover, Laurence (2011) and Koopmans and Schaeffer (2015) observed that diversity, particularly in disadvantaged areas, can increase perceptions of threat and reduce cohesion if not accompanied by opportunities for interaction. These

findings imply that exposure without interaction may even exacerbate negative stereotypes, further underlining the necessity of contact-based mechanisms.

Stolle, Soroka, and Johnston (2008) found that interpersonal trust and social cohesion in diverse settings were largely explained by the frequency and quality of social interactions across group lines. In contexts where social bridging is absent, ethnic diversity has little to no effect or even a negative effect on attitudes. Finally, Vezzali et al. (2017) emphasized the power of even indirect or extended forms of contact in reducing prejudice, reinforcing the view that actual engagement, rather than exposure alone, is essential for improving attitudes.

Taken together, these findings support the conclusion that increase in neighbourhood ethnic exposure does not directly predict improved intergroup attitudes, but the quality of contact, whether positive or negative contact has direct effect on the formation of attitude, wherein positive contact resulted in positive attitude and anxiety resulted in more negative attitudes towards ethnic outgroup members. The indirect effect of negative contact, positive contact and anxiety however do not mediate the relationship between neighbourhood exposure and attitude.

5.2 Countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Workplace Exposure and Intergroup Attitude.

The study assessed the countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety in the relationship between **Workplace Exposure** and Intergroup Attitude. The first model examines whether exposure to ethnic outgroups in the workplace (WExprs) predicts negative contact (VCNC). The model was statistically significant, ($b = 0.0046$; $F(1, 508) = 7.05$, $p = .008$; 95% CI [0.0012, 0.0081]), and explained 1.37% of the variance in Negative Contact (VCNC) ($R^2 = .0137$). The standardized coefficient was $\beta = .117$, indicating a small but significant positive association between workplace exposure and negative contact. The second model tested whether workplace exposure (WExprs) predicts positive

contact (VCPC). The model was significant, ($b = 0.0083$; $F(1, 508) = 12.20$, $p = .001$; 95% CI [0.0036, 0.0130]), with $R^2 = .0234$, explaining 2.34% of the variance. The standardized coefficient was $\beta = .153$, indicating a small but significant positive association between workplace exposure and positive contact. This shows that greater exposure to ethnic outgroup members in workplace is associated with increased levels of positive contact, albeit with a small effect size. The third model assessed whether workplace exposure, negative contact and positive contact predict intergroup anxiety. The model was significant: $F(3, 506) = 7.73$, $p < .001$, $R^2 = .0438$, explaining 4.38% of the variance in anxiety. Positive contact ($b = -.9500$; $p = .002$; 95%CI [-1.5637, -0.3363]) and Workplace exposure ($b = -.0487$; $p = .004$; 95%CI [-0.0822, -0.0152]) emerged as significant negative predictor against anxiety, indicating that increase in workplace exposure and positive contact is accompanied by decrease in anxiety. Negative contact was a non-significant predictor. The final regression model examines how workplace exposure, negative contact, positive contact and intergroup anxiety predict attitude. The model was significant ($F(4, 505) = 14.04$, $p < .001$, $R^2 = .1001$), explaining 10.01% of the variance. Positive contact has significant positive effect on attitude ($b = 0.3962$; $p < .001$; 95%CI [0.2485, 0.5438]). Anxiety was found to have significant negative effect on attitude ($b = -0.0395$; $p < .001$; 95%CI [-0.0604, -0.0187]). Workplace Exposure and Negative Contact were not significant predictors. This indicates that increase in positive contact results in positive attitude towards ethnic outgroup members while increase in intergroup anxiety fosters decrease in attitude towards ethnic outgroup members.

The total effect of workplace exposure on intergroup attitude was significant ($b = 0.0103$, $p = .014$, 95% CI [0.0021, 0.0185], $\beta = .109$) indicating that workplace exposure positively predicted attitudes toward ethnic outgroups when considered alone, but the effect size was modest. The total indirect effect of workplace exposure on attitude through the set of mediating variables (Negative contact, Positive contact and Intergroup anxiety) was significant ($b = 0.0052$, 95% CI [0.0023, 0.0083]), indicating that workplace exposure improves intergroup attitudes primarily through its effects on contact quality and anxiety, aligning with intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2006).

The specific indirect effect of workplace exposure on attitude via negative contact was non-significant ($b = -.0002$, 95% CI $[-0.0012, 0.0006]$), indicating that negative contact does not mediate the relationship between workplace exposure and attitude. This aligns with findings that negative contact may not consistently worsen attitudes unless the contact is particularly intense or threatening (Barlow et al., 2012).

The specific indirect effect of workplace exposure on attitude via positive contact was significant ($b = 0.0033$, 95% CI $[0.0014, 0.0056]$). This significant mediation pathway suggests that increased positive contact (VCPC) due to workplace exposure leads to more favorable intergroup attitudes. This supports the classic intergroup contact hypothesis (Allport, 1954) and is echoed in meta-analytic research showing that even casual, voluntary contact can meaningfully reduce prejudice (Pettigrew & Tropp, 2006).

The specific indirect effect of workplace exposure on attitude via intergroup anxiety was significant ($b = .0019$, 95% CI $[0.0006, 0.0037]$), indicating that increase in workplace exposure was associated with reduced intergroup anxiety, which in turn predicted more positive attitudes. This supports models emphasizing the emotional mediators of contact effects, particularly anxiety as a central mechanism (Stephan & Stephan, 1985; 2000). It reflects how increased exposure to diversity reduces fear, uncertainty, and perceived threat.

The specific indirect effect of workplace exposure on attitude via the sequence of mediators, negative contact and intergroup anxiety was non-significant ($b = -.0001$; 95% CI $[-.0004, 0.0000]$).

The specific indirect effect of workplace exposure on attitude via the sequence of mediators, Positive Contact and Intergroup Anxiety was significant ($b = .0003$; 95% CI $[0.0001, 0.0007]$). A small but significant serial mediation suggests that workplace exposure increases positive contact, which reduces intergroup anxiety, and thereby improves attitudes. This aligns with extended models of contact theory, where positive experiences foster psychological safety, which in turn facilitates attitude change (Turner et al., 2008; Dovidio et al., 2017).

Table 5.1.2 Countervailing role of Negative Contact, Positive Contact and Intergroup Anxiety on the relationship between Workplace Exposure and Intergroup Attitude

OUTCOME VARIABLE:

NContact

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1170	.0137	.8152	7.0514	1.0000	508.0000	.0082

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5740	.0465	33.8183	.0000	1.4825	1.6654
WExpsr	.0046	.0017	2.6555	.0082	.0012	.0081

Standardized coefficients

	coeff
WExpsr	.1170

OUTCOME VARIABLE:

PContact

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1531	.0234	1.5159	12.1955	1.0000	508.0000	.0005

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.0297	.0635	79.2506	.0000	4.9050	5.1544
WExpsr	.0083	.0024	3.4922	.0005	.0036	.0130

Standardized coefficients

	coeff
WExpsr	.1531

OUTCOME VARIABLE:

Anxiety

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2094	.0438	74.5082	7.7344	3.0000	506.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	34.9566	1.8192	19.2159	.0000	31.3826	38.5306
WExpsr	-.0487	.0170	-2.8586	.0044	-.0822	-.0152

NContact	.7016	.4260	1.6471	.1002	-.1353	1.5385
PContact	-.9500	.3124	-3.0411	.0025	-1.5637	-.3363

Standardized coefficients

	coeff
WExprsr	-.1268
NContact	.0724
PContact	-.1343

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3163	.1001	4.2344	14.0396	4.0000	505.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.9477	.5704	8.6746	.0000	3.8271	6.0683
WExprsr	.0051	.0041	1.2475	.2128	-.0029	.0132
NContact	-.0464	.1018	-.4562	.6485	-.2465	.1536
PContact	.3962	.0751	5.2721	.0000	.2485	.5438
Anxiety	-.0395	.0106	-3.7315	.0002	-.0604	-.0187

Standardized coefficients

	coeff
WExprsr	.0542
NContact	-.0195
PContact	.2282
Anxiety	-.1611

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

Attitude

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1092	.0119	4.6217	6.1330	1.0000	508.0000	.0136

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.6301	.1108	50.8054	.0000	5.4124	5.8478
WExprsr	.0103	.0042	2.4765	.0136	.0021	.0185

Standardized coefficients

	coeff
WExprsr	.1092

```

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y
      Effect      se      t      p      LLCI      ULCI      c_cs
      .0103      .0042      2.4765      .0136      .0021      .0185      .1092

Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI      c'_cs
      .0051      .0041      1.2475      .2128      -.0029      .0132      .0542

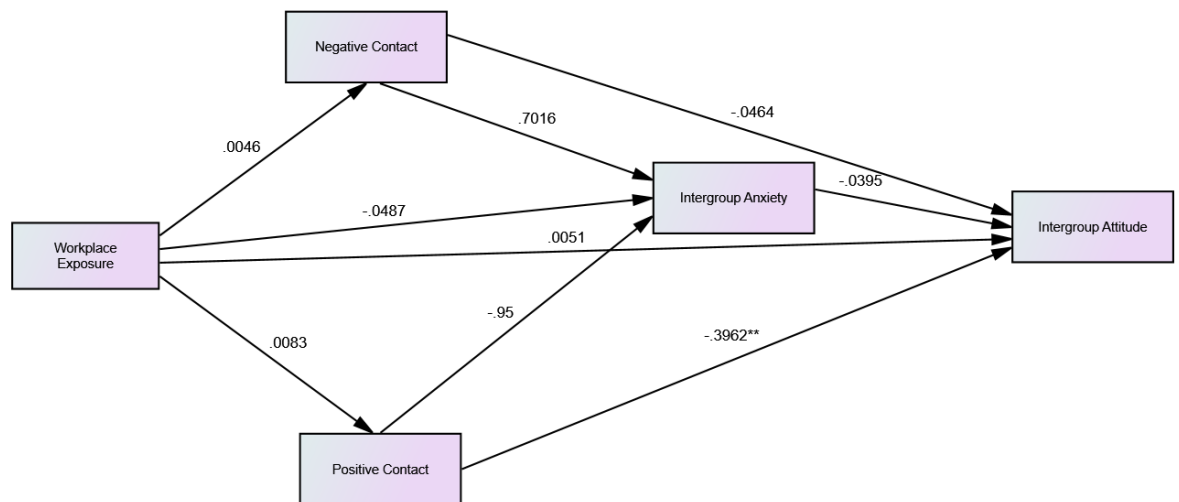
Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      .0052      .0015      .0023      .0083
Ind1      -.0002      .0005      -.0012      .0006
Ind2      .0033      .0011      .0014      .0056
Ind3      .0019      .0008      .0006      .0037
Ind4      -.0001      .0001      -.0004      .0000
Ind5      .0003      .0002      .0001      .0007

Completely standardized indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
TOTAL      .0550      .0157      .0251      .0875
Ind1      -.0023      .0049      -.0131      .0068
Ind2      .0349      .0111      .0144      .0581
Ind3      .0204      .0086      .0060      .0397
Ind4      -.0014      .0011      -.0040      .0002
Ind5      .0033      .0018      .0006      .0076

Indirect effect key:
Ind1 WExprs -> NContact -> Attitude
Ind2 WExprs -> PContact -> Attitude
Ind3 WExprs -> Anxiety -> Attitude
Ind4 WExprs -> NContact -> Anxiety -> Attitude
Ind5 WExprs -> PContact -> Anxiety -> Attitude

```

Figure 16: Path model showing effects of Workplace Exposure on Intergroup Attitude through Negative Contact, Positive Contact and Intergroup Anxiety. *Notes: Unstandardized coefficients are shown*



To summarize, the present study examined how Workplace Exposure (WExp_{sr}) influences Attitudes toward ethnic outgroup members through both Negative Contact and Positive Contact (VCNC, VCPC) and Intergroup Anxiety mediators, using a serial mediation model with a sample of $N = 510$. The total effect of workplace exposure on attitudes was significant ($\beta = .139, p < .001$), indicating that individuals in more ethnically diverse workplace environments generally hold more positive attitudes. However, this relationship was primarily explained through **indirect effects**, rather than a strong direct path.

The most robust mediators were positive contact (VCPC) and intergroup anxiety. Workplace exposure significantly predicted greater Positive Contact ($\beta = .108, p = .0046$), which in turn predicted more favorable outgroup attitudes ($\beta = .217, p < .001$). This supports foundational work on intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2006), affirming that voluntary, quality intergroup interactions foster more positive intergroup evaluations.

Additionally, both direct and serial mediation paths through reduced anxiety were significant. Workplace Exposure predicted lower Intergroup Anxiety ($\beta = -.119, p = .0019$), which was associated with more positive attitudes ($\beta = -.194, p <$

.001). This aligns with Stephan & Stephan's (1985) Integrated Threat Theory, which emphasizes the affective dimension of prejudice. The serial path (WExpsr → VCPC → Anxiety → Attitude) further supported the emotional mediational role of positive contact in reducing anxiety (Turner et al., 2008; Paolini et al., 2007).

In contrast, negative contact (VCNC), though significantly predicted by Workplace Exposure ($\beta = .132, p = .0005$), did not significantly predict outgroup attitudes either directly ($\beta = .004, p = .905$) or indirectly through Anxiety ($\beta = .065, p = .087$). This suggests that negative contact may not necessarily generalize to attitudinal change unless it is more frequent or emotionally intense (Barlow et al., 2012; Zhou et al., 2019). These results underscore the asymmetrical impact of positive over negative contact, a trend supported in meta-analytic literature (Pettigrew & Tropp, 2006; Lemmer & Wagner, 2015).

Overall, the findings indicate that workplace diversity alone does not directly transform intergroup attitudes; rather, it provides opportunities for positive intergroup contact, which then fosters attitudinal openness by reducing intergroup anxiety. These results advance our understanding of how contextual exposure shapes social attitudes through both cognitive and emotional pathways, supporting multidimensional models of intergroup relations (Hodson et al., 2018; Christ et al., 2014).

This objective was investigated using both self-reported measures of intergroup exposure (i.e., neighborhood and workplace exposure) and diversity levels across districts. Analysis of the self-reported data of intergroup exposure (neighborhood and workplace exposure) revealed multiple significant indirect effects, highlighting the complex pathways through which workplace exposure influenced intergroup attitudes. In contrast, when examining the effects by actual diversity levels, a different pattern emerged. Specifically, in Lawngtlai District, the most ethnically diverse region, only the indirect effect of positive contact significantly predicted intergroup attitudes. Neither negative contact nor intergroup anxiety showed meaningful effects in Lawngtlai District (high diversity) or the other two districts (medium and low diversity).

These findings indicate that positive contact functioned as a significant mediator exclusively in the high-diversity setting of Lawngtlai District, while no significant indirect effects were observed in the other districts. Conversely, the self-reported neighbourhood and workplace exposure data revealed several significant mediation pathways. Notably, positive contact (VCPC) had direct significant effect on the relationship between neighborhood exposure (NExpsr) and intergroup attitudes and intergroup anxiety had direct negative effect on the relationship between neighborhood exposure (NExpsr) and intergroup attitudes. Additionally, both positive contact (VCPC) and intergroup anxiety significantly mediated the relationship between workplace exposure (WExpsr) and intergroup attitudes.

Chapter V

SUMMARY AND CONCLUSION

The main aim of this research was to examine the role of contact valence in understanding the overall intergroup processes across different levels of intergroup exposure or diversity levels. Previous researches on the impact of intergroup exposure on intergroup attitudes suggests that diversity leads to increased intergroup contact, which can either produce a positive overall effect (as proposed by the ecological-contact hypothesis) or mitigate a negative effect caused by perceived threats (Pettigrew et al., 2006; Putnam, 2007; Laurence et al., 2018). However, this framework only partially explains how exposure influences attitudes through contact, without considering the valence of the contact. Following Laurence et al., (2017), the present study incorporated the concept of contact valence into the existing exposure/contact/prejudice framework. The present study aims to explain how increasing ethnic exposure/diversity influences intergroup anxiety and attitudes through both positive and negative contact pathways.

Based on the theoretical and empirical framework reviewed to explore the role of contact valence in intergroup processes, several specific objectives were outlined for this study. The first objective was to highlight the impact of diversity levels on Intergroup Anxiety and Intergroup Attitude. The second objective was to elucidate the role of frequency of Intergroup Contact on Intergroup Anxiety and Intergroup Attitude. The third objective was to explore the mediating role of Contact Quality and Negative Experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety (ii) Contact Quantity and Intergroup Attitude in the three Outgroup Exposure Levels (diversity levels). The fourth objective was to explore the role of countervailing Positive and Negative (valenced) contact in understanding the overall association between Diversity (Neighbourhood and Workplace Exposure) and Intergroup Anxiety and Attitude.

Following a multistage sampling procedure, samples were obtained in equal proportion of male and female gender. In the first stage of sampling, demographic composition and diversity of groups according to the grouping criteria of language, ethnicity, religion, religious denomination, gender and health related categories in the 8 district capitals of Mizoram was first ascertained from the secondary data available with various State Government departments, community-based organizations and

faith-based organizations. The district capitals were then ranked from the most diverse to the least diverse on the different grouping criteria such as languages, ethnicity, religion and religious denomination, gender and health related categories, according to the diversity of the groups, in the second stage. In the third stage, three district capitals in order of their diversity were selected for data collection, the selection of which was based on the levels of intergroup exposure of grouping criteria that cuts across all locations from the highest to the lowest levels. Out of the different grouping criteria, ethnicity was used as the main criterion to reflect diversity of the eight districts as it appeared to be most salient. As such, Lawngtlai District was first selected to represent highest diversity on the criteria of ethnicity, among the eight districts. Aizawl district was selected to represent medium intergroup exposure of ethnicity and Serchhip District was selected to represent lowest intergroup exposure of ethnicity.

Demographic information such as age, sex, educational qualification, citizenship, occupation, type of family, permanent residence area, ethnicity, religion, religious denomination, native language was recorded to depict sample representativeness. The mean age of participants in Lawngtlai District was 29 years, Aizawl District = 26 years and Serchhip District = 28 years. 50% of the respondents constitute the male population while the remaining 50% are females. The percentage of young adult respondents who studied till the matriculation level was 4.1%, while .4% did not attend school at all. 28.2% reported to have completed the 12th Standard, while 64.1 % studied till graduation level and 3.1% completed their Master's Degree and above. Amongst the respondents, 36.5% were students, 15.3% work in Private business, 31.8% work under Government services while 4.7% reported as having their own income one way or another, and 11.8% reported as having no source of income. 60.6% of the respondents lived in joint families, 27.3%% lived in nuclear families and 12.2% of the respondents reported as living alone.

From the 510 respondents, 87.7% reported Mizo as their mother tongue, 9.1% reported Lai as their mother tongue, 1.2% Mara, .6% Gorkha, .2% Bru, .2% Paite, .4% Pawi, .8% Hmar, .2% Chakma, .2% Lakher, .2% Simte, .2% Pang. Out of the respondents, 77.3% reported as belonging to Mizo ethnic group, 16.5% belongs to

Lai/Pawi ethnic group, 1.2% belongs to Hmar, 2% belongs to Mara ethnic group, .6% belongs to Paite, .6% belongs to Gorkha ethnic group, .2% belongs to Bru, .2% belongs to Chakma, Hindi, Tlumang, Simte and Bawm respectively.

From the total sample collected ($n=510$), 99% of the respondents were Christian, .2% were Hindu and .8% reported as having no religion. Among religious denomination, 53.7% belongs to Mizoram Presbyterian Church, 14.7% belongs to Baptist Church of Mizoram, 13.7 % belongs to LIKBK, 6.9% belongs to UPC-NE, 3.3% belongs to Roman Catholic, 2.2% belongs to Salvation Army, 1.4% belongs to ECM, .8% belongs to UPC-Mizoram, .8% belongs to IKK, .6% Seventhday Adventist, .2% belongs to CBC, ICI, MITPC respectively, the remaining 1.3% reported as having no denomination.

To prepare for parametric statistical analyses, the data underwent initial screening. Extreme outliers were removed, while mild outliers were adjusted using winsorization. To ensure adequate statistical power, an equal number of participants were randomly assigned to each cell of the design using random numbers generated in SPSS. Several diagnostic tests were conducted to verify the assumptions necessary for parametric tests, including linearity, normality (assessed through Skewness, Kurtosis, Kolmogorov-Smirnov, and Shapiro-Wilk tests), homogeneity of variance (Levene's statistic), independence of errors, and homoscedasticity across the three groups. Due to the robustness of the parametric techniques and the equal sample sizes, the significance threshold for assumption tests was set at a lenient level of .01, with results interpreted cautiously following the guidelines of Fields (2016). The final sample included 510 participants, evenly distributed as 170 (85 males and 85 females) from each of the three locations- Lawngtlai District, Aizawl District and Serchhip District.

Five psychological tools were employed to measure the behavior and psychological constructs under consideration for this study. To measure intergroup contact, General Intergroup Contact Quantity and Contact Quality Scale (CQCQ; Islam & Hewstone ,1993) was used. Feeling Thermometer (Converse et al., 1980) was employed to measure ethnic outgroup attitude. Intergroup Anxiety Scale – *Short*

Form (IAS; Paolini et al., 2004) was used to assess intergroup anxiety towards ethnic outgroup members. Negative Experiences Inventory (NEI; Stephan et al., 2000) was used to assess negative experiences with ethnic outgroup member. Lastly, Valenced Contact (Single-Item Scale) (VC; Barlow et al., 2012) was employed to measure the nature of contact experiences i.e. whether contact is experienced negatively or positively with ethnic outgroup members.

SPSS 22 (Statistical Package for Social Sciences) was used to prepare the scores on all tools for all respondents and psychometric adequacy of the measures was checked for the total sample through (i) item-total coefficients of correlation (ii) inter-scale relationships, and (i) reliability coefficients (Cronbach's Alpha) over all the levels of analyses. Descriptive statistics such as Mean, SD, Skewness, Kurtosis and Standard Errors were also included in order to ensure comparison of scores between various sub-groups within the study and to check data distributions for still further statistical analyses (Miles & Shevlin, 2004). The General Intergroup Contact Quantity and Quality Scale (Islam & Hewstone, 1993) demonstrated high reliability ($\alpha = .79-.82$), with item-total correlations ranging from .62 to .82. Results indicated that both contact quantity and quality were significantly higher in ethnically diverse districts compared to less diverse ones, and the two constructs were strongly correlated ($r = .56-.79$). Attitudes toward ethnic outgroups, measured using a Feeling Thermometer, revealed overall neutral affect ($M = 5.24-6.48$ on a 10-point scale). The Intergroup Anxiety Scale (IAS) showed moderate reliability ($\alpha = .70-.74$), and a mean score ranging from $M = 28.36 - 29.46$ for males and $M = 32.02- 32.63$ for females, with item-total correlations between .206 and .537. Negative Experiences Inventory (NEI) demonstrated acceptable reliability ($\alpha = .74-.75$) with mean scores ranging from $M = 28.28 - 33.37$ for males and $M = 28.21-29.05$ for females. Finally, Valenced Contact ratings indicated infrequent negative contact ($M = 1.49-1.71$) and moderately frequent positive contact ($M = 4.81-5.45$), suggesting that participants generally reported more favorable intergroup experiences. After all this, statistical analyses of the data were done using the *SPSS 22* and *PROCESS* macro, v4.2, Hayes (2022) in order to address the various objectives and hypotheses stated in the study.

The effects of 'Diversity Levels' on Intergroup Attitude and Intergroup Anxiety in the three locations were examined using two-way ANOVA (3 Diversity Levels x 2 Sex). It was ensured that there were no violations of assumptions of the requirements for parametric testing indicated - Skewness, Kurtosis and homogeneity of variances of scores were checked.

Investigation of the **first objective** i.e. to highlight the impact of Diversity Levels on Intergroup Anxiety and Intergroup Attitude, indicated significant effect of diversity levels on Intergroup Attitude. However, no significant effect of diversity levels on intergroup anxiety was found. This shows that individuals having different levels of intergroup exposure or diversity does not differ much on intergroup anxiety.

A two-way ANOVA (3 Diversity Levels x 2 Sex) revealed a significant independent effect of diversity levels on intergroup attitudes. LSD post-hoc analysis indicated that participants from regions with medium (Aizawl District) and high (Lawngtlai District) levels of diversity exhibited significantly more positive attitudes toward members of other ethnic groups than those from low-diversity areas (Serchhip District). These findings align with Allport's (1954) Contact Hypothesis, which suggests that increased intergroup contact can reduce prejudice under appropriate conditions. Moreover, studies by Pettigrew and Tropp (2006) have demonstrated that intergroup contact generally improves intergroup attitudes across a wide range of contexts.

In order to explore potential sex-related differences that might provide valuable insights into the overall findings due to the naturally distinguishing behavioural differences of the two sexes, male and female, the effects of 'Sex' on Intergroup Anxiety and Intergroup Attitude were investigated even though it was not explicitly stated as part of the study's objectives. Results revealed significant 'Sex' effects on Intergroup Anxiety. However, no significant 'Sex' effect was found on Intergroup Attitude.

The results of two-way ANOVA (3 Diversity levels x 2 Sex) indicated **significant ‘Sex’ effect on Intergroup Anxiety**. Comparisons of mean scores revealed that females have relatively higher scores than males in the three levels of diversity. Supporting evidence was found in the study of Ma, Dang & Zhang (2021) among Chinese, in which females showed heightened intergroup anxiety compared to men, which in turn significantly reduced their cooperative behavior in intergroup contexts.

The **second** objective was to study the predictability of Intergroup Anxiety and Intergroup Attitude from Contact Quantity among young adults in Mizoram. The hypothesis set forth was: Individuals with high levels of intergroup contact will have lower intergroup anxiety and more positive attitude than individuals with low frequency of contact regardless of diversity levels or location. Results of hierarchical regression analyses conducted controlling for demographic variables such as age, educational qualification, occupation and family entered in the first step, and Contact Quantity entered in the second step as the predictor variable indicated that Contact Quantity significantly predicted both Intergroup Anxiety and Intergroup Attitude in males and females.

The frequency of intergroup contact, or contact quantity, was found to significantly and positively predict attitudes toward ethnic outgroup members, explaining 21% in males and 21.2% in females, supporting the hypothesis. In parallel, greater contact quantity was also associated with significantly lower levels of intergroup anxiety across genders, explaining 3.6% of the variance in males and 7.3% in females. These findings reinforce the well-established theoretical framework emphasizing the beneficial role of intergroup contact in fostering more harmonious intergroup relations and mitigating psychological tension (Dovidio, Gaertner, & Kawakami, 2003; Pettigrew & Tropp, 2006; Turner, Crisp, & Lambert, 2007; Voci & Hewstone, 2003).

A substantial body of literature supports the notion that intergroup contact effectively reduces prejudice by attenuating negative emotional responses such as anxiety, while simultaneously enhancing positive affective responses toward the

outgroup (Paolini, Hewstone, Cairns, & Voci, 2004; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007). Moreover, affective processes, especially the reduction of intergroup anxiety have been identified as key mediators in the relationship between contact and improved intergroup attitudes (Harwood, Hewstone, Paolini, & Voci, 2005). Collectively, these findings underscore the psychological mechanisms through which contact quantity facilitates more favorable perceptions of ethnic outgroup members, thereby contributing to improved intergroup dynamics.

The **third** objective was to study the mediating role of contact quality and negative experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude. It was hypothesized that increasing outgroup exposure will exert a positive indirect effect on intergroup attitude and intergroup anxiety via positive contact, but also a negative indirect effect via negative intergroup contact. The findings from the mediation analyses provide a mixed understanding of how positive contact (contact quality) and negative contact (negative experiences) mediates the relationship between Contact Quantity and both Intergroup Anxiety and Intergroup Attitude across varying levels of ethnic diversity in Mizoram. This multi-contextual analysis deepens understanding of existing frameworks within Intergroup Contact Theory (Allport, 1954), by demonstrating how contextual diversity moderates the mechanisms through which contact influences intergroup dynamics.

In Lawngtlai District, where ethnic outgroup exposure is relatively high due to the co-existence of multiple communities such as the *Lai* (an indigenous ethnic group primarily residing in the Lawngtlai District, who are a part of the larger Chin-Kuki-Mizo ethnolinguistic family and have their own distinct language (Laiholh), culture, and autonomous administrative region known as the Lai Autonomous District Council). and *Chakma* (a Buddhist ethnic group in Mizoram, mainly settled in the Chakma Autonomous District Council (CADC) in the southwestern region of the state) populations, findings revealed a **full mediation** of contact quality on the relationship between contact quantity and intergroup anxiety and **partial mediation** of contact quality on the relationship between contact quantity and intergroup

attitudes. The full mediation of contact quality on the relationship between contact quantity and intergroup anxiety indicates that positive and quality interactions served as the primary pathway through which contact frequency reduces anxiety. This supports the Anxiety/Uncertainty Management Theory (Stephan, 2014), which posits that anxiety reduction in intergroup settings requires more than exposure, it demands positive and trust-based engagements. These findings highlight how multiethnic contexts facilitate not only higher contact frequency but also settings where such contact can be meaningful, thereby enhancing both cognitive (attitude) and emotional (anxiety) outcomes.

Furthermore, results also suggest that although mere frequency of contact can positively affect intergroup attitudes, the effect is significantly enhanced when the contact is perceived as high-quality, marked by positivity and equality. This is consistent with Pettigrew and Tropp's (2008) meta-analysis, which found that quality contact is a more powerful predictor of attitudinal change than contact frequency alone. Negative Experiences, however, did not meaningfully mediate either outcome, suggesting that in high-diversity settings, the predominance of routine, positive contact may neutralize or countervail the psychological impact of occasional negative interactions.

In Aizawl District, which has moderate ethnic exposure due to a relatively cosmopolitan population and migrant influxes, the mediation pattern shifts. Here, intergroup attitude was **fully mediated** by contact quality, while the mediation effect for anxiety by contact quality was statistically non-significant. This suggests that in moderately diverse environments, young adults require not only frequent contact but also positive valence and meaningfulness in interaction to develop favorable attitudes. When contact quality was controlled, the influence of contact frequency on attitude became non-significant, affirming that quality is the operative force behind attitude change.

However, the lack of a significant indirect path of contact quality for the relationship between contact quantity and intergroup anxiety points to a deeper complexity in emotional outcomes. As noted by Paolini et al., (2004), the affective

dimension of prejudice, particularly anxiety, is more resistant to superficial contact and requires frequent and emotionally intense engagement. This insight aligns with Islam and Hewstone's (1993) argument that while cognitive aspects of intergroup perception are more malleable, affective responses need depth, duration, and reciprocity to shift meaningfully. Negative Experiences (negative contact) did not significantly influence both the outcomes of Intergroup Anxiety and Intergroup Attitude.

In the homogenous environment of Serchhip District, where intergroup encounters are infrequent due to low ethnic diversity, results showed **full mediation** of contact quality on the relationship between contact quantity and intergroup attitude but no significant mediation for intergroup anxiety. This highlights a critical insight: even in contexts where opportunities for intergroup contact are scarce, positive changes in attitudes can still occur if the few interactions that do happen are of exceptionally high quality. This finding resonates with Voci & Hewstone (2003), who argued that quality can compensate for quantity in contact scenarios. It underscores the transformative potential of even limited contact, provided it is respectful, cooperative, and supportive.

Conversely, Negative Experiences (negative contact) emerged as a **significant mediator** for intergroup anxiety, while Contact Quality (positive contact) did not. This highlights a key vulnerability in low-diversity settings: negative interactions are more salient and influential when contact is rare, likely due to the lack of balancing positive experiences (Stephan & Stephan, 2014). In such contexts, even limited negative contact can reinforce outgroup distrust and elevate anxiety, underscoring the importance of carefully managed intergroup exposure where interaction quality is prioritized.

The **fourth** objective was to study the role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (neighborhood and workplace exposure) and intergroup anxiety and attitude. It was hypothesized that only after controlling for positive intergroup contact in particular (and not all contact) will a negative effect of contextual-

exposure emerge; and that any emergent negative effect of intergroup exposure on anxiety and attitude will (in part) be accounted for by the frequency of negative contact. In order to test the mediating role of both positive and negative contact as well as intergroup anxiety on the relationship between intergroup exposures (neighbourhood and workplace), and intergroup attitude; negative contact, positive contact and intergroup anxiety were entered together as the mediating variables (Model 80 of Hayes, 2022). Neighbourhood and Workplace intergroup exposure were entered as independent variables separately in the two units of analyses. Intergroup attitude was entered separately as dependent variable over all units of analyses (neighbourhood and workplace exposure).

The analysis revealed that the direct effect of positive intergroup contact significantly predicted more favorable attitudes toward ethnic outgroups, aligning with extensive literature highlighting the critical role of contact quality in prejudice reduction (Pettigrew & Tropp, 2006). In contrast, the direct effect of intergroup anxiety had a significant negative effect on attitudes, supporting the Integrated Threat Theory (Stephan & Stephan, 2000), which posits that anxiety in intergroup interactions exacerbates negative perceptions.

However, the total effect of Neighbourhood Exposure on attitudes was non-significant, suggesting that residing in ethnically diverse environments alone does not lead to more positive intergroup attitudes. This finding supports prior research indicating that mere exposure or passive proximity without meaningful interaction rarely reduces prejudice (Paolini et al., 2010; Dixon et al., 2010).

Importantly, no significant indirect effects were found via negative contact, positive contact, or anxiety, indicating that these variables did not mediate the relationship between neighborhood exposure and attitudes. While counterintuitive in light of robust contact literature (e.g., Pettigrew & Tropp, 2008; Christ et al., 2014), this pattern reinforces a key insight: the impact of intergroup contact depends on interaction quality and context, not merely on opportunity or frequency (McKeown & Dixon, 2017). As Dixon et al., (2005) caution, structural diversity without interpersonal engagement may sustain or even deepen social divides. The limited

mediating role of intergroup anxiety contrasts with earlier findings (Stephan & Stephan, 1985; Tausch et al., 2007), suggesting that anxiety may be more contextually and relationally activated than assumed. It is also possible that the cross-sectional design limited the ability to detect the dynamic, cumulative nature of intergroup contact and anxiety over time.

Overall, the findings underscore a growing consensus in contact theory research: exposure is insufficient without engagement. Positive, meaningful intergroup interactions, rather than passive coexistence are central to reducing bias and fostering more inclusive social attitudes. Meta-analyses (Pettigrew & Tropp, 2006) and longitudinal studies (Binder et al., 2009) consistently show that contact must be constructive, voluntary, and emotionally salient to generate attitudinal change.

Moreover, research shows that in high-diversity areas, diversity can even increase perceived threat and reduce cohesion unless it is accompanied by opportunities for cross-group interaction (Laurence, 2011; Koopmans & Schaeffer, 2015). Studies such as Stolle et al., (2008) and Vezzali et al., (2017) further emphasize that interpersonal trust and prejudice reduction hinge not on diversity per se, but on the frequency, depth, and context of intergroup experiences, even including vicarious or extended forms of contact.

Regarding Workplace Exposure (WExpr), the analysis revealed a more complex mediational structure. Using a serial mediation model with a sample of $N = 510$, workplace exposure was found to influence attitudes toward ethnic outgroups through both positive (VCPC) and negative contact (VCNC), as well as intergroup anxiety. The most robust predictors of improved intergroup attitudes were positive contact and reduced anxiety.

Workplace exposure significantly predicted greater positive contact, which in turn predicted more favorable attitudes toward ethnic outgroups. These findings reinforce prior research on voluntary, cooperative contact as a catalyst for attitudinal change (Allport, 1954; Pettigrew & Tropp, 2006). Additionally, the serial path (WExpr $\rightarrow$ VCPC $\rightarrow$ Anxiety $\rightarrow$ Attitude) was significant, further supporting the

mediational role of emotional mechanisms. Lower intergroup anxiety was associated with more positive outgroup evaluations, aligning with Integrated Threat Theory (Stephan & Stephan, 1985), which highlights the affective dimensions of prejudice.

While negative contact was significantly predicted by workplace exposure, it did not independently predict attitudes either directly or via intergroup anxiety. This is consistent with findings by Barlow et al., (2012) and Zhou et al., (2019), which suggest that negative contact must be more frequent or emotionally intense to elicit generalized attitudinal shifts. This asymmetry between positive and negative contact effects is well documented in meta-analytic studies (Pettigrew & Tropp, 2006; Lemmer & Wagner, 2015). Overall, these results underscore that workplace diversity alone is not sufficient to improve intergroup relations. Instead, it must be accompanied by opportunities for positive, voluntary, and meaningful contact, which serve to reduce intergroup anxiety and enhance outgroup evaluations.

This study examined the effects of contextual intergroup exposure on intergroup anxiety and attitudes, with a focus on the mediating roles of positive and negative intergroup contact. The findings offer robust support for the positive component of the hypothesis: Workplace exposure improved outgroup attitudes indirectly through positive contact, affirming the central role of quality intergroup engagement over mere exposure. However, no indirect negative effect of contextual exposure emerged after controlling for positive contact, and negative contact failed to significantly mediate any effects on attitudes or anxiety. These results reinforce the asymmetrical influence of contact types, highlighting the transformative potential of positive intergroup interactions, while suggesting that negative contact may only influence attitudes under more intense or repeated conditions. Overall, the findings emphasize the need for intentional, positive engagement strategies in diverse settings to effectively improve intergroup relations.

While this study offers valuable insights into the effects of intergroup contact on attitudes and anxiety in the context of Mizoram, several **limitations** must be acknowledged. First, the cross-sectional design of the study precludes causal inferences. Although associations between intergroup contact, attitudes, and anxiety

were identified, the directionality of these relationships cannot be definitively established. Future research employing longitudinal or experimental methods would enhance causal understanding. Second, the findings are geographically and culturally specific, derived exclusively from three districts within Mizoram. While this provides rich context-specific data, it limits the generalizability of the results to other cultural settings where intergroup dynamics may differ significantly. Third, the use of district-level ethnic diversity as a proxy for intergroup exposure may overlook the individual-level variability in contact experiences. Participants' personal frequency and quality of intergroup contact may not align neatly with district-level characteristics. Forth, the impact of negative contact was not as prominent as expected. This could be due to underreporting, the emotional salience of negative experiences being context-dependent, or limitations in how negative contact was conceptualized and measured (Barlow et al., 2012). Lastly, other potential confounding variables such as personality traits (e.g., openness), political orientation, or past experiences with intergroup conflict were not controlled for, and may independently influence both intergroup attitudes and anxiety.

To conclude, future research should increase sample size in each level of diversity to robustly test interaction effects. Replicating the study across other Indian states with different ethnic compositions can test the external validity of the findings and provide comparative insights. Given the inconsistent mediating role of negative contact, future studies should differentiate between types of negative interactions (e.g., passive avoidance, conflict, aggression) and assess their intensity and frequency to better capture their impact. Variables such as empathy, perceived threat, and intergroup trust may serve as crucial mediators in the relationship between intergroup contact and outgroup attitudes. Disaggregating types of contact such as voluntary vs. involuntary, in-person vs. digital, or formal vs. informal can yield insights into the contextual effectiveness of various intergroup experiences. By addressing these recommendations, future studies can deepen theoretical understanding and offer practical strategies for improving intergroup relations in increasingly diverse societies.

APPENDICES

APPENDIX-I

GENERAL INTERGROUP CONTACT QUANTITY AND CONTACT QUALITY SCALE

"Please indicate the amount and quality of contact you have had with members of ethnic outgroups. Use the scale below, where lower scores indicate less frequent and more negative contact, and higher scores indicate more frequent and more positive contact."

Heng a hnuaia zawhnate hi i hnam pui ni lo, tawng hrang hmang (ethnic outgroup member) te nena in inkungkaih dan leh in inpawh dan hriatna tura zawhnate ani a, a sira number awm 1-7 ah khuan i chhana i thai dawn nia.

Contact quantity

How much contact do you have with (outgroup)..... (Ethnic Outgroup member te nen engzat a hnuaia hmun tarlan ah khuan eng anga tam nge in inkungkaih thin?)

	Ngai meuh lo	Ngai tehreng mai
1.at college (<i>College ah</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
2.as neighbours (<i>Thenawm khawvannah</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
3.as close friends (<i>Thian hnai tak angin</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	

How often have you... (Vaw i engzat a tam nge...)

	Ngai miah lo	Ngai tehreng mai
1. Engaged in informal conversations with outgroup members (<i>Outgroup member te nen titi satliah in nei thin em?</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
2. Visited the homes of outgroup members (<i>Outgroup member te in inlenpawh thin em?</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	

Contact Quality

To what extent did you experience the contact (outgroup) as.... (Ethnic Outgroup nen te nen in inpawh na eng angin nge i sawifah ang?)

	Teuhlo mai	Tehreng mai
1. ...equal (<i>in ang khat</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
	Tulna vanga inkawm	Duh vang renga inkawm
2.involuntary or voluntary (<i>duh vang renga inkawm nge a tulna avanga inkawm</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
	Pawnlang takin	Chhungmila inpawhtawnin
3.superficial or intimate (<i>pawnlang takin emaw chhungmila inpawhtawnin</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	
	Hlimawm vak loh	Hlimawm thin hle
4.pleasant (<i>hlimawm takin</i>)	1 - 2 - 3 - 4 - 5 - 6 - 7	

In el ru ranin

Inpuihtawn duhna taktakin

5.competitive or cooperative
(in el ru ranin emaw inpuihtawn duhna taktak riluin)

1 - 2 - 3 - 4 - 5 - 6 - 7

APPENDIX-II

FEELING THERMOMETER

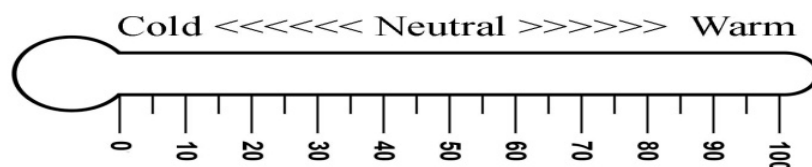
“Below is something that looks like a thermometer. We call it a “feeling thermometer” because it measures your feelings towards group. Here’s how it works. If you don’t know too much about a group, or don’t feel particularly warm or cold toward them, then you should place them in the middle, at the 50-degree mark. If you have a warm feeling toward a group, or feel favourably toward it, you would give it a score somewhere between 50 and 100 depending on how warm your feeling is toward the group. On the other hand, if you don’t feel very favourably toward some of these groups – if there are some you don’t care for too much – then you would place them somewhere between the 0 and 50 marks.

How do you feel towards(ethnic outgroup member)?”

(“A hnuaia thermometer ang tak kan hmuh khu “feeling thermometer” ani a, ethnic outgroup member kan tih mai (eg; kan hnam pui ni lo hnam dang, tawng hrang hmang, kan chipui ni lo) laka kan thinlung tlaknat dan tehna ani. Heng outgroup member kan tih te hi kan hrechiang vaklo a, an laka kan rilru put hmang pawh a tha emaw tha lo emaw, kan ngaina emaw ngaina vaklo emaw kan sawi fak theilo anih chuan kan chhanna hi 50 bawr velah kan click tur ani a, kan ngaina viau in an laka kan rilru put dan a tha viau anih chuan 50-100 inkarah kan click leh anga, kan ngaina lo viauin kan ngaitheilo viau anih chuan 50 hnuaialam ah kan click dawn nia.)

***A hnuaia a zawhna tam tak ah hian “ethnic outgroup member” tih tawngkam hman ani dawn a, heng “outgroup member” kan tih te chu – kan hnam pui ni lo hnam dang, tawng hrang hmang, kan chipui ni lo tehi an ni...*

Ethnic Outgroup member te hi hi eng angin nge I ngaih? _____”



INTERGROUP ANXIETY SCALE-SHORT FORM

“If you were the only member of your ethnic group and you were interacting with people from a different racial or ethnic group (e.g., talking with them, working on a project with them), how would you feel compared to occasions when you are interacting with people from your own ethnic group?”

“ I hnampui ni lo, hnam dang a hlanga awm zingah i hna vang emaw tuldang vanga i awm a lo tul a, i hnampui te bula i awmdan nen a danglam dan tur a hnuaia tehna hmang khuan han sawi teh?”

	Teuhlo mai	Tehreng mai
1.happy (hlim) *	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	
2.awkward (awm nuamlo)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	
3. self-conscious (mahni nihphung a Chiang riau)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	
4. confident (nihna a Chiang) *	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	
5. relaxed (hahdam) *	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	
6.defensive (mahni in veng ru run)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10	

Scaled from: 1 = not at all to 10 = extremely.

APPENDIX-IV

NEGATIVE EXPERIENCES INVENTORY

“The following questions ask about your personal experiences with members of ethnic outgroups—that is, individuals who do not belong to your ethnic group. Please reflect on your past and present experiences and indicate how often or to what extent outgroup members have treated you in the following ways. Use the 9-point scale to respond, where 1-3 indicates ‘never to infrequently’, 4-6 indicates ‘moderately’ and 7-9 indicates ‘very frequently.’

“Heng a hnuaia zawhnate hi i hnam pui ni lo, tawng hrang hman, i chipui ni lo (ethnic outgroup member) te atanga i tawn tawh dan a zirin a sira number 1-9 ah khuan i chhan na i thai dawn nia. I tawng ngai meuh lo anih chuan 1-3 bawrah khuan i thai anga, i tawng ve zeuh thin anih chuan 4-6 ah, i tawng ngai fo anih chuan 7-9 ah i thai dawn nia..”

Have (ethnic outgroupers) ever treated you as follows...

(Ethnic Outgroup member ami te atangin a hnuaia mi ang khu i tawng thin em?)

		Ngai teuhlo mai	Ngai tehreng mai
1.	..treated as inferior (<i>Anni aia hniam zawk angin</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
2.	..verbally abused (<i>tawngkama hmuhsitna</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
3.	rediculed (<i>nawmnah taka fiam</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
4.	manipulated (<i>fuihpawrh</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
5.	rejected (<i>kawm ve duh lo</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
6.	sexually harassed (<i>zahmawh rawngkai taka zar buai</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
7.	sexually assaulted (<i>pawngsual</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
8.	...threatened (<i>vau</i>)	1	2 – 3 – 4 – 5 – 6 – 7 – 8 – 9

9.	physically harmed (<i>kutthlak</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
10.	...exploited (<i>mahni zalenna rahbehsak</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
11.	...forced to do something I didn't want to (<i>duh lo chung thil tihtir lui</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
12.	...unfairly criticized (<i>thiamna renga sawisel</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
13.	made to feel unwanted (<i>tel ve lo anga innghaiha</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
14.	emotionally blackmailed (<i>rilru / thluak suksak</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
15.	put down (<i>rilru hnual taka siam</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
16.	intimidated (<i>inthlahruntir</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9
17.	discriminated against (<i>thlei hrang bik</i>)	1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9

APPENDIX-V

VALENCED CONTACT (SINGLE-ITEM SCALE)

"The following questions ask about your experiences interacting with people who do not belong to your ethnic group (ethnic outgroup members). Please rate your experiences using a scale from 1 to 7, where lower scores indicate less frequent experiences and higher scores indicate more frequent experiences."

"Heng a hnuaia zawhnate hi i hnam pui ni lo, tawng hrang hmang (ethnic outgroup member) te nen in inbiak pawh dan chungchang zawhna ani a, a sira number 1-7 ah khuan i chhanna i thai dawn nia".

Negative contact

On average, how frequently do you have NEGATIVE/BAD contact with ethnic outgroup people?

(Ethnic Outgroup member te nen boruak thalo taka inbiakna a chawhrualin engzat nge i tawn tawh?)

Tawng ngai meuh lo

Tawng ngai tehreng mai

1 – 2 – 3 – 4 – 5 – 6 – 7

Positive contact

On average, how frequently do you have POSITIVE/ GOOD contact with ethnic outgroup people?

(Ethnic Outgroup member te nen boruak muanawm leh tha a inbiakpawhna a chawhrualin engzat vel nge i tawn tawh?)

Ngai teuhlo mai

Ngai tehreng mai

1 – 2 – 3 – 4 – 5 – 6 – 7

APPENDIX-VI

“The following set of questions is part of a Ph.D. research project under Mizoram University (MZU), aimed at exploring intergroup processes, specifically, the ways in which people from different backgrounds, communities, and ethnic groups interact and experience one another in everyday settings such as neighborhoods and workplaces. This study seeks to understand how we perceive, experience, and sometimes struggle with differences based on ethnicity. The focus is particularly on how these dynamics affect our thoughts, feelings, and social behaviors. Please note that all your responses will be kept strictly confidential. Your answers will be used solely for research purposes, and your name or identity will not be recorded or disclosed at any point. We kindly ask you to answer each question honestly, freely, and without hesitation, based on your true thoughts and feelings.

This questionnaire is available in both English and Mizo to ensure clarity and comfort in understanding. I deeply appreciate your time and participation. May you and your family remain safe and healthy”.

“A chhunga zawhnate hi Ph.D Research (MZU) a pawl lampang (intergroup process) zir chianna atana siam a ni a. Kan thenawm khawvengah te, zirna inah te leh hna thawhna hmunah te mi chi hrang hrang, pawl hrang hrang, sakhaw hrang hrang vuan kan cheng za thin a. Kan inhriat hnaihna emaw, inhlatna emawin kan sukhlek, a tlangpuia min nghawng dan zir chianna tur a ni ber a.

Mi mal chhannate hi confidential vek niin mi dang chhannate nen a huhova research atan chauha hman tur a nih avangin hming pawh ziah lan a ngai lem lo va. I rilru nena inmil berin, zalen takin, mawihawih zawng lova min lo chhansak ve hram turin ka ngen a che (English leh Mizo tawng a dah kawp a ni e).

He hun khirh bik karah hian in chhungin lo him dam ang che u”.

DEMOGRAPHIC INFORMATION FORM

1. Kum zat: _____ 2. Sex: Mipa ☐ Hmeichhia ☐ Other ☐
3. I lehkha zir chin: Sikul kai lo ☐ HSLC hnuai ☐ HSLC chung ☐ Bachelor ☐ Masters leh a chunglam ☐
4. Hna thawh: Mi mal sumdawnna ☐ Sawrkar hna thawk ☐ Private hna thawk ☐ Zirlai ☐
Hna thawh nei lo ☐ Sum hnar neia intodelh (in luah man, lo-huan etc) ☐
5. Chhungkua; Chhungpui chang (Joint family) ☐ In dang tawh (Nuclear family) ☐
Chhungte bul lova awm (hostel, mahni/unau in luah) ☐
6. Tuna awmna khua: Aizawl ☐ Serchhip ☐ Lawngtlai ☐

7. Citizenship: Indian ☐ Non- Indian ☐

8. Pianpui tawng (Native language): Ralte ☐ Chakma ☐ Pawi ☐ Lakher ☐ Kuki ☐ Tripuri ☐ Hmar ☐ Paihte ☐ Lai ☐ Mara ☐ Lusei ☐ Bengali ☐ Bangla ☐ Mizo ☐ Other ☐

9. Ethnic group (Mahni hnam hlawm hming, Example, Gorkha, Chakma, Bru, Bengali etc etc)_____

10. Surname or sub-tribe name (Hnam chhungkaw hming or hnam bil hming. Example, Ralte, Pachuau etc etc)

12. Religion: Christian ☐ Buddhist ☐ Hindu ☐ Muslim ☐ Other ☐

13. Kristian i nih chuan I lawina kohhran hming (denomination): IKK ☐ Salvation Army ☐ Baptist ☐ UPC – Mizoram ☐ UPC- NE ☐ Presbyterian ☐ LIKBK ☐ ECM ☐ Roman Catholic ☐ Other ☐

14. In thenawm khawvengah hnam dang, tawng hrang hmang engzat percent % vel nge awm ang? (Percentage of level of exposure in the neighbourhood): 1% vel ☐ 5% vel ☐ 10% vel ☐ 20% vel ☐ 30% vel ☐ 40% vel ☐ 50% vel ☐ 60% vel ☐ 70% vel ☐ 80% vel ☐

15. I thawhna emaw i zirna hmunah emaw hnam dang, tawng hrang hmang engzat percent % vel nge awm ang? (Percentage of exposure in workplace/institution): 1% vel ☐ 5% vel ☐ 10% vel ☐ 20% vel ☐ 30% vel ☐ 40% vel ☐ 50% vel ☐ 60% vel ☐ 70% vel ☐ 80% vel ☐

REFERENCES

- Aberson, C. L., & Gaffney, A. M. (2008). An integrated threat model of explicit and implicit attitudes. *European Journal of Social Psychology*, 39, 808-830.
- Aberson, C. L., & Haag, S. C. (2007). Contact, anxiety, perspective taking, and stereotype endorsement as predictors of implicit and explicit biases. *Group Processes & Intergroup Relations*, 10, 179-201.
- Abrams, D., & Eller, A. (2017). A temporally integrated model of intergroup contact and threat (TIMICAT). In L. Vezzali & S. Stathi (Eds.), *Intergroup contact theory: Recent developments and future directions* (pp. 38–56). New York, NY: Routledge.
- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The authoritarian personality*. New York, NY: Harper.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (Vol. 1, pp. 173–221). Mahwah, NJ: Lawrence Erlbaum Associates.
- Alexander, R. D. (1974). The evolution of social behavior. *Annual Review of Ecology and Systematics*, 4, 325-384.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison Wesley.
- Altemeyer, B. (1996). *The authoritarian specter*. Cambridge, MA: Harvard University Press.
- Amodio, D. M. (2009). Intergroup anxiety effects on the control of racial stereotypes: A psycho neuro endocrine analysis. *Journal of Experimental Social Psychology*, 45, 60-67.
- Arbuckle, J. L. (2012). *IBM SPSS Amos 22 User's Guide*. IBM Corporation.
- Aronson, J., & McGlone, M. S. (2009). Stereotype and social identity threat. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 153-178). New York, NY: Psychology Press.

- Asbrock, F., Sibley, C. G., & Duckitt, J. (2010). Right-wing authoritarianism and social dominance orientation and the dimensions of generalized prejudice: A longitudinal test. *European Journal of Personality, 24*, 324-340.
- Avery, D. R., Richeson, J. A., Hebl, M. R., & Ambady, N. (2009). It does not have to be uncomfortable: The role of behavioral scripts in Black–White interracial interactions. *Journal of Applied Psychology, 94*, 1382-1393.
- Balliet, D., Wu, J., & de Dreu, C. K. W. (2014). Ingroup favoritism in cooperation: A meta-analysis. *Psychological Bulletin, 140*, 1556-1581.
- Barlow, F. K., Louis, W. R., & Terry, D. J. (2010). Minority report: Social identity, cognitions of rejection and intergroup anxiety predicting prejudice from one racially marginalized group towards another. *European Journal of Social Psychology, 40*, 805-818.
- Barnard W. A., Benn M. S. (1987). Belief congruence and prejudice reduction in an interracial contact setting. *The Journal of Social Psychology, 128*, 125–134.
- Bennett, M., Lyons, E., Sani, F., & Barrett, M. (1998). Children's subjective identification with the group and ingroup favoritism. *Developmental Psychology, 34*, 902–909.
- Berrenberg, J. L., Finlay, K. A., Stephan, W. G., & Stephan, C.W. (2002). Prejudice toward people with cancer or AIDS: Applying the integrated threat model. *Journal of Applied Biobehavioral Research, 7*(2), 75–86.
- Berry, J. (1984). Multiculturalism policy in Canada: A social psychological analysis. *Canadian Journal of Behavioural Science, 16*, 353-370.
- Bergh, R., Akrami, N., Sidanius, J., & Sibley, C. G. (2016). Is group membership necessary for understanding generalized prejudice? A re-evaluation of why prejudices are interrelated. *Journal of Personality and Social Psychology, 111*, 367-395

- Bettencourt B. A., Brewer M. B., Croak M. R., Miller N. (1992). Cooperation and reduction of intergroup bias: The role of reward structure and social orientation. *Journal of Experimental Social Psychology*, 28, 301–319.
- Binder J., Zagefka H., Brown R., Funke F., Kessler T., Mummendey A., . . . Leyens J.-P. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis amongst majority and minority groups in three European countries. *Journal of Personality and Social Psychology*, 96, 843–856.
- Bizumic, B., Kenny, A., Iyer, R., Tanuwira, J., & Huxley, E. (2017). Are the ethnically tolerant free of discrimination, prejudice, and political intolerance? *European Journal of Social Psychology*, 47, 457-471.
- Blair, I. V., Park, B., & Bachelor, J. (2003). Understanding intergroup anxiety: Are some people more anxious than others? *Group Processes & Intergroup Relations*, 6, 151-169.
- Blalock, H. M. (1967). *Toward a theory of minority group relations*. New York: Wiley.
- Blumer, H. 1958. 'Race Prejudice as a Sense of Group Position', *Pacific Sociological Review* 1, 3– 7.
- Bobo, L. (1988). Group conflict, prejudice, and the paradox of contemporary racial attitudes. In P. A. Katz & D. A. Taylor (Eds.), *Eliminating racism: Profiles in controversy* (pp. 85- 116). New York: Plenum.
- Bobo, L. D. (1999). Prejudice as group position: Micro foundations of a sociological approach to racism and race relations. *Journal of Social Issues*, 55, 445-472.
- Bowyer, B. (2008). Local context and extreme right support in England: The British National Party in the 2002 and 2003 local elections. *Electoral Studies*, 27(4), 611–620.

- Brandt, M. J. (2011). Sexism and gender inequality across 57 societies. *Psychological Science, 22*(11), 1413–1418.
- Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology, 24*, 641-657.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threats. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 35-58). Oxford: Blackwell.
- Branton, R. P., & Jones, B. S. (2005). Reexamining racial attitudes: The conditional relationship between diversity and socioeconomic environment. *American Journal of Political Science, 49*(2), 359–372.
- Brewer, M. B. (1997). On the social origins of human nature. In C. McGarty & S. A. Haslam (Eds.), *The message of social psychology: Perspectives on mind in society* (pp. 54-62). Cambridge, MA: Blackwell.
- Brewer, M. (1999). The psychology of prejudice: Ingroup love or outgroup hate? *Journal of Social Issues, 55*, 429-444.
- Brewer, M., & Campbell, D. (1976). *Ethnocentrism and intergroup attitudes: East African evidence*. New York: Sage.
- Brewer, M. B., & Caporael, L. R. (1990). Selfish genes vs. selfish people: Sociobiology as origin myth. *Motivation and Emotion, 14*, 237-242.
- Brewer, M. B. (2007). The many faces of social identity: Implications for political psychology. *Political Psychology, 27*(1), 1-15.
- Brewer, M. B. (2017). Intergroup discrimination: Ingroup love or outgroup hate? In F. K.
- Barlow & C. G. Sibley (Eds.), *The Cambridge handbook of the psychology of prejudice* (pp. 90-110). Cambridge, England: Cambridge University Press.

- Britt, T. W., Boniecki, K. A., Vescio, T. K., Biernat, M., & Brown, L. M. (1996). Intergroup anxiety: A person $\times$ situation approach. *Personality and Social Psychology Bulletin*, 22, 1177-1188.
- Bromgard, G., & Stephan, W. G. (2006). Responses to the stigmatized: Disjunctions in affect, cognitions, and behavior. *Journal of Applied Social Psychology*, 36, 2436-2448.
- Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, 37, 255-343.
- Browne, M. W., & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. In *Testing Structural Equation Models* (pp. 136–162). SAGE Publications.
- Buttelmann, D., & Böhm, R. (2014). The ontogeny of the motivation that underlies in group bias. *Psychological Science*, 25, 921-927.
- Butz, D. A., & Plant, E. A. (2006). Perceiving outgroup members as unresponsive: Implications for approach-related emotions, intentions, and behavior. *Journal of Personality and Social Psychology*, 91, 1066-1079.
- Campbell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine (Ed.), *Nebraska symposium on motivation* (Vol. 13, ed., pp. 283-311). Lincoln, NE: University of Nebraska Press.
- Campbell, D. E. (2006). Religious “threat” in contemporary presidential elections. *Journal of Politics*, 68, 104-115
- Caspi, A. (1984). Contact hypothesis and inter-age attitudes: A field study of cross-age contact. *Social Psychology Quarterly*, 74-80.
- Cheso, D., Zagefka, H., & Bjornsdottir, R. T. (2024). Exploring the relations among knowledge, contact, and transgender prejudice. *Sex Roles*.
- Christ, O., Schmid, K., Lolliot, S., Swart, H., Stolle, D., Tausch, N & Hewstone, M. (2014). Contextual effect of positive intergroup contact on outgroup prejudice. *Proceedings of the National Academy of Sciences*, 111, 3996–4000.

- Clunies Ross G., O'Meara K. (1989). Changing attitudes of students toward peers with disabilities. *Australian Psychologist*, 24, 273–284.
- Corenblum, B., & Stephan, W. G. (2001). White fears and native apprehensions: An integrated threat theory approach to intergroup attitudes. *Canadian Journal of Behavioral Science*, 33, 251-268.
- Cornielle, O., Yzerbyt, V. Y., Rogier, A., & Buidin, G. (2001). Threat and the group attribution error: When threat elicits judgments of extremity and homogeneity. *Personality and Social Psychology Bulletin*, 27, 437-446.
- Costello, K., & Hodson, G. (2011). Social dominance-based threat reactions to immigrants in need of assistance. *European Journal of Social Psychology*, 41, 220-231.
- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to “prejudice.” *Journal of Personality and Social Psychology*, 88, 770-789.
- Crandall, C. S., & Stangor, C. (2005). Conformity and prejudice. In J. F. Dovidio, P. Glick, & L. A. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport* (pp. 295-309). Malden, MA: Blackwell.
- Crano, W. D. (2001). Social influence, social identity, and ingroup leniency. In C. W. K. de Dreu & N. K. de Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 122-143). Oxford: Blackwell.
- Crisp, R. J., Stone, C. H., & Hall, N. R., (2006). Recategorization and subgroup identification: Predicting and preventing threats from common ingroups. *Personality and Social Psychology Bulletin*, 32, 230-243.
- Croucher, S. M. (2013). Integrated threat theory and acceptance of immigrant assimilation: An analysis of Muslim immigration in Western Europe. *Communication Monographs*, 80, 46 - 62.
- Curseu, P. L., Stoop, R., & Schalk, R. (2007). Prejudice toward immigrant workers

- among Dutch employees: Integrated theory revisited. *European Journal of Psychology*, 37, 125-140.
- Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review*, 15(4), 332–351.
- de França, D. X., & Monteiro, M. B. (2013). Social norms and the expression of prejudice: The development of aversive racism in children. *European Journal of Social Psychology*, 43, 263-271.
- Degner, J., & Dalege, J. (2013). The apple does not fall far from the tree, or does it? A meta-analysis of parent-child similarity in intergroup attitudes. *Psychological Bulletin*, 139, 1270-1304.
- Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology*, 51, 629-636.
- Dhont K., Van Hiel A. (2009). We must not be enemies: Interracial contact and the reduction of prejudice among authoritarians. *Personality and Individual Differences*, 46, 172–177.
- Dixon, J., Durrheim, K., & Tredoux, C. (2005). Beyond the optimal contact strategy: A reality check for the contact hypothesis. *American Psychologist*, 60, 697–711.
- Dixon, J., Durrheim, K., & Tredoux, C. (2007). Intergroup contact and attitudes toward the principle and practice of racial equality. *Psychological Science*, 18, 867–872.
- Dixon, J., Durrheim, K., & Tredoux, C. (2020). Intergroup contact and the struggle for social change. *Perspectives on Psychological Science*, 15(4), 877–897.
- Dovidio, J. F., & Gaertner, S. L. (2010). Intergroup bias. In S. T. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (Vol. 2, 5th ed., pp. 1084-1121). New York, NY: Wiley.

- Dovidio, J. F., Gaertner, S. L., & Saguy, T. (2017). Intergroup contact: Theory, research, and policy. *Policy Insights from Behavioral and Brain Sciences*, 4(1), 5-12.
- Dovidio, J. F., Gaertner, S. L., & Kawakami, K. (2003). Intergroup contact: The past, present, and the future. *Group Processes & Intergroup Relations*, 6(1), 5–21.
- Dovidio, J. F., Gaertner, S. L., & Pearson, A. R. (2017). Aversive racism and contemporary bias. In F. K. Barlow & C. G. Sibley (Eds.), *The Cambridge handbook of the psychology of prejudice* (pp. 267-294). Cambridge, England: Cambridge University Press.
- Dovidio, J. F., Hewstone, M., Glick, P., & Esses, V. M. (2010). Prejudice, stereotyping, and discrimination: Theoretical and empirical overview. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 3-28). London: Sage.
- Dovidio, J. F., Love, A., Schellhaas, F. M. H., & Hewstone, M. (2017). Reducing intergroup bias through intergroup contact: Twenty years of progress and future directions. *Group Processes & Intergroup Behavior*, 20, 606–620.
- Dovidio, J. F., Schellhaas, F. M. H., & Pearson, A. R. (2018) The Role of Attitudes in Intergroup Relations. In D. Albarracín, & B. T. Johnson (Eds.), *The handbook of attitudes*. New York, NY: Psychology Press
- Gudykunst, W. B., & Kim, Y. Y. (2003). *Communicating with strangers: An approach to intercultural communication* (4th ed.). New York: McGraw-Hill.
- Dunbar, R. I. M. (1988). *Primate social systems*. Ithaca, NY: Cornell University Press.
- Duronto, P. M., Nishida, T., & Nakayama, S. (2005). Uncertainty, anxiety, and avoidance in communication with strangers. *International Journal of Intercultural Relations*, 29, 549-560.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.

- Ekehammar, B., Akrami, N., Araya, T. (2003). Gender differences in implicit prejudice. In *Personality and Individual Difference*, 34 (2003) 1509–1523. ResearchGate.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorization, commitment to the group, and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29, 371-389.
- Fearon J. D. Ethnic and cultural diversity by country. *Journal of Economic Growth*. 2003; 8(2): 195– 222.
- Fiske, S. T., & Taylor, S. E. (2013). *Social cognition: From brains to culture*. Thousand
- Oaks, CA: Sage
Forbes, H.D.1997. *Ethnic Conflict*. New Haven, CT: Yale University Press.
- González, R., Sirlopú, D., & Kessler, T. (2010). Prejudice among Peruvians and Chileans as a function of identity, intergroup contact, acculturation preferences, and intergroup emotions. *Journal of Social Issues*, 66, 803-824.
- González, K. V., Verkuyten, M., Weesie, J., & Poppe, E. (2008). Prejudice towards Muslims in The Netherlands: Testing integrated threat theory. *British Journal of Social Psychology*, 47, 667–685.
- Gordijn, E., Finchilescu, G., Brix, L., Wijnants, N., & Koomen, W. (2008). The influence of prejudice and stereotypes on anticipated affect: Feelings about a potentially negative interaction with another ethnic group. *South African Journal of Psychology*, 38, 589-601.
- Greenwald, A. G., & Pettigrew, T. F. (2014). With malice toward none: Ingroup favoritism enables discrimination. *American Psychologist*, 69, 669-684.
- Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, 97, 17-41.

- Halperin, E., Crisp, R. J., Husnu, S., Trzesniewski, K. H., Dweck, C. S., & Gross, J. J. (2012). Promoting intergroup contact by changing beliefs: Group malleability, intergroup anxiety, and contact motivation. *Emotion*, 12(6), 1192-1195. doi:10.1037/a0028620
- Haselton, M. G., & Buss, D. M. (2003). Biases in social judgment: Design flaws or design features? In J. P. Forgas, K. D. Williams, & W. von Hippel (Eds.), *Social judgments: Implicit and explicit processes* (pp. 23-43). New York, NY: Cambridge University Press.
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.
- Helman, E., Flake, J. K., & Calanchini, J. (2017). Disproportionate use of lethal force in policing is associated with regional racial bias. *Social Psychological and Personality Science*, 8(2), 137–144.
- Hepsomali, P., Hadwin, J. A., & Liversedge, S. P. (2019). The impact of cognitive load on processing efficiency and performance effectiveness in anxiety: Evidence from event-related potentials and pupillary responses. *Experimental Brain Research*, 237(5), 1195–1211.
- Hewstone, M., Cairns, E., Voci, A., Paolini, S., McLemon, F., Crisp, R. J., (2005). Intergroup contact in a divided society: Challenging segregation in Northern Ireland.
- Hewstone, M. (2015). Consequences of diversity for social cohesion and prejudice: The missing dimension of intergroup contact. *Journal of Social Issues*, 71(2), 417–438.
- Hinkle, S., & Brown, R. (1990). Intergroup comparisons and social identity: Some links and lacunae. In D. Abrams & M. Hogg (Eds.), *Social identity theory: Constructive and critical advances* (pp. 48-70). New York: Springer.
- Hodson G., Costello K., MacInnis C. C. (2013). Is intergroup contact beneficial among intolerant people? In Hodson G., Hewstone M., editors.

- (Eds.), *Advances in intergroup contact* (pp. 49–80). New York, NY: *Psychology Press*.
- Hodson, G., & Dhont, K. (2015). The person-based nature of prejudice: Individual difference predictors of intergroup negativity. *European Review of Social Psychology, 26*, 1-42.
- Hofmann, W. H., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the Implicit Association Test and explicit self-report measures. *Personality and Social Psychology Bulletin, 31*, 1369-1385.
- Hogg, M. A., Abrams, D., & Brewer, M. B. (2017). Social identity: The role of self in group processes and intergroup relations. *Group Processes & intergroup Relations, 20*, 570-581.
- Huntsinger, J., Sinclair, S., Kenrick, A. C., & Ray, C. (2016). Affiliative social tuning reduces the activation of prejudice. *Group Processes & Intergroup Relations, 19*, 217-235.
- Hutchison, P., Fox, E., Laas, A. M., Matharu, J., & Urzi, S. (2010). Anxiety, outcome expectancies, and young people's willingness to engage in contact with the elderly. *Educational Gerontology, 36*, 1008-1021.
- Hutchison, P., & Rosenthal, H. E. S. (2011). Prejudice against Muslims: Anxiety as a mediator between intergroup contact and attitudes, perceived group variability and behavioural intentions. *Ethnic and Racial Studies, 34*, 40-61.
- Islam, M. R., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin, 19*(6), 700–710.
- Jackson, L. M. (2002). *The psychology of prejudice: From attitudes to social action. American Psychological Association.*

- Jackson, L. M., & Esses, V. M. (2000). Effects of perceived economic competition on people's willingness to help immigrants. *Group Processes & Intergroup Relations*, 3(4), 419–435.
- Jackson, J., & Smith, E. (1999). Conceptualising social identity: A new framework and evidence for the impact of different dimensions. *Personality and Social Psychology Bulletin*, 25, 120-135.
- Jasinskaja-Lahti, I., Mähönen, T. A., & Liebkind, K. (2011). Ingroup norms, intergroup contact and intergroup anxiety as predictors of the outgroup attitudes of majority and minority youth. *International Journal of Intercultural Relations*, 35(3), 346-355.
- Jetten, J., Spears, R., & Postmes, T. (2004). Intergroup distinctiveness and differentiation: A meta-analytic integration. *Journal of Personality and Social Psychology*, 86, 862-879.
- Johnson, K. M. (2006). The relationship of personal control, power and anxiety to the contact-bias relationship. Dissertation Abstracts International: Section B. *The Sciences and Engineering*, 66(7-B), 3998.
- Johnson D. W., Johnson R. T. (1985). Relationships between black and white students in intergroup cooperation and competition. *The Journal of Social Psychology*, 125, 421–428.
- Kendall, R. (1998). Anxiety, fear contribute to prejudice, say NMSU professors.
- Krosnick, J. A., Judd, C. M., & Wittenbrink, B. (2005). The measurement of attitudes. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (Vol. 1, pp. 21–76). Mahwah, NJ: Lawrence Erlbaum Associates.
- Krumhuber, E. G., & Manstead, A. S. R. (2011). When memory is better for out-group faces: On negative emotions and gender roles. *Journal of Nonverbal Behavior*, 35, 51-61.

- Laurence, J., & Bentley, L. (2016). Does ethnic diversity have a negative effect on attitudes towards the community? A longitudinal analysis of the causal claims within the ethnic diversity and social cohesion debate. *European Sociological Review*, 32, 54–67.
- Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., . . . Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, 95, 144–165.
- Lee, R. M. (2005). Resilience against discrimination: Ethnic identity and other-group orientation as protective factors for Korean Americans. *Journal of Counseling Psychology*, 52(1), 36–44.
- Legewie, J. (2013). Terrorist events and attitudes toward immigrants: A natural experiment. *American Journal of Sociology*, 118(5), 1199–1245.
- Lemmer, G., & Wagner, U. (2015). Can we really reduce ethnic prejudice outside the lab? A meta-analysis of direct and indirect contact interventions. *European Journal of Social Psychology*, 45(2), 152–168.
- Littleford, L. N., Wright, M. O. D., & Sayoc-Parial, M. (2005). White students' intergroup anxiety during same-race and interracial interactions: A multimethod approach. *Basic and Applied Social Psychology*, 27, 85–94.
- Liu, G., Chen, Q., Yuan, X., Qian, M., & Du, S. (2024). The association between intergroup contact and psychological capital among adolescents. *International Journal of Intercultural Relations*.
- Liu, L. A., Chua, C. H., & Stahl, G. K. (2010). Quality of communication experience: Definition, measurement, and implications for intercultural negotiations. *Journal of Applied Psychology*, 95, 469–487.
- Lolliot, S., Fell, B., Schmid, K., Woßlfer, R., Swart, H., Voci, A., et al. (2015). Measures of intergroup contact. In G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Personality and social psychological constructs*. London, UK: Academic Press.

- Lun, J., Sinclair, S., Glenn, C., & Whitchurch, E. (2007). (Why) do I think what you think? Epistemic social tuning and implicit prejudice. *Journal of Personality and Social Psychology*, 93, 957-972.
- Ma, Yuting., Dang, Qingxiu., Zhang, Baoshan. (2021). Effect of metastereotypes on female cooperative behaviour and the mediating role of intergroup anxiety. *Asian Journal of Social Psychology/Volume 25, Issue 2*.
- MacInnis, C. C., Page-Gould, E. (2015). How Can Intergroup Interaction Be Bad If Intergroup Contact Is Good? Exploring and Reconciling an Apparent Paradox in the Science of Intergroup Relations. *Perspect Psychol Sci*.
- Mähönen, T. A., Jasinskaja-Lahti, I., Liebkind, K., & Finell, E. (2010). Perceived normative pressure and majority adolescents' implicit and explicit attitudes towards immigrants. *International Journal of Psychology*, 45, 182-189.
- Majumdar, S., Puri, V., & Ahuja, S. (2024). The effects of contact valence and group salience in digital intergroup contact. *The Journal of Social Psychology*.
- Mak, A. S., Brown, P. M., & Wadey, D. (2014). Contact and attitudes toward international students in Australia: Intergroup anxiety and intercultural communication emotions as mediators. *Journal of Cross-Cultural Psychology*, 45(3), 491-504. doi:10.1177/0022022113509883
- Mardia, K. V. (1970). Measures of Multivariate Skewness and Kurtosis with Applications. *Biometrika*, 57(3), 519–530.
- Matthews, M., Levin, S., & Sidanius, J. (2009). A longitudinal test of the model of political conservatism as motivated social cognition. *Political Psychology*, 30, 921-936.
- Matthews, G. J., Woolley, K. L., Hayes, J. P., & Chipman, J. W. (2009). A simulation-based approach to teaching introductory statistics. *Journal of Statistics Education*, 17(3), 1-17.

- McLaren, L. M. (2003). Anti-immigrant prejudice in Europe: Contact, threat perception, and preferences for the exclusion of migrants. *Social Forces*, 81, 909-936.
- McFarland, S. (1998). Toward a typology of prejudiced persons. Paper presented at the annual meeting of the International Society of Political Psychology, Montreal, Canada
- McKeown, S., & Dixon, J. (2017). The “contact hypothesis”: Critical reflections and future directions. *Social and Personality Psychology Compass*, 11(1), e12295.
- Mendes, W. B., & Koslov, K. (2012). Brittle smiles: Positive biases toward stigmatized and outgroup targets. *Journal of Experimental Psychology: General*, 142, 923-933.
- Miller, S. L., Zielaskowski, K., & Plant, E. A. (2012). The basis of shooter biases: Beyond cultural stereotypes. *Personality and Social Psychology Bulletin*, 38, 1358-1366.
- Molenberghs, P. (2013). The neuroscience of in-group bias. *Neuroscience and Biobehavioral Reviews*, 37, 1530-1536.
- Mummendey, A., Klink, A., & Brown, R. (2001). A rejoinder to our critics and some of their misapprehensions. *British Journal Social Psychology*, 40, 187-191.
- Nshom, E. & Croucher, S. M. (2014). Threats and attitudes toward Russian-speaking immigrants: a comparative study between younger and older Finns. *Russian Journal of Communication*, 6, 308-317.
- Negy, C., Shreve, T. L., Jensen, B. J., & Uddin, N. (2003). Ethnic identity, self-esteem, and ethnocentrism: A study of social identity versus multicultural theory of development. *Cultural Diversity and Ethnic Minority Psychology*, 9(4), 333-344.
- Oliver, J. E., & Wong, J. (2003). Intergroup prejudice in multiethnic settings. *American Journal of Political Science*, 47, 567-582.

- Operario, D., & Fiske, S. T. (2001). Ethnic identity moderates perceptions of prejudice: Judgments of personal versus group discrimination and subtle versus blatant bias. *Personality and Social Psychology Bulletin*, 27(5), 550–561.
- Oskamp, S. (2000). Reducing prejudice and discrimination. New Jersey: Lawrence Erlbaum Associates, Inc. Psychology. (n.d.). Retrieved October 21, 2014, from <http://www.merriam-webster.com/dictionary/psychology>
- Page-Gould E. (2012). To whom can I turn? Maintenance of positive intergroup relations in the face of intergroup conflict. *Social Psychological & Personality Science*, 3, 462–470.
- Pagotto, L., Voci, A., & Maculan, V. (2010). The effectiveness of intergroup contact at work: Mediators and moderators of hospital workers' prejudice toward immigrants. *Journal of Community & Applied Social Psychology*, 20, 317–330.
- Paladino, M. P., & Vaes, J. (2009). Ours is human: On the pervasiveness of infra-humanization in intergroup relations. *British Journal of Social Psychology*, 48, 237–251.
- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effects of direct and indirect cross-group friendships on judgements of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety reduction mechanism. *Personality and Social Psychology Bulletin*, 30, 770–786.
- Paolini, S., Hewstone, M., Voci, A., Harwood, J., & Cairns, E. (2006). Intergroup contact and the promotion of intergroup harmony: The influence of intergroup emotions.
- Paolini, S., Harwood, J., & Rubin, M. (2010). Negative intergroup contact makes group memberships salient: Explaining why intergroup conflict endures. *Personality and Social Psychology Bulletin*, 36(12), 1723–1738.

- Payne, B. K., Vuletic, H. A., & Lundberg, K. B. (2017). The bias of crowds: How implicit bias bridges personal and systemic prejudice. *Psychological Inquiry*, 28(4), 233–248.
- Pettigrew, T. F. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin*, 23, 173–185.
- Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65–85.
- Pettigrew, T., Jackson, J., Brika, J., Lemaine, G., Meertens, R., Wagner, U., & Zick, A. (1998). Outgroup prejudice in Western Europe. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology*, Vol. 8 (pp. 241–273). New York: Wiley
- Pettigrew, T. F., & Tropp, L. R. (2005). Allport's intergroup contact hypothesis: Its history and influence. In J. F. Dovidio, P. Glick, & L. P. Rudman (Eds.), *Reflecting on the nature of prejudice*. Pp.263-277. Oxford, U.K.: Blackwell.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90, 751–783. doi:10.1037/0022-3514.90.5.751
- Pettigrew, T. F. (2008). Future directions for intergroup contact theory and research. *International Journal of Intercultural Relations*, 32(3), 187–199.
- Pettigrew T. F., Tropp L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38, 922–934.
- Pettigrew, T. F. (2008). Intergroup prejudice: its causes and cure. *versão On-line* ISSN 0258-6444

- Phinney, J. S., Ferguson, D. L., & Tate, J. D. (1997). Intergroup attitudes among ethnic minority adolescents: A causal model. *Child Development*, 68(5), 955–969
- Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, 57(3), 493–510.
- Plant, E. A., Butz, D. A., & Tartakovsky, M. (2008). Interethnic interactions: Expectancies, emotions, and behavioral intentions. *Group Processes & Intergroup Relations*, 11, 555-574
- Piontkowski, U., Rohmann, A., & Florack, A. (2002). Concordance of acculturation attitudes and perceived threat. *Group Processes and Intergroup Relations*, 5, 221-232.
- Postmes, T., Spears, R., Lee, A. T., & Novak, R. J. (2005). Individuality and social influence in groups: Inductive and deductive routes to group identity. *Journal of Personality and Social Psychology*, 89, 747-763.
- Powell, L. J., & Spelke, E. S. (2013). Preverbal infants expect members of social groups to act alike. *Proceedings of the National Academy of Sciences*, 110, E3965-E3972.
- Puffer, H., & Hodson, G. (2024). Exploring secondary transfer generalization effects from Black and gay contact. *Journal of Community & Applied Social Psychology*
- Quillan, L. (1995). Prejudice as a response to perceived group threat: Population composition and anti-immigrant and racial prejudice in Europe. *American Sociological Review*, 60, 586-611.
- Rankin, R. E., & Campbell, D. T. (1955). Galvanic skin response to Negro and White experimenters. *Journal of Abnormal and Social Psychology*, 51, 30-33.
- Reimer, N.K., Becker, J.C., Benz, A., Christ, O., Dhont, K., Klocke, U., Hewstone, M. (2017). Intergroup contact and social change: Implications of negative

- and positive contact for collective action in advantaged and disadvantaged groups. *Personality and Social Psychology Bulletin*, 43, 121-136.
- Renfro, C. L., Duran, A., & Stephan, W. G., & Clason, D. L. (2006). The role of threat in attitudes toward affirmative action and its beneficiaries. *Journal of Applied Social Psychology*, 36, 41-74
- Riek, B. M., Mania, E. W., & Gaertner, S. L. (2006). Intergroup threat and outgroup attitudes: A meta-analytic review. *Personality and Social Psychology Review*, 10, 336-353.
- Roccas, S., & Brewer, M. B. (2002). Social identity complexity. *Personality and Social Psychology Review*, 6, 88-106. doi: 10.1207/S15327957PSPR0602_01
- Rohman, A., Piontkowski, U., & van Randenborgh, A. (2006). When attitudes do not fit: Discordance of acculturation attitudes as an antecedent of intergroup threat. Manuscript submitted for publication.
- Rohman, A., Florack, A., & Piontkowski, U. (in press). The role of discordant acculturation attitudes in perceived threat: An analysis of host and immigrant attitudes in Germany. *International Journal of Intercultural Relations*.
- Rosenberg, M. (1965). Society and the adolescent self-image.
- Rutland, A., Cameron, L., Milne, A., & McGeorge, P. (2005). Social norms and self-presentation: Children's implicit and explicit intergroup attitudes. *Child Development*, 76, 451-466.
- Ruttenberg, J., Zea, M., & Sigelman, C. (1996). Collective identity and intergroup prejudice among Jewish and Arab students in the United States. *Journal of Social Psychology*, 136, 209-220.
- Schaller, M., & Abeyasinghe, A.M.N.D. (2006). Geographical Frame of Reference and Dangerous Intergroup Attitudes: A Double-Minority Study in Sri Lanka. *Political Psychology*, 27, 615-631.

- Schmid, K., Hewstone, M., Tausch, N., Cairns, E., & Hughes, J. (2014). The effects of living in segregated vs. mixed communities on intergroup bias. *Journal of Social Issues, 70*(1), 55–71.
- Schmid, K., Ramiah, A.A., Hewstone, M. (2014). Neighborhood Ethnic Diversity and Trust: The Role of Intergroup Contact and Perceived Threat. *Psychological Science*. ISSN: 09567976.
- Shamir, M., & Sagiv-Schifter, T. (2006). Conflict, identity, and tolerance: Israel in the Al-Aqsa intifada. *Political Psychology, 27*, 569-595
- Shelton, J. N. (2003). Interpersonal concerns in social encounters between majority and minority group members. *Group Processes & Intergroup Relations, 6*, 171-185.
- Shelton J. N., Dovidio J. F., Hebl M., Richeson J. A. (2009). Prejudice and intergroup interaction. In Demoulin S., Leyens J. P., Dovidio J. F., editors. (Eds.), *Intergroup misunderstandings: Impact of divergent social realities* (pp. 21–38). New York, NY: *Psychology Press*.
- Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Intergroup conflict and cooperation: The Robbers Cave experiment* (Vol. 10). Norman, OK: University Book Exchange.
- Sherif, M., & Sherif, C. (1953). *Groups in harmony and tension*. New York: Harper.
- Shook N. J., Fazio R. H. (2008). Interracial roommate relationships: An experimental field test of the contact hypothesis. *Psychological Science, 19*, 717–723.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York, NY: Cambridge University Press.
- Sinclair, S., Lowery, B.S., Hardin, C.D., & Colangelo, A. (2005). Social tuning of automatic racial attitudes: The role of affiliative motivation. *Journal of Personality and Social Psychology, 89*, 583-592.
- Snyder, M. (2001). Self-fulfilling stereotypes. In A. Branaman (Ed.), *Self and society* (pp. 30-35). Malden, MA: Blackwell.

- Stephan, W. G. (2014). *Intergroup anxiety: Theory, Research, and Practice. Personality and Social Psychology Review*. Sage Publication.
- Stephan, W. G., Boniecki, K. A., Ybarra, O., Bettencourt, A., Ervin, K. S., Jackson, L. A., McNatt, P. S., & Renfro, C. L. (2002). The role of threats in the racial attitudes of blacks and whites. *Personality and Social Psychology Bulletin*, 28, 1242-1254.
- Stephan, W. G., Diaz-Looving, R., & Duran, A. (2000). Integrated threat theory and intercultural attitudes: Mexico and the United States. *Journal of Cross-Cultural Psychology*, 31, 240-249.
- Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues*, 41, 157-175.
- Stephan W. G., & Stephan, C. W. (1996). Predicting prejudice. *International Journal of Intercultural Relations*, 20, 409-426.
- Stephan, W. G., & Stephan, C. W. (2000). An Integrated Threat Theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination: Claremont symposium on applied social psychology* (pp. 23-45).
- Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice toward immigrants: An integrated threat theory. *Journal of Applied Social Psychology*, 29, 2221-2237.
- Stephan, W. G., Ybarra, O., Martinez, C., Schwarzwald, J., & Turk-Kaspa, M. (1998). Prejudice toward immigrants to Spain and Israel: An integrated threat theory analysis. *Journal of Cross-Cultural Psychology*, 29, 559-576.
- Stephan W. G., & Stephan, C. W. (1996). Predicting prejudice. *International Journal of Intercultural Relations*, 20, 409-426.
- Sumner, W. (1906). *Folkways*. New York: Ginn.
- Suzuki-Crumly, J., & Hyers, L. L. (2004). The relationship among ethnic identity, psychological well-being, and intergroup competence: An investigation in

- biracial groups. *Cultural Diversity & Ethnic Minority Psychology*, 10, 137-150.
- Swann, W. B., Jr., & Buhrmester, M. D. (2015). Identity fusion. *Current Directions in Psychological Science*, 24, 52-57.
- Swart, H., Hewstone, M., Christ, O., & Voci, A. (2010). The impact of crossgroup friendships in South Africa: Affective mediators and multigroup comparisons. *Journal of Social Issues*, 66, 309-333.
- Tajfel, H. (1969). Cognitive aspects of prejudice. *Journal of Social Issues*, 25, 79-97.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations*. Monterey, CA: Brooks/Cole.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall.
- Tausch, N., Hewstone, M., Kenworthy, J. B., Psaltis, C., Schmid, K., Popan, J. R., Hughes, J. (2010). Secondary transfer effects of intergroup contact: Alternative accounts and underlying processes. *Journal of Personality and Social Psychology*, 99, 282-302.
- Tausch, N., Hewstone, M., & Roy, R. (2009). The relationships between contact, status and prejudice: An integrated threat theory analysis of Hindu-Muslim relations in India. *Journal of Community and Applied Social Psychology*, 19, 83-94.
- Tawa, J., & Kim, G. S. (2011). How does biological belief in race relate to our feelings towards in-group and out-groups: A cognitive dissonance framework. *Current Research in Social Psychology*, 16.
- Ting-Toomey, S. (1999). *Communicating across cultures*. New York: The Guilford Press.

- Trawalter, S., Adam, E. K., Chase-Lansdale, P. L., & Richeson, J. A. (2012). Concerns about appearing prejudiced get under the skin: Stress responses to interracial contact in the moment and across time. *Journal of Experimental Social Psychology*, 48, 682-693.
- Trawalter S., Richeson J. A., Shelton J. N. (2009). Predicting behavior during interracial interactions: A stress and coping approach. *Personality and Social Psychology Review*, 13, 243–268.
- Turner R. N., Hewstone M., Voci A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology*, 93, 369–388.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). Rediscovering the social group: A self-categorization theory. Oxford, England: Basil Blackwell.
- Van der Meer, T., & Tolsma, J. (2014). Ethnic diversity and its effects on social cohesion. *Annual Review of Sociology*, 40, 459–478. DOI: <https://doi.org/10.1146/annurev-soc-071913-043309>
- Van Zomeren, M., Fischer, A. H., & Spears, R. (2007). Testing the limits of tolerance: How intergroup anxiety amplifies negative and offensive responses to out-group-initiated contact. *Personality and Social Psychology Bulletin*, 33, 1686-1699.
- Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and Racial Studies*, 30(6), 1024–1054. <https://doi.org/10.1080/01419870701599465>
- Vezzali, L., Giovannini, D., & Capozza, D. (2010). Longitudinal effects of contact on intergroup relations: The role of majority and minority group membership on intergroup emotions. *Journal of Community & Applied Social Psychology*, 20, 462-479.

- Visintin, E. P., Green, E. G. T., Falomir-Pichastor, J. M., & Berent, J. (2020). *Intergroup contact moderates the influence of social norms on prejudice. Group Processes & Intergroup Relations*, 23(6), 899–917.
- Voci, A., & Hewstone, M. (2003). Intergroup contact and prejudice toward immigrants in Italy: The mediational role of anxiety and the moderational role of group salience. *Group Processes and Intergroup Relations*, 6, 37–54.
- Vonofakou, C., Hewstone, M., & Voci, A. (2007). Contact with outgroup friends as a predictor of meta-attitudinal strength and accessibility of attitudes towards gay men. *Journal of Personality and Social Psychology*, 92, 804–820.
- Vorauer, J. D. (2013). Getting past the self: Understanding and removing evaluative concerns as an obstacle to positive intergroup contact effects. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 23-48). New York, NY: Psychology Press.
- Wagner, U., Christ, O., Pettigrew, T. F., Stellmacher, J., & Wolf, C. (2008). Improving intergroup relations: Building on the legacy of Thomas Pettigrew. In U. Wagner, L. R. Tropp, G. Finchilescu, & C. Tredoux (Eds.), *Improving intergroup relations: Building on the legacy of Thomas Pettigrew* (pp. 33–60). Malden, MA: Blackwell Publishing.
- Wagner, U., Christ, O., Pettigrew, T. F., Stellmacher, J., & Wolf, C. (2006). Prejudice and minority proportion: Contact instead of threat effects. *Social Psychology Quarterly*, 69, 380–390.
- White, C., Duck, J. M., & Newcombe, P. A. (2012). The impact of media reliance on the role of perceived threat in predicting tolerance of Muslim cultural practice. *Journal of Applied Social Psychology*, 42, 3051-3082.
- Wilder D. A. (1984). Intergroup contact: The typical number and exception to the rule. *Journal of Experimental Social Psychology*, 20, 177–194.
- Works, E. (1961). The prejudice-interaction hypothesis from the point of view of the Negro minority group. *American Journal of Sociology*. 67: 47–52

- Wright, S. C., Aron, A., McLaughlin, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73-90.
- Ybarra, O., Stephan, W. G., & Schaberg, L. (2000). Misanthropic memory for the behavior of group members. *Personality and Social Psychology Bulletin*, 26, 1515-1525.
- Yuker, H. E., & Hurley, M. K. (1987). Contact with and attitudes toward persons with disabilities: The measurement of intergroup contact. *Rehabilitation Psychology*, 32 (3), 145.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, 9(2), 1-27.
- Zarate, M. A., Garcia, B., Garza, A. A., & Hitlan, R. T. (2004). Cultural threat and perceived realistic group conflict as dual predictors of prejudice. *Journal of Experimental Social Psychology*, 40, 99-105.
- Zhou, S., Page-Gould, E., Aron, A., Moyer, A., & Hewstone, M. (2019). The extended contact hypothesis: A meta-analysis on 20 years of research. *Personality and Social Psychology Review*, 23(2), 132-160.

BRIEF BIO-DATA

LALPARMAWII KHIANGTE

Aizawl – 796001, Mizoram

Date of Birth: 23rd February, 1991

Email: parikhiangte69@gmail.com

EDUCATION

M.Phil in Psychology, 2017 MIZORAM UNIVERSITY

M.A in Psychology, 2014 MIZORAM UNIVERSITY

B.A in Psychology, 2012 GOVERNMENT HRANGBANA COLLEGE, AIZAWL

RESEARCH PAPER PRESENTED

(INTERNATIONAL/NATIONAL)

- National Seminar on “Contemporary Psychosocial Issues – II” organized by MZU Psychology Alumni Association and Department of Psychology, Mizoram University on the 30th November, 2019 at Govt. Hrangbana College, Aizawl.
- Two-Day International Seminar on “Mental Health and Well-being” organized by Department of Psychology on the 10th & 11th October, 2022.

RESEARCH PAPER PUBLICATION

- Lalpawmawii, K & Laldinpuii H.K Fente (2023). Psychosocial Complexities of Selected Districts in Mizoram. *Mizo Studies Vol. XII*. ISSN: 2319-6041
- Lalpawmawii, K & Laldinpuii H.K Fente (2024). Ethnic Diversity and Intergroup Contact: A Study in Mizoram. *Mizo Studies Vol. XIII*. No.4 ISSN: 2319-6041

PARTICULARS OF THE CANDIDATE

NAME OF THE CANDIDATE : LALPARMAWII KHIANGTE

DEGREE : DOCTOR OF PHILOSOPHY

DEPARTMENT : PSYCHOLOGY

TITLE OF THE THESIS : THE ROLE OF CONTACT VALENCE IN
INTERGROUP PROCESSES: A STUDY IN
MIZORAM.

DATE OF ADMISSION :27.07.2017

APPROVAL OF RESEARCH PROPOSAL

1. DRC : 13.10.2017

2. BOS :17.10.2017

3. SCHOOL BOARD :31.10.2017

MZU REGISTRATION NO. :4276 of 2009-10

Ph.D REGISTRATION NO. & DATE: MZU/Ph.D./1061 of 31.10.2017

EXTENSION (IF ANY) :No.16-2/MZU(Acad)/21/313-318

Dated: 12th July, 2023.

Head

Department of Psychology

ABSTRACT

THE ROLE OF CONTACT VALENCE IN INTERGROUP PROCESS: A STUDY IN MIZORAM.

**AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

LALPARMAWII KHIANGTE

MZU REGISTRATION NO.: 4276 of 2009-10

Ph.D. REGISTRATION NO.: MZU/Ph.D./1061 of 31.10.2017



**DEPARTMENT OF PSYCHOLOGY
SCHOOL OF SOCIAL SCIENCES
AUGUST, 2025**

**THE ROLE OF CONTACT VALENCE IN INTERGROUP PROCESSES:
A STUDY IN MIZORAM**

BY
LALPARMAWII KHIANGTE
Department of Psychology

Supervisor
Prof. H.K. Laldinpuii Fente

Submitted
In partial fulfillment of the requirement of the Degree of Doctor of Philosophy
in Psychology of Mizoram University, Aizawl.

In contemporary multicultural societies, understanding how intergroup relations evolve amid rising ethnic diversity is a pressing concern. Intergroup contact theory, especially the contact hypothesis posited by Allport (1954), has long been heralded for its optimistic claim that increased contact between groups can reduce prejudice. Over time, this theory has been expanded to account for real-world complexities, notably in contexts marked by varying degrees of ethnic exposure such as neighborhoods, workplaces, and schools. Central to these expansions are theories like the ecological-contact hypothesis, which posit that greater ethnic diversity leads to increased intergroup contact, generally fostering more positive intergroup attitudes (Pettigrew et al., 2006; Laurence et al., 2018).

However, this optimistic narrative has been tempered by findings suggesting that diversity can also heighten intergroup tension and perceived threat, particularly in contexts lacking quality contact or positive institutional support (Putnam, 2007). The ambiguity in outcomes has drawn scholarly attention to the need for a more refined understanding of how and what kind of contact occurs in diverse settings. Not all contact experiences are alike, and recent empirical work has begun to emphasize that the valence of contact, whether interactions are positive or negative plays a pivotal role in shaping intergroup dynamics (Barlow et al., 2012; Laurence et al., 2017).

Intergroup contact theory, originally proposed by Allport (1954), argues that, under certain conditions, interaction between members of different social groups can reduce intergroup prejudice. Allport identified four optimal conditions for effective contact: equal group status, common goals, intergroup cooperation, and institutional support. While early studies focused heavily on these criteria, later research has demonstrated that positive outcomes can still occur even when these conditions are not fully met (Pettigrew & Tropp, 2006). The theory has become a cornerstone in social psychology, especially in diversity and prejudice-reduction research. Pettigrew and Tropp's (2006) comprehensive meta-analysis of over 500 studies across various contexts confirmed the robustness of the theory. Their results showed that intergroup contact typically reduces prejudice, regardless of setting, age group, or type of group involved. Importantly, the effects generalized across different outgroups and were

consistent across both majority and minority group members. Yet, more recent research has emphasized the ecological context in which such contact occurs. The ecological-contact hypothesis suggests that increased ethnic diversity leads to more frequent intergroup encounters, which can cumulatively reduce prejudice over time (Laurence et al., 2018).

However, this assumption often relies on the quantity of contact without sufficiently accounting for quality. Studies by Barlow et al., (2012) and Dhont et al., (2014) indicate that negative intergroup contact may have disproportionately stronger effects on prejudice than positive contact, suggesting an asymmetry that challenges the optimistic assumptions of traditional contact theory. Hence, the nature or valence of contact becomes essential in understanding these dynamics.

Laurence et al., (2017) emphasized the importance of examining both positive and negative intergroup contact as countervailing forces within diverse settings. Their findings suggest that while positive contact fosters trust and empathy, negative contact may have stronger or more persistent effects on intergroup anxiety and attitudes. Moreover, contact quality has emerged as a crucial mediating variable. For instance, high-frequency contact without supportive or cooperative structures may increase opportunities for negative experiences, thereby worsening intergroup relations (Graf et al., 2014).

Intergroup anxiety, defined as the apprehension individuals feel when anticipating or engaging in contact with outgroup members is a key affective mechanism linking contact to attitudes (Stephan & Stephan, 1985). Research shows that positive contact tends to reduce anxiety and perceived threat, thereby promoting more favorable intergroup attitudes (Turner et al., 2007). In contrast, negative contact can exacerbate fear and avoidance, reinforcing stereotypes and hostility (Paolini et al., 2010). Putnam's (2007) influential "constrict theory" also posits that diversity can initially lead to social withdrawal and decreased social capital, suggesting that mere exposure is not inherently beneficial. This adds further weight to the argument that valenced contact, not diversity per se, may be the more significant driver of intergroup outcomes.

Intergroup attitudes refer to the evaluations and affective responses individuals hold toward members of social groups to which they do not belong (Brewer, 1999). According to Eagly and Chaiken (1993), attitudes have three components: affective (emotions), cognitive (beliefs/stereotypes), and behavioral (inclinations to act). Intergroup attitudes can therefore manifest in emotional reactions (e.g., fear, sympathy), beliefs (e.g., stereotypes), or behavioral intentions (e.g., support for exclusion or inclusion). Intergroup attitudes are complex constructs shaped by psychological, social, and contextual factors. While negative attitudes can lead to discrimination and social division, a range of mechanisms from intergroup contact to empathy and institutional norms can foster more positive perceptions (Brown et al., 2005). Two foundational theories help illuminate the development of these attitudes. Social Identity Theory (Tajfel & Turner, 1979) emphasizes that individuals derive self-worth and identity from their group affiliations, often resulting in a preference for one's own group (ingroup favoritism) and biased views toward others (outgroup derogation). This theory highlights how group-based identity needs can shape intergroup evaluations independently of personal interactions. In contrast, Realistic Group Conflict Theory (Sherif, 1966) explains intergroup attitudes through the lens of competition over limited resources, where rivalry fosters hostility and collaboration promotes more positive intergroup relations.

Building on these insights, the current study incorporates contact quantity, quality, and contact valence (negative and positive contact) as mediators within the broader diversity- anxiety and attitude framework. It specifically explores how these variables interact across three levels of ethnic exposure – high (Lawngtlai District), medium (Aizawl District) and low (Serchhip District) ethnic diversity contexts in Mizoram, to predict intergroup anxiety and attitudes. To systematically address these aims, the research is guided by four objectives.

The first objective attempted to highlight the impact of diversity levels on intergroup anxiety and intergroup attitude. The second objective was to study the predictability of Intergroup Anxiety and Intergroup Attitude from Contact Quantity among young adults in Mizoram. The third objective aims to study the mediating role

of contact quality and negative experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude. The fourth objective was to study the role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (neighborhood and workplace exposure) and intergroup anxiety and attitude.

A multistage sampling strategy was employed to ensure representativeness and alignment with the study's objective of examining intergroup processes across varying contexts. In the **first stage**, secondary demographic data were gathered from State Government records, community-based organizations (CBOs), and faith-based institutions to map the diversity profiles of all eight district capitals in Mizoram. These profiles were assessed based on the composition of social categories including language, ethnicity, religion, religious denomination, gender, and health-related classifications. In the **second stage**, districts were ranked from most to least diverse across these criteria. Ethnicity emerged as the most salient and analytically relevant dimension of intergroup diversity for this study. Accordingly, in the **third stage**, three districts were selected to represent distinct levels of ethnic exposure: Lawngtlai District (high ethnic diversity), Aizawl District (moderate diversity), and Serchhip District (low diversity).

Demographic information such as age, sex, educational qualification, citizenship, occupation, type of family, permanent residence area, ethnicity, religion, religious denomination, native language was recorded to depict sample representativeness. The mean age of participants in Lawngtlai District was 29 years, Aizawl District = 26 years and Serchhip District = 28 years. 50% of the respondents constitute the male population while the remaining 50% are females. The percentage of young adult respondents who studied till the matriculation level was 4.1%, while .4% did not attend school at all. 28.2% reported to have completed the 12th Standard, while 64.1 % studied till graduation level and 3.1% completed their Master's Degree and above. 60.6% of the respondents lived in joint families, 27.3%% lived in nuclear families and 12.2% of the respondents reported as living alone.

From the 510 respondents, 87.7% reported Mizo as their mother tongue, 9.1% reported Lai as their mother tongue, 1.2% Mara, .6% Gorkha, .2% Bru, .2% Paite, .4% Pawi, .8% Hmar, .2% Chakma, .2% Lakher, .2% Simte, .2% Pang. Out of the respondents, 77.3% reported as belonging to Mizo ethnic group, 16.5% belongs to Lai/Pawi ethnic group, 1.2% belongs to Hmar, 2% belongs to Mara ethnic group, .6% belongs to Paite, .6% belongs to Gorkha ethnic group, .2% belongs to Bru, .2% belongs to Chakma, Hindi, Tlumang, Simte and Bawm respectively.

Data screening was conducted prior to statistical analysis. Extreme outliers, defined as z-scores exceeding ± 3.29 were removed from the dataset. Mild outliers were addressed using winsorization to minimize their influence while preserving sample size and statistical power. To ensure adequate statistical power, an equal number of participants were randomly assigned to each cell of the design using random numbers generated in SPSS. This procedure ensured equal group sizes and minimized confounding effects. To meet the requirements of parametric statistical analyses, several diagnostic tests were conducted including linearity, normality (assessed through Skewness, Kurtosis, Kolmogorov-Smirnov, and Shapiro-Wilk tests), homogeneity of variance (Levene's statistic), independence of errors, and homoscedasticity across the three groups. Following recommendations by Field (2016) and recognizing the robustness of parametric procedures with equal cell sizes, a lenient significance threshold of $p < .01$ was adopted during assumption testing. All assumptions were considered adequately met for the application of two-way ANOVA, hierarchical regression, and mediation analyses.

Five psychological tools were employed to measure the behavior and psychological constructs under consideration for this study. To measure intergroup contact, the General Intergroup Contact Quantity and Contact Quality Scale (CQCQ; Islam & Hewstone, 1993) was used. Feeling Thermometer (Converse et al., 1980) was employed to measure ethnic outgroup attitude. Intergroup Anxiety Scale – Short Form (IAS; Paolini et al., 2004) was used to assess intergroup anxiety towards ethnic outgroup members. Negative Experiences Inventory (NEI; Stephan et al., 2000) was used to assess negative experiences with ethnic outgroup member. Lastly, Valenced Contact (Single-Item Scale) (VC; Barlow et al., 2012) was employed to measure the

nature of contact experiences i.e. whether contact is experienced negatively or positively with ethnic outgroup members.

SPSS 22 (Statistical Package for Social Sciences) was used to prepare the scores on all tools for all respondents and psychometric adequacy of the measures was checked for the total sample through (i) item-total coefficients of correlation (ii) inter-scale relationships, and (i) reliability coefficients (Cronbach's Alpha) over all the levels of analyses. Descriptive statistics such as Mean, SD, Skewness, Kurtosis and Standard Errors were also included in order to ensure comparison of scores between various sub-groups within the study and to check data distributions for still further statistical analyses (Miles & Shevlin, 2004).

The General Intergroup Contact Quantity and Quality Scale (Islam & Hewstone, 1993) demonstrated adequate reliability ($\alpha = .79-.82$), with item-total correlations ranging from .62 to .82. Results indicated that both contact quantity and quality were significantly higher in ethnically diverse districts compared to less diverse ones, and the two constructs were strongly correlated ($r = .56-.79$). Attitudes toward ethnic outgroups, measured using a Feeling Thermometer, revealed overall neutral affect ($M = 5.24-6.48$ on a 10-point scale). The Intergroup Anxiety Scale (IAS) showed moderate reliability ($\alpha = .70-.74$), and a mean score ranging from $M = 28.36 - 29.46$ for males and $M = 32.02- 32.63$ for females, with item-total correlations between .206 and .537. Negative Experiences Inventory (NEI) demonstrated acceptable reliability ($\alpha = .74-.75$) with mean scores ranging from $M = 28.28 - 33.37$ for males and $M = 28.21-29.05$ for females. Finally, Valenced Contact ratings indicated infrequent negative contact ($M = 1.49-1.71$) and moderately frequent positive contact ($M = 4.81-5.45$), suggesting that participants generally reported more favorable intergroup experiences. After all this, statistical analyses of the data were done using the SPSS 22 and *PROCESS* macro, v4.2, Hayes (2022) in order to address the various objectives and hypotheses stated in the study.

The **first objective** investigates the impact of diversity levels on intergroup anxiety and intergroup attitudes, revealing a significant effect of diversity levels on intergroup attitudes, but not on intergroup anxiety. This suggests that variations in

diversity levels do not substantially influence individuals' levels of intergroup anxiety. A two-way ANOVA (3 Diversity Levels $\times$ 2 Sex) demonstrated a significant main effect of diversity level on intergroup attitudes. Post-hoc Mean comparisons using the Least Significant Difference (LSD) test indicated that participants from regions with medium (Aizawl District) and high (Lawngtlai District) diversity levels reported significantly more positive attitudes toward ethnic outgroup members than those from low-diversity regions (Serchhip District). These findings support Allport's (1954) Contact Hypothesis, which posits that increased intergroup contact under favorable conditions reduces prejudice. This is further corroborated by Pettigrew & Tropp (2006), who found that intergroup contact generally enhances intergroup attitudes across varied contexts.

Although sex differences were not explicitly stated among the study's primary objectives, they were examined to explore potential behavioral distinctions between males and females. The analysis revealed a significant main effect of 'sex' on intergroup anxiety but not on intergroup attitudes. Specifically, the two-way ANOVA showed that females reported higher levels of intergroup anxiety than males across all three diversity levels. This finding is consistent with research by Ma, Dang, and Zhang (2021), which reported elevated intergroup anxiety among Chinese women, consequently leading to decreased cooperative behavior in intergroup settings.

The **second objective** examined the predictability of Intergroup Anxiety and Intergroup Attitude from Contact Quantity among young adults in Mizoram. Hierarchical regression analyses, controlling for demographic factors such as age, educational qualification, occupation and family, revealed that higher levels of intergroup contact significantly predicted lower intergroup anxiety and more positive intergroup attitudes across both sexes. Contact quantity accounted for 21% of the variance in attitudes for males and 21.2% for females, and explained 3.6% and 7.3% of the variance in anxiety, respectively. These results align with existing literature emphasizing the role of intergroup contact in reducing prejudice and anxiety, while fostering more positive outgroup perceptions (Dovidio et al., 2003; Pettigrew &

Tropp, 2006, 2008; Turner et al., 2007; Voci & Hewstone, 2003; Harwood et al., 2005; Paolini et al., 2004).

The **third objective** was to study the mediating role of contact quality and negative experiences in the relationship between (i) Contact Quantity and Intergroup Anxiety and (ii) Contact Quantity and Intergroup Attitude. The findings from the mediation analyses provide a mixed understanding of how positive contact (contact quality) and negative contact (negative experiences) mediates the relationship between Contact Quantity and both Intergroup Anxiety and Intergroup Attitude across varying levels of ethnic diversity in Mizoram. This multi-contextual analysis deepens understanding of existing frameworks within Intergroup Contact Theory (Allport, 1954), by demonstrating how contextual diversity moderates the mechanisms through which contact influences intergroup dynamics.

In Lawngtlai District, where ethnic outgroup exposure is relatively high due to the co-existence of multiple communities such as the Lai (an indigenous ethnic group primarily residing in the Lawngtlai District, who are a part of the larger Chin-Kuki-Mizo ethnolinguistic family and have their own distinct language (Laiholh), culture, and autonomous administrative region known as the Lai Autonomous District Council) and Chakma {an ethnic group in Mizoram, mainly settled in the Chakma Autonomous District Council (CADC) in the southwestern region of the state} populations, findings revealed that positive contact (contact quality) **fully mediated** the relationship between contact quantity and intergroup anxiety, and **partially mediated** its relationship with attitude, highlighting that positive, trust-based interactions are key to reducing anxiety (Stephan, 2014) and fostering acceptance (Pettigrew & Tropp, 2008). However, negative contact (negative experiences) did not meaningfully mediate either outcome, suggesting that in high-diversity settings, the predominance of routine, positive contact may neutralize or countervail the psychological impact of occasional negative interactions.

In Aizawl District, which has moderate ethnic exposure due to a relatively cosmopolitan population and migrant influxes, the mediation pattern shifts. Positive contact (contact quality) **fully mediated** the quantity-attitude link but did not mediate

anxiety, underscoring the emotional complexity of intergroup anxiety and supporting findings by Paolini et al., (2004) and Islam & Hewstone (1993), which emphasize that affective outcomes demand deep, emotionally salient engagement. Negative contact (negative experiences) did not significantly influence both the outcomes of Intergroup Anxiety and Intergroup Attitude.

Conversely, in Serchhip District, where contact opportunities are scarce, even limited high-quality contact significantly improved attitudes, aligning with Voci & Hewstone (2003). However, negative contact (negative experiences), not positive contact (contact quality), **significantly mediated anxiety** in this low-diversity context, affirming that negative experiences are more psychologically salient where positive intergroup exposure is limited (Stephan & Stephan, 2014).

The **fourth objective** was to study the role of countervailing positive and negative (valenced) contact in understanding the overall association between diversity (neighborhood and workplace exposure) and intergroup anxiety and attitude. Results revealed that the direct effects of Positive Contact significantly predicted more positive attitudes, consistent with Intergroup Contact Theory (Allport, 1954) and meta-analytic findings by Pettigrew and Tropp (2006), which emphasize the role of contact quality in reducing prejudice. Intergroup Anxiety also directly significantly predicted more negative attitudes, aligning with Integrated Threat Theory (Stephan & Stephan, 2000).

However, the total effect of Neighbourhood Exposure (NExpsr) on Attitudes was non-significant, and none of the indirect effects through Negative Contact (VCNC), Positive Contact (VCPC) or Anxiety reached statistical significance. This suggests that exposure alone to outgroup members in one's neighborhood is not sufficient to improve intergroup attitudes, a conclusion supported by studies emphasizing the importance of meaningful intergroup engagement over mere proximity (Dixon et al., 2005, 2010 ; McKeown & Dixon, 2017 ; Paolini et al., 2010).

Research by Schlueter & Scheepers (2010) and Binder et al., (2009) has similarly shown that neighborhood diversity only promotes positive attitudes when it

leads to constructive intergroup interaction, and that co-residence without contact fails to reduce prejudice over time. Moreover, in disadvantaged or high-threat contexts, diversity may exacerbate intergroup tensions in the absence of bridging opportunities (Laurence, 2011; Koopmans & Schaeffer, 2015). Stolle, Soroka, and Johnston (2008) found that social cohesion in diverse areas was driven by interaction frequency and quality.

In conclusion, this analysis confirms that positive contact and reduced intergroup anxiety are critical drivers of favorable attitudes, while neighborhood exposure alone is insufficient. The findings reinforce the importance of fostering qualitative intergroup engagement to meaningfully improve social cohesion and reduce prejudice.

Regarding Workplace Exposure (WExpr), the analysis revealed a more complex mediational structure. Results revealed that the total effect of Workplace Exposure (WExpr) on Attitudes was significant, indicating that greater exposure to outgroup members in the workplace is positively associated with more favorable intergroup attitudes. The direct effect of Positive Contact (VCPC) on Attitude was positively significant and the direct effect of Anxiety on Attitude was negatively significant, indicating that positive contact predicted more positive attitudes and anxiety predicted negative attitudes towards ethnic outgroup members. The specific indirect effects of Positive Contact (VCPC), Anxiety and sequence of mediators – Positive Contact and Anxiety were significant. These results support Intergroup Contact Theory (Allport, 1954; Pettigrew & Tropp, 2006), which argues that meaningful, positive intergroup contact reduces prejudice. The significant indirect path through Positive Contact reflects that the quality of intergroup interaction, not just frequency of exposure, is crucial for improving attitudes (Binder et al., 2009). The mediating role of anxiety aligns with Integrated Threat Theory (Stephan & Stephan, 2000), which posits that intergroup anxiety is a core emotional mechanism behind prejudice.

The non-significance of the Negative Contact paths suggests that negative contact, while potentially impactful, did not significantly mediate the relationship

possibly due to lower variance or frequency of such experiences, echoing works by Barlow et al., (2012) and Zhou et al., (2019), which suggest that negative contact must be more frequent or emotionally intense to elicit generalized attitudinal shifts. This asymmetry between positive and negative contact effects is well documented in meta-analytic studies (Pettigrew & Tropp, 2006; Lemmer & Wagner, 2015). Overall, these results underscore that workplace diversity alone may not be sufficient to improve intergroup relations. Instead, it seems necessary that it be accompanied by opportunities for positive, voluntary, and meaningful contact, which serve to reduce intergroup anxiety and enhance outgroup evaluations.

This study examined the effects of contextual intergroup exposure on intergroup anxiety and attitudes, with a focus on the mediating roles of positive and negative intergroup contact. The findings offer robust support for the positive component of the hypothesis: both neighbourhood and workplace exposure improved outgroup attitudes indirectly through positive contact, affirming the central role of quality intergroup engagement over mere exposure. These results reinforce the asymmetrical influence of contact types, highlighting the transformative potential of positive intergroup interactions, while suggesting that negative contact may only influence attitudes under more intense or repeated conditions. Overall, the findings emphasize the need for intentional, positive engagement strategies in diverse settings to effectively improve intergroup relations.

While this study contributes meaningfully to the understanding of the psychological outcomes of intergroup contact, particularly anxiety and attitudes in the context of Mizoram, several **limitations** should be carefully considered. First, the research employed a cross-sectional design, which limits the ability to draw causal conclusions. Although significant associations were observed among variables such as workplace exposure, contact quality, intergroup anxiety, and attitudes, the direction of these relationships remains uncertain. It is plausible, for example, that individuals with more positive attitudes are more open to contact, rather than contact solely shaping attitudes. To clarify causal mechanisms, future research should employ longitudinal or experimental designs (e.g., intervention studies, panel data) that can better capture changes over time and establish temporal ordering.

Second, the study's findings are culturally and geographically specific, being based solely on participants from three districts in Mizoram. While this localized approach offers valuable, context-rich insights into intergroup relations in a multi-ethnic Indian state, it also limits the generalizability of the findings. Intergroup dynamics are shaped by unique cultural, historical, and political contexts. Therefore, replication in other Indian states with different ethnic compositions or sociopolitical histories is necessary to determine the external validity of these findings.

Third, the non-significant or limited role of negative contact in mediating attitudes was contrary to expectations. Existing literature suggests that negative contact often has a disproportionately strong effect on prejudice and intergroup hostility (Barlow et al., 2012). Several explanations may account for this: participants may underreport negative encounters due to social desirability concerns; the emotional salience of negative contact may vary depending on context; or the construct may not have been sufficiently differentiated in the current study. Future research should disaggregate types of negative contact such as passive avoidance, hostile conflict and microaggressions, and assess their frequency, perceived intensity, and emotional impact.

Fourth, the study did not account for potential confounding variables, such as personality traits (e.g., openness to experience) or prior experiences with intergroup conflict, all of which could independently influence both anxiety and attitudes toward outgroups. Inclusion of such variables in future models would allow for more precise estimation of the specific effects of intergroup contact.

To conclude, the present study offers compelling evidence that the quality and context of intergroup contact, not mere exposure are important in shaping intergroup attitudes and alleviating intergroup anxiety. While regions with higher ethnic diversity (e.g., Lawngtlai and Aizawl) were associated with more favorable attitudes toward outgroups, it was not diversity itself but the nature of interpersonal engagement, particularly positive and high-quality interactions that accounted for these shifts.

The study confirms that positive intergroup contact reduces anxiety and fosters acceptance, reinforcing foundational theories such as Allport's Intergroup Contact Hypothesis and the Integrated Threat Theory. Interestingly, in lower-diversity contexts (e.g., Serchhip), negative contact had a disproportionately strong influence, suggesting that where intergroup experiences are rare, negative events become more psychologically salient and can shape perceptions more powerfully than in high-contact environments.

Furthermore, the workplace emerged as a crucial site for intergroup transformation, where the opportunity for sustained, cooperative engagement facilitated more positive intergroup attitudes. In contrast, neighborhood diversity failed to produce meaningful attitudinal change without the presence of active and positive interaction, emphasizing that proximity without relationship does not reduce prejudice.

Another core takeaway is the asymmetrical impact of contact valence: positive contact consistently led to improved attitudes and reduced anxiety, while negative contact only occasionally demonstrated influence, and only under certain conditions. This highlights a valuable social psychological principle that the capacity for prejudice reduction lies more reliably in fostering genuine, positive experiences than in merely managing negative ones.

In sum, this research underlines the need to go beyond demographic diversity as a metric of inclusion. True intergroup harmony requires intentional efforts to cultivate environments of trust, cooperation, and positivity whether in neighborhoods or workplaces. It is these qualitative experiences, not quotas or demographic counts, that ultimately shape how communities perceive, relate to, and accept one another.