



Friends' Influence and Social Interaction on Callous-Emotional Trait of Adolescents: Does Neighborhood Characteristics Play Some Roles?

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Abstract

The study explored the moderating role of neighbourhood disorder on the relationship between friends' influence and social interaction on callous-unemotional traits among 323 adolescents selected from secondary schools in Awka, Anambra State, Nigeria. The ages of the participants ranged from 14 – 17 with the mean age of 15.3 and standard deviation of 1.4. Their gender consisted of males 158 (48.9%) and females 165 (51.1%). Four instruments were used for data collection namely: parents and peer influence scale, social interaction scale, neighbourhood disorder scale and anti-social screening device. The study adopted cross sectional survey design and moderated regression statistics was used for data analysis. Four hypotheses were tested and the results showed that social interaction significantly and positively predicted callous-unemotional traits. Friends influence significantly and negatively predicted callous-unemotional traits. Also, neighbourhood disorder significantly and positively predicted callous-unemotional traits. Neighbourhood disorder significantly and positively moderated relation between social interaction and callous-unemotional traits. However, neighbourhood disorder did not moderate relation between friends' influence and callous-unemotional traits. Thus, interventions aimed to reduce callous-unemotional traits should prioritize and promote cordial interpersonal relationship among adolescents.

Keywords: Friends' influence, social interaction, neighbourhood disorder, callous-unemotional traits, maladaptive behaviour.

Introduction

Understanding the underlying mechanism of the increasing manifestation of callous-unemotional traits among adolescents globally seems quite pressing. The rising cases of maladaptive behaviours among adolescents that are characterized by persistent pattern of disregard for other peoples' right, lack of empathy, lack of concern for performance in school, and general deficit in affectivity was corroborated by literature (Kimonese et al., 2013; Nwafor et al., 2024; Wang et al., 2017) Globally, World Health Organization (2020) reported general increase in adolescents' engagement in violent behaviour, with gender differences of boys forty two percent (42 %) and girls thirty seven percent (37 %). Youth Justice Statistics (2020) stated that there was twelve percent (12 %) increase among adolescents of England and Wales between April 2018 and March 2019. Also, Snyder, et al. (2003) reported fourteen percent (14 %) increase among the USA adolescents. Zhao, Zhang and Liu (2015) reported about seven percent (7 %) increase among Chinese adolescents. In Africa, xenophobic attacks in South Africa and the #EndSars protest in Nigeria in the year 2020 and the widespread gang related killings in Anambra State between the year 2020 – 2024 (Alumona & Amusan, 2019; Nwafor et al, 2024; Ofor, Onunkwo & Ofor, 2023), offered useful supports that adolescents' involvement in maladaptive behaviours cut across different continents.

Callous-unemotional trait was reported to potentiate other problem behaviours at personal interpersonal and society levels (Zhu et al., 2024). At the personal level, an adolescent with callous-unemotional trait tends to be unconcerned with performance in school and any other training (Kim & Chang, 2019). It portends serious danger for the adolescents' career growth and development. Adolescence period is a time for secondary education and performance is a condition for continuity (Nwafor et al., 2021). Being unconcerned with academic performance may lead to lack of attention in school activities, poor academic engagement and overall poor school adjustment (Engels et al., 2019). School adjustment consists of school engagement, academic achievement, and burn-out and student-teacher relationship (Eccles, 2009). At this stage of education, a lot of emphasis is placed on grade and competition hence academic maladjustment may affect the adolescent's self-concept, which may have implications on emotional and cognitive wellbeing.

At the interpersonal level, adolescents with callous-unemotional traits were reported to have bullies, poor affect, and a general lack of emotional sensitivity and feeling for others (Zhang & Sha, 2024). This could lead to interpersonal alienation and a lack of cordial relationships with peers. Naturally, adolescents have the tendency to drift toward and prioritize peer relationships, and disruption of behavioral development may cause enormous crises for the adolescent (Eisenhut, 2023). The cordial relationship is important, especially for adolescents, because some pubertal changes that occur in their lives are confided in their peers (Eisenhut, 2023; Zhang & Sha, 2024). However, those manifesting callous-unemotional traits are avoided, and the consequences could affect the development of interpersonal skills, functioning, and overall wellbeing.

Additionally, manifestation of the trait could lead to labeling and social discrimination. One of the ways for the formation of social identity is through interpersonal relation (Frick, 2024). Therefore, when adolescents display callousness, unemotional, disregard for other persons' rights, poor affect, among others, they would be known for it and be treated in like manner (Vaughan et al., 2023). The consequences of an adolescents been known for such negative traits could be detrimental for their mental health, achievement, social and self-appraisal (Goagoses, Schipper & Koglin, 2023). It could equally lead to involvement in status offence (Vaughan et al., 2021), delinquent behavior (Nwafor et al., 2024), and other undesirable behaviours (Catone et al., 2021). Hence, there is urgent need to explore callous-unemotional trait, related factors and a phenomenon that could moderate its manifestation among adolescents in Nigeria.

One of the factors that play roles in adolescent behavior engagement is friends influence (Werner-Wilson & Arbel, 2000). Friends influence refers to the totality of pressure peers exert on adolescent to behave in a preferred way (Werner-Wilson & Arbel, 2000). It could be subtle or coercive pattern. Friends are important part of human development at different stages but most critical at adolescence (Werner-Wilson & Arbel, 2000). Friends contribute to the formation, sustenance and otherwise of behavioural patterns. According to Harris and Orth (2019) in-group conformity enhances subjective wellbeing, peer acceptance, confidence, self esteem, interpersonal relationship, and goal achievement. On the other hand, reduces anxiety, depression, shame and guilt (Flynn, 2018; Guroglu, 2022).

It is reported that the development of mental health wellbeing and psychopathologies may be dependent on friends' role in individual life (Guroglu, 2022). Friends influence cuts across different areas of life of individuals such as fashion, communication style, aggressive behavior, competitiveness, education pursuit and performance, future orientation, body image and general self-evaluation among others (Flynn, 2018).

The role and importance of friends were explained by socio-meter theory (Leary et al., 1995). The theory postulated that self-esteem is a product of social approval from others, which could serve as a gauge for interpersonal relationships. It further averred that the level of peer acceptance enjoyed by the adolescent in the in-group helps to deepen belongingness. Social approval is a product of conformity to in-group behavioral expectations, norms, and values (Leary et al., 1995). From the socio-meter theoretical standpoint, friends contribute enormously to behavioral displays and their mental health wellbeing. Additionally, social comparism theory (Festinger, 1954) maintains that individuals have the tendency to compare themselves to others. Social comparism consisted of upward comparism (the tendency to compare oneself to an individual believed to be better than them) and downward comparism (comparing oneself to a person believed to be lower than oneself). Adolescents tend to compare friend compliance to peer group expectations, which may play a role in in-group respect (Flynn, 2018; Szvedo et al., 2024). Given the importance of friends in the lives of adolescents, there is a need to explore their role in the manifestation of callous and unemotional traits.

Also, social interaction refers to the totality of influences emanating from different agents of socialization that determine the manifestation of adolescent behaviors. Social factors that interact cut across parents, family, neighbourhood, school environment, peer groups, and other non-eventful issues that exert some influences on adolescents (Markowitz et al., 2001). According to Hope, Heimberg, and Turk (2019), social interaction refers to a mutually regulated process in which children and adolescents, on a second-by-second basis, communicate and respond to the relational intentions, needs, and meanings of others. All the factors that play a role in adolescents' training influence them individually and jointly with other factors. The joint role was conceptualized as a meso-system, and Bronfenbrenner (1979) maintained that it has a powerful influence on children's and

adolescents cognitive and behavioral development. In addition, social norms and values are easily inculcated in children and adolescents through social interaction. According to Vygotsky (1979), the interface of different social factors of socialization enhances childhood and adolescents' development and the attainment of the zone of proximal development.

The moderating role of neighborhood characteristics, which was conceptualized as neighborhood disorder in the present study was assessed. Neighborhood disorder is characterized by signs of physical blight, like broken windows or trash in the street, as well as social signs of disorganization, such as people arguing in the street or groups of unsupervised adolescents congregating in public spaces (Wojciechowski, 2020). Some research findings have shown that neighborhood disorder is a risk factor for engagement in criminal behaviours (Elliott, Dupéré, & Leventhal, 2015; O'Brien & Sampson, 2015; Ross & Mirowsky, 1999; Walters, 2016). Neighborhood disorder may have consequences for individuals, reducing individual well-being and increasing fear, mistrust, isolation, anger, anxiety, and demoralization. It also may have consequences for communities, reducing socialites among neighbors, which further undermines social control and leads to more disorder in the neighborhood without intervention. Skogan (1990) argued that disorder ultimately will lead to the decline of the neighborhood development.

Ross and Mirowsky (1999) refer neighbourhood disorder as a lack of order and social control in the community. Order is a state of peace, safety, and observance of the law, and control is an act of maintaining this order. Order and control are indicated by visible cues that residents perceive. It also defines social disorder as signs indicating a lack of social control that involve people. Visible signs of social disorder include fights and trouble among neighbors and the presence of people hanging out on the streets, drinking, taking drugs, panhandling, and creating a sense of danger. Physical disorder refers to the overall physical appearance of a neighborhood. Places with high levels of physical disorder are noisy, dirty, and run down; many buildings are in disrepair or abandoned; and vandalism and graffiti are common (Yang et al., 2024). Physical disorder—such as litter, graffiti, and vandalism—also indicates that social control has broken down. Social and physical disorder are conceptualized on a continuum, with high levels of order on one end and

disorder on the other. Visible signs of order include a clean, safe, quiet neighborhood where buildings are in good repair, police protection is good, crime is low, neighbors watch out for one another, and not a lot of young people are hanging out (Gracia, 2021).

The impact of the environment on behavioral formation, manifestation, and sustenance is critical. This was explained by the ecological system theory of Bronfenbrenner (1979). Ecological systems are divided into five levels of environment (5): microsystem, mesosystem, exosystem, macrosystem, and chronosystem. According to Bronfenbrenner (1979), human development is the product of interaction between the growing human organism and environmental systems. The core tenet of the theory is that various systems are interconnected and interact to form and shape human behavior.

Current study

The present study explored the relationship between friend influence and social interaction on callous-unemotional traits and the moderating role of neighbourhood disorder. The study became expedient given the increasing exhibition of callous-unemotional traits by adolescents, as typified by constant gang-related killings, arson, mindless stealing, and other social vices perpetrated by adolescents in Anambra State, Nigeria. The population of Anambra State is about 7,299,910, and adolescents' population in the state is about 3,101,341 (microtrends, 2024). To this end, the following hypotheses were tested:

- Friends influence will significantly predict callous-unemotional traits among the participants.
- Social interaction will significantly predict callous and unemotional traits among the participants.
- Neighbourhood disorder will significantly predict callous-unemotional traits among the participants.
- Neighbourhood disorder will significantly moderate the relationship between friend influence and social interaction on callous-unemotional traits among the participants.

Methods

Participants

Three hundred and twenty-three (323) senior secondary school students were selected from six secondary schools in Awka, Anambra State, Nigeria. The ages of the participants ranged from 14 to 17 years, with a mean age of 15.03 and a standard deviation of 1.4, and their gender consisted of males 158 (48.9%) and females 165 (51.1%).

Instruments

Four instruments were used for data collection, and the cover page of each instrument has spaces for age, gender, and class of study.

The Parent and Peer Influence Scale

This is a 17-item scale with two subscales: eight (8) items measure parental influence, and nine (9) items measure friend influence. It was developed by Werner-Wilson and Arbel (2000). It is pertinent to note that the peer influence sub-scale was used in this study. It has a seven-point Likert pattern: 1 = disagree very much, 2 = disagree moderately, 3 = disagree slightly, 4 = neither agree nor disagree, 5 = agree slightly, 6 = agree moderately, and 7 = agree very much. The developers of the scale reported a Cronbach alpha coefficient of $\alpha = .94$. In the pilot study conducted by the present researcher, before the commencement of this study with 50 junior secondary school students in Awka, Anambra State, Nigeria, a Cronbach alpha coefficient of $\alpha = .92$ was found.

Social Interaction Scale

It contains twenty items that are scored in a four-point Likert response format. 0 = not at all characteristic or true of me, 1 = slightly characteristic or true of me; 2 = very characteristic or true of me; 4 = extremely characteristic or true of me. It was developed by Hope, Heimberg, and Turk (2019). The Cronbach Alpha of $\alpha = .90$ was reported by the developers of the scale, but a Cronbach Alpha of $\alpha = .88$ was found in a pilot study with 50 secondary students by the present researcher.

Neighbourhood Disorder Scale

It was developed by Rose and Mirowsky in 1999. It has two sub-scales of physical and social neighbourhood disorders, with a total of nine (9) items. While items 1, 2, 3, and 4 measured physical disorders, items 5 to 9 measured social disorders. The response pattern consists of a four-point Likert format: strongly disagree = 1, disagree = 2, agree = 3, strongly agree = 4. Rose and Mirowsky (1999) reported a Cronbach alpha reliability of .921, but .889 was obtained from a pilot study.

Callous-Unemotional traits

The construct was assessed with an anti-social process screening device. It was developed by Frick and Hare (2001). It contains twenty (20) items of self-reported measures. It has three main subscales, such as narcissism, impulsivity, and callous-unemotional. It has an original Cronbach alpha of $\alpha = .92$. The response pattern ranged from 0 = not all true, 1 = sometimes true, 2 = definitely true. A pilot study among Nigerian samples yielded a Cronbach alpha of $\alpha .89$.

Procedure/Ethical Consideration

The Nnamdi Azikiwe University Humanities and Social Sciences Ethical Committee approved the study. The ethical principles required the researcher to ensure that informed consent was obtained before the commencement of the study, the freedom of participants to withdraw at any time during the study, freedom from coercion, and the utmost confidentiality of the information supplied by the participants and the information to be used for research purposes only. The researcher undertook to abide by the rules. Additionally, the school administrators of the selected schools were adequately informed about the aims, objectives, and relevance of the study. They gave approval for the administration of the questionnaires to the senior class students. Two research assistants were recruited and participated in the data collection. Sixty-five (65) participants were selected from each of the five participating secondary schools. The selected students were addressed in the classrooms, and a total of three hundred and twenty-five (325) copies of

questionnaires were administered, but three hundred and twenty-three were properly filled out and returned, hence being used for the analyses.

Design and Statistical Analysis

It is cross sectional survey design, and the moderated regression statistics model 1 of conditional process analysis (Hayes, 2013) was used for data analysis. The model one enables one factor to be used one at a time to moderate the relationship. The dependent variable for the study was callous-unemotional traits; the independent variables were friend influence and social interaction. Neighbourhood disorder was the moderator.

Results

The results of descriptive parameters such as mean, standard deviation, and skewness scores of the factors of the study showed that the data was robust and acceptable to continue with further analysis (see table 1).

Table 1, Descriptive and zero-order correlation results.

S/NO	Factors	M	Std. Deviation	Skewness	1	2	3	4
1	Callous-unemotional traits	7.21	2.65	-.23	1			
2	Friends Influence	16.97	10.5	1.9	-.314**	1		
3	Social Interaction	33.9	14.5	1.0	.326**	.344**	1	
4	Neighbourhood Disorder	28.5	6.1	2.8	.171*	.207*	.304	1

*= $p < .05$, **= $p < .01$

The correlation results showed that callous-unemotional traits significantly and negatively correlated with friends influence $r = -.314$, $P < .01$, but positively correlated with social interaction $r = .326$, $P < .001$ and neighbourhood disorder $r = .171$, $p < .05$ respectively.

Table 2, moderation result of neighbourhood disorder on relation between social interaction and friends influence on callous-unemotional traits.

Variables	R ²	Df1(Df2)	F	Estimate	SE	T	LLCI	ULCI
Model	.039	4(319)	4.31					
Social interaction (A)				.297**	.107	3.56	.097	.497
Friends' influence (B)				-.176*	.102	2.20	-.378	-.401
Neighbourhood disorder (C)				.183*	.104	3.1	.388	.431
A*C				.194**	.13	3.18	.109	.471
B*C				.135	.12	1.51	-.051	.322

The moderation regression analyses showed that the value of the adjusted r^2 was .39, $F(4.31)$. The result further showed that a unit increase in social interaction increased the callous-unemotional traits Beta estimate $\beta = .297$, $p < .01$. Also, a unit increase in friends influence decreased callous-unemotional traits Beta estimate $\beta = -.176$, $p < .05$. Similarly, a unit increase in neighbourhood disorder increased callous-unemotional traits Beta estimate $\beta = .183$, $p < .02$. Interestingly, neighbourhood disorder moderated relation between social interaction and callous-unemotional traits Beta estimate $\beta = .194$, $p < .01$. However, neighbourhood disorder did not moderate relationship between friends influence and callous-unemotional traits Beta estimate $\beta = .135$, $p < .11$.

Discussion and Conclusion

The aim of the study was to examine the moderating effects of neighborhood disorder on relationships between friends' influence and social interaction on callous-unemotional traits among adolescents in Awka.

The result of the first hypothesis showed that friends influence significantly and negatively predicted callous-unemotional traits. The result is in tandem with the previous findings (Flynn, 2018; Frick, 2024; Goagoses, Schipper, & Koglin, 2023; Vaughan et al., 2023). For instance, Flynn (2023) argued that friends are an objective mirror to assess an individual tendency, especially in adolescence. Thus, it would propel them to hide the callous-

unemotional attributes. Because friendship is important for adolescents' development, any behavior that seems to disrupt interpersonal cordiality should be avoided. Friends provide the emotional and social succor needed to navigate the prevalent identity crisis of adolescence.

Secondly, the hypothesis, which stated that social interaction will significantly and positively predict callous-unemotional traits, was accepted. The result is in accordance with the previous findings (Facci, 2023; Markowitz et al., 2019). The result further strengthened ecological systems theory (Bronfenbrenner, 1979), which postulated the impact of the social environment on behavior formation and manifestation. The theory specifically averred that the interaction of different levels of the environment or agents of socialization (the mesosystem) is a powerful mechanism of behavior development. Thus, there is a positive relationship between social interaction and neighbourhood disorder.

The third hypothesis, which stated that neighbourhood disorder will significantly and positively predict callous-unemotional traits, was accepted. The present study corroborates the findings of Gracia (2021; Wojciehowki, 2020; Yang et al., 2024), which stated that environment can potentiate some behaviors in individuals. The prevailing environmental condition plays a strong role in behavior manifestation or otherwise (Bronfenbrenner, 1979).

Also, it was hypothesized that neighbourhood disorder would moderate the relationship between social interaction and callous-unemotional traits. The finding confirms the hypothesis. Neighbourhood disorder is related to callous-unemotional traits such that it potentiates its manifestation. The previous findings (Sakki et al., 2023; Simmons, Mitchell-Adams, & Baskin-Sommers, 2022) showed that neighbourhood disorder has a serious impact on behavior development. However, neighbourhood disorder did not moderate the relationship between friends' influence and callous-unemotional traits. Friendship influence has a negative relationship with callous-unemotional traits, such that the addition of neighbourhood disorder would completely eliminate the effect of callous-unemotional traits. Some previous findings (Guroglu, 2022; Szwedo et al., 2024) stated that friends'

influence is a protective factor against the development and manifestation of psychopathologies.

Limitations of the Study

There are two key limitations to the study. The data were collected from participants using a cross-sectional survey design (that is, the collection of data once). This could not allow checking causality. Longitudinal design gives room for data comparison and ensures robustness in finding. Secondly, the self-report measure was used solely for data collection, and given the sensitivity of the dependent variable, some participants may not respond truthfully. Thus, it could cause bias.

Implications of the Findings

The study has practical implications for the role of friends in mitigating the manifestation of callous and unemotional traits among adolescents. Even in a disorganized or disordered environment, friends' influence is a powerful factor in the management of callous-unemotional traits. Also, the finding should be an eye-opener for some parents and guardians who are worried when their adolescents relate to their friends. Rather, parents should encourage their adolescents to establish friendships with their age-mates because of the positive impact it has on their adaptive behaviors and overall development. Theoretically, the study has yielded additional empirical literature from a low-income country. The finding has equally strengthened ecological systems theory by Bronfenbrenner (1979).

Conclusion

The results of the exploration of the moderating role of neighbourhood disorder on the relation between friends' influence and social interaction on callous-unemotional traits among adolescents showed that friends' influence is a protective factor against maladaptive behaviors. Importantly, a disordered environment or neighborhood disorder does not have any contribution to the mechanism through which friends influence callous-unemotional behavior. Experts and researchers working on maladaptive behaviors such as

callous-unemotional traits should prioritize and promote making friends among peers as an intervention model for prevention and management. Other studies should endeavor to explore other factors and mechanisms through which callous-unemotional traits among adolescents could be prevented or managed.

Conflict of interest declaration

The author hereby declares no conflict of interest.

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Data availability statement

The dataset for the study is available with the author on a reasonable request.

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