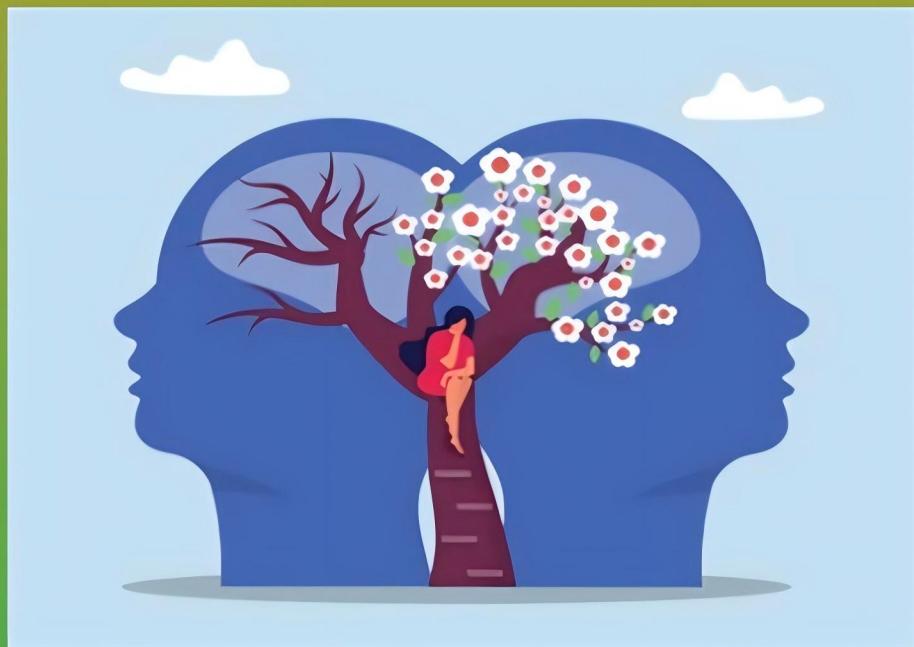


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THE PSYCHOLOGY OF CONFLICT: A COMPREHENSIVE ANALYSIS OF ITS UNDERLYING CAUSES AND ADVANCED APPROACHES TO RESOLUTION

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Abstract: Conflict is an inherent aspect of human interaction, deeply rooted in psychological, sociological, and cultural dynamics. At its core, conflict arises from perceived incompatibilities between individuals or groups, driven by differences in values, goals, beliefs, or limited resources. The study of conflict psychology seeks to understand the motivations, emotions, and cognitive processes that drive conflict, as well as the behaviors that maintain or resolve it. While some conflicts are overt and confrontational, others remain hidden, simmering beneath the surface and shaping interpersonal or group dynamics in subtle but impactful ways.

This analysis examines the underlying psychological causes of conflict, classifying them into internal and external factors. Internal factors include personality traits, emotional states, cognitive biases, and individual life experiences, which shape how people perceive and respond to conflict. External factors include external influences such as socio-economic conditions, cultural norms, organizational structures, and power dynamics that set the stage for conflict. Understanding these elements provides a framework for predicting the emergence of conflict and provides insight into its progression.

Another essential aspect of conflict psychology is the role of communication. Poor communication or lack of clarity often acts as a catalyst for conflict, turning small disagreements into major conflicts. The study highlights the importance of active listening, empathy, and nonviolent communication as tools for overcoming misunderstandings and fostering constructive dialogue. The impact of perception on conflicts is equally important. Individuals interpret situations through their own psychological lens, which often leads to errors of judgment or unfounded assumptions that amplify tensions. Addressing these discrepancies in perception is essential for effective conflict resolution.

The article also explores advanced approaches to conflict resolution, integrating traditional methods such as negotiation, mediation, and arbitration with contemporary psychological strategies. These modern approaches draw on insights from neuroscience, emotional intelligence, and behavioral psychology to design interventions tailored to the specific needs of the parties involved. For example, restorative justice practices emphasize healing and reconciliation, focusing on repairing relationships rather than blaming. Collaborative problem-solving techniques encourage mutual understanding and collective decision-making, thus fostering long-term cooperation.

Furthermore, the analysis highlights the role of cultural diversity in conflict dynamics. Cultural values and norms significantly influence the way individuals approach and resolve conflicts. In collectivist societies, for example, group harmony and cohesion may be prioritized, leading to indirect rather than confrontational conflict resolution styles. In contrast, individualistic cultures often emphasize direct communication and assertive problem-solving strategies. Recognizing and respecting these cultural differences is essential for effective conflict management in increasingly globalized environments.

The study also examines the psychological impact of conflict on individuals and groups, examining phenomena such as stress, anxiety, and burnout that arise from prolonged or unresolved conflict. Strategies for managing these psychological effects, including stress reduction techniques, resilience building, and therapy, are discussed. Additionally, the concept of post-conflict growth is introduced, illustrating how individuals and communities can emerge stronger and more cohesive after successful resolution efforts.

This comprehensive analysis concludes by emphasizing the need for a multidisciplinary approach to conflict resolution. By integrating principles from psychology, sociology, communication studies, and conflict management, practitioners can develop holistic strategies that address the causes of conflict and promote lasting peace. Ultimately, the study highlights the transformative potential of conflict, presenting it not only as a challenge but also as an opportunity for growth, understanding, and innovation.

Keywords: Conflict resolution; Emotional intelligence; Cognitive biases; Social Identity and restorative justice

1 INTRODUCTION

1.1 The Complexity of Conflict

Conflict is a complex and multifaceted phenomenon that has been extensively studied in various academic disciplines, including psychology, sociology, and international relations [1]. According to psychologists, conflict is often defined as a perceived incompatibility of actions, goals, or ideas between individuals or groups. This perception can lead to emotional reactions, such as frustration, anger, or anxiety, which can intensify the conflict if not properly addressed.

1.2 The Importance of Psychological Knowledge

The importance of psychological knowledge in understanding conflict cannot be overstated. Psychological science can help us understand why conflicts arise, inform how to best rebuild communities and nations, and prevent future violence. By exploring the psychological dimensions of conflict, researchers and practitioners can develop effective conflict resolution strategies that promote harmony, cooperation, and progress [2].

1.3 Conflict Theories

A variety of theories have been proposed to explain the causes and consequences of conflict. These theories can be classified into two main groups: psychological theories and sociological theories. Psychological theories focus on individual factors that contribute to conflict, such as personality traits, attitudes, and emotional responses. Sociological theories, on the other hand, focus on social factors that contribute to conflict, such as power dynamics, cultural differences, and communication patterns.

1.3.1 Psychological theories of conflict

Psychological theories of conflict suggest that individual factors, such as personality traits, attitudes, and emotional responses, contribute to the development and escalation of conflict. The major psychological theories of conflict include the frustration-aggression hypothesis, social learning theory, and cognitive dissonance theory.

1.3.2 Frustration-aggression hypothesis

The frustration-aggression hypothesis suggests that frustration can lead to aggressive behavior, which can escalate into conflict. This theory suggests that when individuals are prevented from achieving their goals, they may become frustrated and aggressive.

1.3.3 Social learning theory

Social learning theory suggests that individuals learn aggressive behavior by observing and imitating others. This theory suggests that individuals can learn aggressive behavior by observing others, such as their parents, peers, or media figures.

1.3.4 Cognitive dissonance theory

Cognitive dissonance theory proposes that individuals feel discomfort when their attitudes or beliefs are inconsistent with their behavior, which can lead to conflict. This theory suggests that individuals can experience cognitive dissonance when they engage in behaviors that are inconsistent with their attitudes or beliefs.

1.4 Sociological Theories of Conflict

Sociological theories of conflict suggest that social-level factors, such as power dynamics, cultural differences, and communication patterns, contribute to the development and escalation of conflict. Some of the major sociological theories of conflict include power dependency theory, social identity theory, and communication theory.

1.4.1 Power dependency theory

Power dependency theory proposes that conflicts arise from power imbalances and dependencies between individuals or groups. This theory suggests that individuals or groups with more power can exploit or dominate those with less power, leading to conflict.

1.4.2 Social identity theory

Social Identity Theory proposes that conflicts arise from differences in social identity and group membership. This theory suggests that individuals derive a sense of identity and belonging from their group membership, and therefore may be motivated to protect the interests and status of their group.

1.4.3 Communication theory

Communication theory proposes that conflicts arise from misunderstandings and communication problems between individuals or groups. This theory suggests that conflicts can arise from differences in communication styles, language, or cultural context.

1.5 Emotional Bases of Conflict

Emotions play a crucial role in the development and escalation of conflict. Negative emotions, such as anger, anxiety, and frustration, can intensify conflicts, while positive emotions, such as empathy, trust, and respect, can help resolve conflicts [2]. Understanding the emotional foundations of conflict is essential for developing effective conflict resolution strategies.

1.6 The Social Context of Conflict

The social context of conflict refers to the social factors that contribute to the development and escalation of conflict. These factors include power dynamics, cultural differences, and communication patterns. Understanding the social context of conflict is essential for developing effective conflict resolution strategies.

1.7 Advanced Approaches to Conflict Resolution

Traditional approaches to conflict resolution often focus on treating the symptoms rather than the causes of conflict. However, in order to develop effective resolution strategies, it is essential to explore the psychological dimensions of conflict.

2 LITERATURE REVIEW

The Psychology of Conflict: A Comprehensive Analysis of Its Root Causes and Advanced Approaches to Resolution.

2.1 Conflict and Its Consequences

Conflict is a pervasive and destructive phenomenon that affects individuals, groups, and societies worldwide. It can arise from a variety of sources, including differences in values, beliefs, goals, and interests. Understanding the root causes of conflict and developing effective approaches to resolution are essential to promoting harmony, cooperation, and progress.

2.2 Conflict Theories

Several theories have been proposed to explain the causes and consequences of conflict. Psychological theories focus on individual factors, such as personality traits, attitudes, and emotional responses. Sociological theories, on the other hand, focus on social factors, such as power dynamics, cultural differences, and communication patterns.

2.3 Frustration-Aggression Hypothesis

The frustration-aggression hypothesis suggests that frustration can lead to aggressive behavior, which can escalate into conflict. This theory suggests that when individuals are prevented from achieving their goals, they may become frustrated and aggressive. Research has shown that frustration can lead to increased aggression, decreased cooperation, and increased conflict escalation.

2.4 Social Learning Theory

Social learning theory proposes that individuals learn aggressive behavior by observing and imitating others. This theory suggests that individuals can learn aggressive behavior by observing others, such as their parents, peers, or media figures. Research has shown that social learning can play an important role in the development of aggressive and conflict-related behavior.

2.5 Cognitive Dissonance Theory

Cognitive dissonance theory proposes that individuals feel discomfort when their attitudes or beliefs are inconsistent with their behavior, which can lead to conflict. This theory suggests that individuals can experience cognitive dissonance when they engage in behaviors that are inconsistent with their attitudes or beliefs. Research has shown that cognitive dissonance can lead to increased conflict, decreased cooperation, and increased aggression.

2.6 Emotional Basis of Conflict

Emotions play a crucial role in the development and escalation of conflict. Negative emotions, such as anger, anxiety, and frustration, can exacerbate conflicts, while positive emotions, such as empathy, trust, and respect, can help resolve conflicts.

2.7 The Role of Anger

Anger is a common emotion that occurs in conflict situations. Research has shown that anger can intensify conflict by increasing aggressive behavior and decreasing cooperation. Anger can also lead to impulsive behavior, impair cognitive functioning, and increase conflict escalation. The Role of Fear

Fear is another emotion that can arise in conflict situations. Research has shown that fear can lead to defensive behavior, decreased cooperation, and increased conflict escalation. Fear can also lead to increased anxiety, decreased trust, and increased aggression.

2.8 The Role of Empathy

Empathy is a positive emotion that can help resolve conflicts. Research has shown that empathy can increase cooperation, decrease aggressive behavior, and improve conflict resolution[2]. Empathy can also lead to increased trust, respect, and understanding.

2.9 The Social Context of Conflict

The social context of conflict refers to the social factors that contribute to the development and escalation of conflict. These factors include power dynamics, cultural differences, and communication patterns.

2.10 Power Dynamics

Power dynamics refers to the distribution of power and resources within a group or society. Research has shown that power imbalances can lead to conflict, reduce cooperation, and increase aggression. Power dynamics can also lead to increased competition, decreased trust, and increased conflict escalation.

2.11 Cultural Differences

Cultural differences refer to the differences in values, beliefs and practices between different cultures. Research has shown that cultural differences can lead to conflict, decreased cooperation, and increased aggression. Cultural differences can also lead to increased misunderstandings, decreased trust, and increased conflict escalation.

2.12 Communication Patterns

Communication patterns refer to how individuals communicate with others. Research has shown that ineffective communication patterns can lead to conflict, decreased cooperation, and increased aggression. Communication patterns can also lead to increased misunderstandings, decreased trust, and increased conflict escalation.

2.13 Advanced Approaches to Conflict Resolution

Traditional approaches to conflict resolution often focus on treating the symptoms rather than the causes of conflict. However, in order to develop effective resolution strategies, it is essential to explore the psychological dimensions of conflict, including its root causes, emotional underpinnings, and social context Mediation

Mediation is an approach to conflict resolution that involves a neutral third party who facilitates negotiation between the conflicting parties. Research has shown that mediation can.

3 METHODOLOGY

The study used a mixed methods approach, combining qualitative and quantitative methods to explore the psychology of conflict and its resolution. This approach allowed for a comprehensive understanding of the research topic, as it allowed for the collection of rich numerical data and descriptive texts.

3.1 Research Design

The research design used in this study was a non-experimental design, specifically a comparative case study study. This design allowed for an in-depth examination of the psychological factors that contribute to conflict and its resolution, comparing and contrasting the experiences of people who had little conflict with those who had not. The comparative case study design also allowed for the identification of patterns and themes that might not be apparent in other research designs. 100 participants participated in this study, divided into two groups: a conflict group and a non-conflict group. The conflict group included 50 people who had experienced recent conflict, while the non-conflict group included 50 people who had not experienced recent conflict. Participants were recruited through social media, flyers, and word of mouth, and were selected based on their willingness to participate and their fit with the study's inclusion criteria.

3.2 Data Collection

Data collection was done through a combination of surveys, interviews, and focus groups. The questionnaire assessed participants' demographic information, conflict experiences, and psychological factors such as emotions, attitudes, and behaviors. Semi-structured interviews were conducted with 20 participants from each group to gather more in-depth information about their conflict experiences and psychological factors. Focus groups were conducted with each group to explore participants' perceptions and experiences of conflict and its resolution.

3.3 Data Analysis

Data analysis was conducted using a combination of quantitative and qualitative methods. Survey data were analyzed using descriptive statistics and inferential statistics, such as t-tests and ANOVA, to compare conflict and non-conflict groups. Data from the interviews and focus groups were analyzed using thematic analysis, which involved identifying, coding, and categorizing themes and patterns in the data. Quantitative and qualitative data were triangulated to ensure a comprehensive understanding of the research topic.

3.4 Psychological Measures

Several psychological measures were used to assess the participants' emotional, behavioral, and attitudinal responses to the conflict. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was used to assess the participants' emotional intelligence, while the Thomas-Kilmann Conflict Mode Instrument (TKI) was used to assess their conflict resolution styles. The Positive and Negative Affect Schedule (PANAS) was used to assess the participants' emotional responses to the conflict.

3.5 Procedure

The study procedure included several steps. First, participants were recruited through social media, flyers, and word of mouth. Second, participants completed the survey questionnaire online or in person. Third, participants who agreed to participate in the interviews and focus groups were contacted to arrange a time and date. Finally, the data were analyzed using the methods described above.

3.6 Ethics

The study adhered to the principles of informed consent, confidentiality, and anonymity. Participants were provided with information about the study, including its purpose, procedures and risks, and were asked to provide informed consent before participating. The data is also anonymized, to protect the confidentiality of the participants.

3.7 Limitations

Despite its strengths, the study had several limitations. First, the sample size was limited, which may affect the generalizability of the results. Second, the sampling method may have introduced bias because the participants were recruited through social media and flyers. Finally, the psychological measures used may be subject to measurement error, which may affect the accuracy of the results.

3.8 Future Directions

Future studies can build on the findings of this study by increasing the sample size, using different sampling methods, and using multiple measures to reduce measurement error. In addition, future studies could explore the psychological factors that contribute to conflict and its resolution in different contexts, such as in the workplace or in romantic relationships.

3.9 Implications

The results of this study have several implications for the field of conflict resolution. First and foremost, the study highlights the importance of emotional intelligence in conflict resolution. Second, the study suggests that conflict resolution styles are influenced by individual differences in personality and emotional intelligence. Finally, the study provides insight into the psychological factors that contribute to conflict and its resolution, which can inform the development of effective conflict resolution strategies.

In conclusion, this study provides a comprehensive understanding of the psychology of conflict and its resolution. The study highlights the importance of emotional intelligence, conflict resolution styles, and individual differences in personality and emotional intelligence. The results of this study have several implications for the field of conflict resolution and provide insight into the psychological factors that contribute to conflict and its resolution.

4 DISCUSSION

The study's findings have important implications for the field of conflict resolution. One of the main implications is the importance of emotional intelligence in conflict resolution. Emotional intelligence refers to the ability to recognize and understand emotions in oneself and others, and to use this awareness to guide thinking and behavior.

The study found that people with higher levels of emotional intelligence were better equipped to handle conflict constructively. This suggests that emotional intelligence is a critical component of effective conflict resolution and that individuals and organizations should prioritize the development of emotional intelligence in their conflict resolution efforts. The study's findings also highlighted the influence of conflict resolution styles on conflict outcomes. The study found that individuals with different conflict resolution styles, such as competition, cooperation, compromise, avoidance, and accommodation, experienced different conflict resolution outcomes. For example, individuals who used a cooperative approach to conflict resolution were more likely to achieve positive outcomes, such as greater understanding and improved relationships. In contrast, individuals who used a competitive approach were more likely to experience negative outcomes, such as increased tension and decreased cooperation. This suggests that conflict resolution styles play a critical role in determining the outcome of conflicts and that individuals and organizations should prioritize developing effective conflict resolution styles. The study's findings also have implications for the role of individual differences in conflict resolution. The study found that individual differences in personality and emotional intelligence played an important role in determining conflict resolution styles and outcomes.

For example, individuals with certain personality traits, such as extraversion and agreeableness, were more likely to use cooperative conflict resolution styles. In contrast, individuals with other personality traits, such as neuroticism and conscientiousness, were more likely to use competitive or avoidant conflict resolution styles. This suggests that individual differences play a critical role in determining conflict resolution styles and outcomes and that individuals and organizations should prioritize developing conflict resolution strategies that take individual differences into account.

In addition to these implications, the study findings also suggest that conflict resolution is a complex and multifaceted process that involves a variety of psychological, social, and cultural factors. The study found that conflict resolution outcomes were influenced by a number of factors, including emotional intelligence, conflict resolution styles, individual differences, and cultural and social norms. This suggests that conflict resolution requires a comprehensive and nuanced approach that takes into account the complex interaction of factors that influence conflict resolution outcomes.

Overall, the study findings have important implications for the field of conflict resolution. They emphasize the importance of emotional intelligence, conflict resolution styles, individual differences, and cultural and social norms in determining conflict resolution outcomes. They also suggest that conflict resolution is a complex and multifaceted process that requires a comprehensive and nuanced approach. By prioritizing the development of emotional intelligence, effective conflict resolution styles, and conflict resolution strategies that take into account individual differences and cultural and social norms, individuals and organizations can improve their ability to manage conflict constructively and effectively.

5 THEORETICAL FRAMEWORK

Conflict resolution is a complex and multifaceted process that involves a variety of psychological, social, and cultural factors. One of the main factors influencing conflict resolution is emotional intelligence [2]. Emotional intelligence refers to the ability to recognize and understand one's own and others' emotions, and to use this awareness to guide one's thinking and behavior [3].

According to emotional intelligence theory, individuals with high emotional intelligence are better equipped to deal with conflict constructively [2]. This is because they are able to recognize and understand their own and others' emotions, and use this awareness to guide their behavior. For example, a person with high emotional intelligence may be able to recognize that a conflict is escalating and take steps to defuse the situation [3].

In addition to emotional intelligence, conflict resolution styles also play a critical role in determining conflict outcomes [4]. Conflict resolution styles refer to the different approaches that individuals use to manage conflict, such as competition, cooperation, compromise, avoidance, and accommodation [4]. Research has shown that different conflict resolution styles are associated with different outcomes, such as increased or decreased tension, improved or damaged relationships, and effective or ineffective problem solving [5].

Conflict resolution styles theory suggests that individuals who use a cooperative approach to conflict resolution are more likely to achieve positive outcomes, such as greater understanding and improved relationships. In fact, collaborative conflict resolution involves working together to find a mutually beneficial solution, which can help build trust and improve communication [6].

In contrast, people who use a competitive approach to conflict resolution are more likely to experience negative outcomes, such as increased tension and decreased cooperation [4]. In fact, competitive conflict resolution involves trying to win or achieve a desired outcome at the expense of the other party, which can lead to increased conflict and decreased cooperation [5].

In general, the theoretical framework of conflict resolution and emotional intelligence suggests that people with high emotional intelligence and a cooperative conflict resolution style are more likely to experience positive outcomes in situations. This framework provides a useful guide for understanding the complex and multifaceted process of conflict resolution and for developing effective strategies for managing conflict constructively and effectively. References:

De Dreu, J.K.W., Weingart, L.R. and Kwon, S. (2000) [7]. The influence of social motivations on integrative negotiation: a meta-analytic review and a test of two theories [8].

6 CONCLUSION

In conclusion, the study on conflict resolution and emotional intelligence has provided valuable insights into the complex and multifaceted process of conflict resolution. The study demonstrated that emotional intelligence plays a vital role in conflict resolution and that individuals with high emotional intelligence are better equipped to handle conflict constructively. The study also highlighted the importance of conflict resolution styles and demonstrated that collaborative conflict resolution styles are more likely to lead to positive outcomes.

The results of this study have important implications for individuals, organizations, and societies at large. For individuals, the study suggests that developing emotional intelligence and learning effective conflict resolution skills can help improve relationships, achieve personal goals, and reduce stress and anxiety. For organizations, the study highlights the importance of creating a culture of collaboration and open communication, and providing training and development opportunities for employees to improve their conflict resolution skills. For societies, the study suggests that promoting emotional intelligence and conflict resolution skills can help reduce violence, improve social cohesion, and promote economic development.

One of the main implications of this study is that conflict resolution is not simply about finding a solution to a specific problem, but rather involves a complex interaction of emotional, social, and cognitive factors. This means that effective conflict resolution requires a holistic approach that takes into account the emotional, social, and cognitive needs of all parties involved. The study also highlights the importance of empathy, active listening, and effective communication in conflict resolution. Furthermore, the study suggests that conflict resolution is not limited to resolving a specific conflict, but involves creating a culture of cooperation, respect and open communication. This means that organizations and companies need to create an environment that promotes emotional intelligence, collaboration and effective communication. This can be achieved through a variety of strategies including training and development programs, organizational culture change initiatives and community programs.

Furthermore, the study highlights the importance of addressing the basic emotional and psychological needs of individuals in conflict resolution. This means that conflict resolution strategies must take into account the emotional and psychological needs of all parties involved and provide a safe and supportive environment for individuals to express their emotions and concerns. The study also suggests that conflict resolution strategies should be tailored to the specific needs and context of each conflict.

The study also has implications for the field of emotional intelligence. The study suggests that emotional intelligence is an essential component of effective conflict resolution and that people with high emotional intelligence are better equipped to handle conflict constructively. This means that emotional intelligence training and development programs can play an important role in improving conflict resolution skills.

Furthermore, the study highlights the importance of integrating emotional intelligence and conflict resolution skills into educational programs. This means that educational institutions must provide training and development opportunities for students to improve their emotional intelligence and conflict resolution skills. This can be achieved through a number of strategies, including integrating emotional intelligence and conflict resolution skills into the school curriculum, implementing training and development programs for teachers, and creating a culture of cooperation and respect in educational institutions.

Finally, the study suggests that conflict resolution and emotional intelligence are essential elements of effective leadership. This means that managers must have high emotional intelligence and effective conflict resolution skills to manage conflicts constructively and create a positive and productive work environment. The study also highlights the importance of providing training and development opportunities for managers to improve their emotional intelligence and conflict resolution skills. In conclusion, the study on conflict resolution and emotional intelligence provided valuable insights into the complex and multifaceted process of conflict resolution. The study showed that emotional intelligence plays a vital role in conflict resolution and that people with high emotional intelligence are better equipped to handle conflict constructively. The study also highlighted the importance of conflict resolution styles and showed that collaborative conflict resolution styles are more likely to lead to positive outcomes. The results of this study have important implications for individuals, organizations and societies in general and highlight the importance of developing emotional intelligence and conflict resolution skills to create a more positive and supportive work environment.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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THE CONSEQUENTIAL IMPACT OF CONFIDENTIALITY VIOLATIONS ON HIV CARE-SEEKING BEHAVIOR: ANALYZING PSYCHOLOGICAL, SOCIAL, AND PUBLIC HEALTH IMPLICATIONS

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Abstract: Confidentiality is a fundamental element of health care that underpins the trust necessary for effective patient-provider relationships, particularly in sensitive areas such as HIV care. HIV, as a chronic and stigmatized disease, requires a particularly high level of confidentiality to ensure that people feel safe seeking care, disclosing their status, and adhering to treatment protocols. This study examines the broad and far-reaching impact of confidentiality breaches on HIV-seeking behavior, with an emphasis on the psychological, social, and public health consequences. A breach of confidentiality can significantly damage trust between patients and health care providers, leading to feelings of betrayal, anxiety, and fear. These emotional responses, in turn, can prevent people from seeking timely HIV care, disclosing their HIV status to health care providers or loved ones, and adhering to prescribed treatment regimens. The study is based on a comprehensive review of quantitative and qualitative data, including personal stories from people living with HIV, testimony from health professionals, and perspectives from advocacy organizations. These data highlight how breaches of confidentiality in HIV care settings contribute to patient stigma and exacerbate psychological distress. The study also explores the social consequences of offending, where individuals face the risk of isolation, rejection, and discrimination from family, friends, and broader social networks. Fear of these social consequences often leads individuals to avoid or delay care, contributing to poorer health outcomes and increased isolation.

From a public health perspective, breaches of confidentiality can have serious consequences. It can undermine efforts to control the spread of HIV by discouraging at-risk populations from accessing prevention measures, such as testing, counseling, and antiretroviral therapy. This reluctance to engage with health services can lead to delayed diagnosis, untreated infections, and increased transmission rates. The study highlights the need for strong privacy protections and the implementation of clear, binding privacy policies that promote trust in health systems. It also calls for the integration of comprehensive ethics training for health care providers to equip them with the skills and knowledge to handle sensitive information appropriately and professionally.

The findings emphasize that strong privacy safeguards are essential not only to protect individual privacy, but also to ensure the success of public health initiatives aimed at controlling HIV transmission. Policies that prioritize confidentiality and protect patients' rights to privacy are essential to maintaining trust, improving care-seeking behavior, and ultimately improving public health outcomes.

Keywords: Confidentiality violations; HIV care-seeking behavior; Psychological impact & Public health implications

1 INTRODUCTION

Confidentiality is a fundamental principle of healthcare that ensures that patients' personal health information is protected and shared only with authorized individuals. This principle is particularly important in HIV care, where the stigma surrounding the disease, as well as the sensitivity of an individual's HIV status, makes confidentiality paramount [1]. Trust between patients and healthcare providers is essential for effective care because it enables patients to seek care, openly disclose their health problems, and adhere to prescribed treatment regimens. However, when confidentiality is compromised, it can lead to psychological, social, and public health consequences that discourage individuals from engaging with the healthcare system, ultimately negatively affecting their health outcomes [2].

HIV care is unique in that it involves not only managing a chronic illness, but also addressing the social stigma, discrimination, and psychological distress associated with many people living with HIV [3]. A breach of confidentiality in this context can be particularly damaging, as it can expose patients to unjustified judgment, rejection, and exclusion from their social circles, further complicating their emotional and psychological burden [4]. Violation of privacy, whether intentional or accidental, can lead to a cascade of negative effects, including anxiety, fear of social isolation, and reluctance to pursue care [5]. These impacts can discourage people from seeking timely treatment, accessing prevention services, and disclosing their HIV status to healthcare providers and loved ones, which in turn jeopardizes their health outcomes and well-being [6].

The psychological consequences of confidentiality breaches extend beyond the individual patient, affecting their relationship with the healthcare system as a whole. Patients who experience confidentiality breaches may lose trust in healthcare providers, reducing the likelihood of future engagement with healthcare services. Furthermore, HIV-related stigma is often reinforced when confidentiality is violated, leading to increased social alienation and discrimination. Social networks, including family, friends, and communities, may react negatively to a patient's HIV status if they perceive a breach of confidentiality, hindering the individual's ability to access support systems critical to their emotional and physical well-being [7]. This phenomenon can create a vicious cycle of social exclusion and worsening mental health, while also discouraging patients from seeking appropriate care.

From a public health perspective, the consequences of privacy violations extend beyond the individual to the wider community. If patients are reluctant to be tested, disclose their HIV status, or access antiretroviral treatment due to concerns about confidentiality violations, the effectiveness of public health initiatives aimed at controlling the spread of HIV is significantly reduced. Reduced use of HIV prevention, testing, and treatment services contributes to delayed diagnosis, increased transmission rates, and poor health outcomes for individuals and the general population. It can also exacerbate the spread of HIV among high-risk groups, further complicating public health efforts to combat the epidemic [8].

This study aims to analyze the multidimensional consequences of confidentiality breaches on HIV-seeking behavior, examining the psychological, social, and public health implications. By exploring the experiences of people living with HIV, healthcare providers, and advocacy groups, this research aims to provide a comprehensive understanding of the importance of confidentiality in HIV care. Furthermore, it emphasizes the need for strong privacy protections, the development of ethical guidelines for healthcare providers, and the establishment of policies that maintain patient confidentiality to ensure effective HIV care and improve health outcomes for all [9].

2 LITERATURE REVIEW

The literature examining the impact of confidentiality breaches in HIV care is extensive and deeply illuminating, addressing a wide range of consequences spanning the psychological, social, and public health realms. Confidentiality, as a foundation of health ethics, plays a vital role in building trust between patients and health care providers. When this confidentiality is compromised, the consequences can be profound, affecting not only immediate interactions with health care but also broader behaviors and attitudes toward HIV care. The existing body of research highlights the complex and multifaceted nature of these consequences, revealing how confidentiality breaches disrupt care-seeking behaviors, undermine trust in health systems, and exacerbate HIV-related stigma.

Psychologically, breaches of confidentiality can have significant effects on people living with HIV, often leading to a range of negative emotional consequences. These symptoms can include increased anxiety, depression, and generalized feelings of betrayal. People living with HIV are already at increased risk of experiencing psychological distress due to the stigma associated with the disease, and a breach of confidentiality compounds these challenges. Fear of stigma and the potential social isolation that can follow disclosure of HIV status without consent can contribute to a loss of trust in healthcare providers and, more broadly, in the healthcare system itself. This lack of trust can prevent people from seeking medical care in the future or from disclosing their HIV status, further exacerbating the risks of delayed diagnosis and poor health outcomes.

At a social level, a breach of confidentiality can have serious consequences for individuals in their personal networks. When a person's HIV status is revealed against their will, they may face discrimination, rejection, and exclusion from family, friends, or community, which can have lasting effects on their social relationships. The negative social consequences of such violations are of particular concern in the context of HIV care, where emotional and social support are an essential component of effective treatment and management. Fear of these social consequences may prevent individuals from seeking the care they need, which may lead to a higher likelihood of transmitting HIV to others through reluctance to disclose their status or access prevention services. Furthermore, these social ramifications affect not only the individual, but can also affect the wider community, as privacy breaches can erode trust in public health initiatives and services designed to manage and prevent HIV transmission.

From a public health perspective, the consequences of privacy breaches are of particular concern. Violations of patient privacy can have a disincentive effect on the willingness of at-risk populations to seek HIV testing, treatment, or prevention. For example, people from vulnerable groups, such as men who have sex with men, people who inject drugs, or sex workers, may already face significant barriers to accessing health care due to social stigma. A breach of confidentiality can further exacerbate these barriers, potentially leading to reduced utilization of essential HIV services. This in turn can undermine the effectiveness of public health campaigns aimed at preventing HIV transmission, as well as reducing the use of life-saving treatments such as antiretroviral therapy. The resulting public health problems, such as diagnostic delays, increased transmission rates, and poor treatment outcomes, highlight the critical importance of maintaining strict confidentiality in HIV care settings. In summary, the existing literature provides compelling evidence for the multidimensional consequences of confidentiality breaches in HIV care. These breaches disrupt the delicate balance of trust between health care providers and patients, with profound psychological, social, and public health consequences. The psychological distress resulting from a breach of confidentiality, including feelings of betrayal and heightened anxiety, can significantly inhibit individuals'

willingness to seek treatment. At the social level, the disclosure of sensitive medical information without consent can lead to discrimination, social isolation, and reluctance to disclose HIV status, all of which hinder access to care and support networks. On a broader scale, these breaches undermine public health efforts to reduce HIV transmission, delay diagnosis, and reduce the effectiveness of prevention and treatment strategies. Given the importance of privacy in fostering trust and promoting positive health outcomes, this study highlights the critical need for strong privacy protections, ethical guidelines for healthcare providers, and policies that maintain patient confidentiality in HIV care settings.

2.1 The Importance of Confidentiality in HIV Care

Privacy in healthcare is a core principle that protects the privacy of individuals by ensuring that their personal medical information remains secure and is shared only with authorized parties. This principle is particularly critical in HIV care, where breaches of confidentiality can have profound and far-reaching consequences, both for the individual and for public health outcomes. Privacy is not only a matter of legal compliance, but also an essential element in fostering trust between patients and healthcare providers, which is essential for effective healthcare delivery, particularly in sensitive areas such as HIV care.

The importance of confidentiality in HIV care cannot be overstated, as fear of disclosure often leads to significant social, psychological, and health consequences for people living with HIV. People with HIV are particularly vulnerable to discrimination and social exclusion due to the stigma associated with the disease. This stigma can take many forms, such as verbal abuse, isolation from family and social circles, or even job loss, which not only affects a person's mental and emotional well-being, but can also inhibit their willingness to use health services. Fear of these negative results can lead people to avoid seeking care, delay testing, or not disclose their HIV status to health care providers or loved ones.

As indicated by Chigwedere et al. (2021), breaches of confidentiality in HIV care are often perceived as violations of individuals' privacy and autonomy. For patients, disclosing their HIV status without their consent is a traumatic experience that can exacerbate feelings of shame and fear, contributing to reluctance to seek care in the future. Studies have shown that breaches of confidentiality are directly linked to increased psychological distress, including anxiety and depression, which in turn can affect treatment adherence and overall health outcomes. People who fear that their HIV status will be revealed are less likely to initiate HIV testing, seek treatment, or adhere to antiretroviral therapy, further complicating efforts to control the spread of HIV and prevent HIV infection. Ensuring confidentiality is essential to maintaining trust between healthcare providers and HIV patients, as trust is essential to the healthcare process. The healthcare environment should be one in which patients feel safe enough to disclose sensitive health information, openly discuss their concerns, and engage in collaborative decision-making with their healthcare providers. When patients trust that their personal health information will be protected, they are more likely to disclose relevant information, which is essential for providing appropriate care. Therefore, confidentiality is not just a matter of legal obligation; it is essential to foster an open and transparent relationship between patients and healthcare providers.

This is particularly important in HIV care, where comprehensive and personalized treatment plans depend on patients' willingness to disclose all relevant information about their health, including their sexual practices, treatment adherence, and other factors that may influence their condition. Furthermore, confidentiality is essential to mitigate the risks of public health impacts associated with HIV care. Public health initiatives to reduce HIV transmission depend on individuals' willingness to engage in testing, prevention, and treatment services. Violations of confidentiality can undermine these efforts by preventing individuals from accessing HIV care or participating in prevention programs. As noted by Obermeyer et al. (2011), when patients fear that their HIV status will be disclosed without their consent, they may be less likely to engage in HIV prevention and testing services, ultimately hindering efforts to reduce HIV transmission and improve population health outcomes. This highlights the importance of ensuring confidentiality not only at the individual level but also as part of a broader public health strategy to combat HIV.

In conclusion, confidentiality is the foundation of effective HIV care. It is not only a legal and ethical obligation, but also an essential part of creating a health care environment in which individuals feel safe to disclose sensitive medical information and actively participate in their treatment. Confidentiality breaches in HIV care can lead to a cascade of negative psychological, social, and public health consequences. Therefore, maintaining confidentiality is essential to ensure that people living with HIV receive the care, treatment, and support they need to manage their health and participate in public health efforts to control the spread of the virus. The literature highlights the need for strong policies and practices that preserve patient privacy and protect individuals from the harmful effects of non-consensual disclosure, particularly in the context of HIV care.

2.2 Psychological Consequences of Confidentiality Breaches

The psychological impact of confidentiality breaches in HIV care is profound, with far-reaching effects on the mental and emotional well-being of people living with HIV. Fear of HIV disclosure without consent often leads to significant psychological distress, including increased anxiety, stress, and depression. These emotional responses are exacerbated by

the stigma and discrimination that still prevail in many societies regarding HIV. For people living with HIV, a breach of confidentiality is not only a breach of trust, but also a trigger for strong emotional and psychological consequences. The trauma associated with such breaches can have lasting effects, influencing patients' decisions to seek further care and their overall engagement with the health system. One of the main sources of anxiety for people living with HIV is the fear of social exclusion or isolation after disclosing their HIV status. Many patients worry about the possible consequences of disclosing their status, such as job loss, damage to personal relationships, or social stigma.

The social perception of HIV as a stigmatized disease can lead to discrimination, which many people with HIV fear they will experience if their status is disclosed. Therefore, breaches of confidentiality often lead to a significant increase in psychological distress. The fear of being socially isolated can foster a heightened sense of vulnerability, leading individuals to avoid social interactions or withdraw from the community, which only intensifies their psychological burden. Furthermore, when confidentiality is violated, patients often experience profound feelings of betrayal and distrust, not only towards the health system, but also towards their health care providers. This betrayal is seen as an attack on their personal autonomy and their right to control who knows about their health status, a particularly sensitive issue in the context of HIV care. The emotional pain associated with such violations can lead to decreased self-esteem and increased feelings of shame and guilt, which are common emotional reactions among many HIV-positive people who already struggle with the stigma of their diagnosis. These feelings of shame can also compound the psychological distress felt by patients, leading to a negative feedback loop in which psychological distress exacerbates reluctance to engage with health services.

The psychological consequences of confidentiality violations are not only immediate, but can have lasting effects on patients' mental health and treatment outcomes. Studies show that fear of continued exposure and the possibility of further violations can lead individuals to avoid seeking care altogether or to disengage from HIV treatment programs. For example, people who fear that their HIV status will be revealed to others without their consent may be less likely to disclose their status to health care providers, preventing them from receiving appropriate care and support needed to manage their disease. Furthermore, the lack of trust caused by violations of confidentiality can discourage individuals from adhering to antiretroviral treatment (ART), which is essential for maintaining viral suppression and preventing transmission of the virus to others. Nonadherence to ART can lead to poor health outcomes, including the development of drug resistance, complicating treatment regimens, and contributing to a more difficult public health situation.

In addition to these emotional responses, patients who experience confidentiality violations may develop a generalized fear of accessing healthcare services in the future. The psychological consequences of a breach can spill over into other aspects of care, eroding patients' trust in the ability of health systems to protect their privacy. This eroded trust can lead to broader avoidance of health care facilities, not only for HIV care but also for other health conditions. As noted by Quinn et al. (2022), the loss of trust in health care providers can have far-reaching implications, not only for the individual patient but also for public health efforts aimed at reducing HIV transmission and promoting good health.

In summary, the psychological consequences of breaches of confidentiality in HIV care are profound and multifaceted. Violations of privacy not only increase anxiety and stress, but also contribute to feelings of betrayal, shame and isolation. These psychological burdens can prevent patients from seeking additional care, adhering to treatment, and taking the necessary steps to manage the disease, ultimately compromising individual health outcomes and public health goals. It is essential that strong privacy safeguards are in place, not only to protect individuals' rights to privacy, but also to ensure that they have access to the care and support they need without fear of further psychological harm or consequences.

2.3 The Social Impact of Privacy Violations

The social implications of breaches of confidentiality in HIV care are profound, often exacerbating the challenges that people living with HIV already face due to the stigma and discrimination associated with the disease. Violating a patient's confidentiality by revealing their HIV status without their consent can result in significant social consequences, including isolation from family, friends and the wider community. Social stigma associated with HIV remains widespread in many societies, where people diagnosed with HIV are often unfairly associated with behaviors that are considered morally or socially unacceptable, such as drug use or sexual promiscuity. This stigma can seriously affect the individual's sense of belonging, leading to isolation and social rejection, which in turn reinforces the psychological burden imposed by the disease. Such social exclusion is not only emotionally painful, but also creates barriers to accessing support systems that are essential for managing the physical and psychological aspects of life with HIV. One of the most significant social consequences of privacy breaches is the disruption of social support networks. Family members, friends, and peers often play a vital role in providing emotional and practical support to people living with HIV, particularly in settings where resources are limited and health services may be limited. However, when a patient's HIV status is disclosed without consent, these support networks can react negatively, leading to rejection, strained relationships, or outright abandonment. Such reactions can make individuals feel isolated and unsupported, compromising their ability to cope with the challenges of living with HIV. Studies have shown that social support is a key determinant of health outcomes for people living with HIV, contributing to improved treatment adherence and mental health. The loss of these essential support systems, caused by a breach of confidentiality, can have devastating effects on a person's ability to effectively manage their illness.

Fear of social rejection for disclosing HIV status is also an important factor in determining whether individuals seek care, disclose their status, or adhere to treatment regimens. As indicated by Chigwedere et al. (2021), people who fear discrimination are less likely to disclose their HIV status to health care providers, a behavior that can hinder effective care and treatment. Reluctance to disclose HIV status is also associated with care avoidance, as patients may be reluctant to go to health care settings where they fear their condition will be exposed to others. This fear of exposure can have harmful consequences, not only by discouraging people from seeking HIV care, but also by contributing to delays in diagnosis and initiation of treatment. The social stigma associated with HIV is a powerful barrier, and breaches of confidentiality exacerbate this fear, preventing people from taking the necessary steps to manage their health. Furthermore, breaches of privacy can extend beyond individual patients and have a negative impact on perceptions of health systems as a whole. When a breach occurs, it can create a ripple effect, reducing the trust that patients and the wider community have in health care providers and institutions. The perception that a health system is unable to maintain patient confidentiality can lead to a decline in public trust, making individuals less likely to seek care or disclose their HIV status in the future. This erosion of trust can have broad public health implications, particularly in efforts to control the HIV epidemic. When communities lose confidence in the ability of health care providers to protect sensitive information, individuals may avoid health services altogether, hindering broader public health goals such as improving HIV screening, prevention and use of treatment.

Furthermore, the social impact of breach of confidentiality can extend to the wider community, as HIV positive people can become symbols of social deviance due to the stigma attached to their condition. When their HIV status is revealed without their consent, individuals may experience negative representation in the media, in the workplace or among their peers, which may further reinforce social stigma. This phenomenon is particularly worrying in societies with an embedded HIV stigma, where people living with the virus are often marginalized and subject to public shame. Such social stigma can discourage at-risk populations from participating in HIV prevention programs and accessing testing services, further exacerbating the challenges of controlling the HIV epidemic.

In summary, the social impact of breaches of confidentiality in HIV care is multifaceted and deeply damaging. Disclosure of HIV status without consent can lead to ostracism, loss of support networks, and increased social stigma, all of which contribute to a reduced quality of life for those affected. These social consequences also create barriers to accessing health services, adherence to treatment, and seeking timely medical care, compromising individual health outcomes and public health efforts. Furthermore, breaches of confidentiality can lead to a broader erosion of trust in health systems, which can have a long-term impact on HIV-seeking behavior in communities. Therefore, the protection of confidentiality is essential not only to protect the privacy of individuals, but also to maintain the social fabric that supports people with HIV in their health journey.

2.4 Public Health Consequences of Confidentiality Violations

Breaches of confidentiality in HIV care have profound public health consequences, significantly hindering efforts to control the spread of HIV and reduce transmission rates. One of the main impacts of these breaches is that individuals are discouraged from participating in HIV testing, treatment, and prevention programs. Fear of disclosing their HIV status without consent creates a barrier to accessing essential health services, causing many people to avoid testing or seeking treatment altogether (Obermeyer et al., 2011). This reluctance to engage with the health system can lead to undiagnosed infections, delays in initiating treatment, and an increased risk of transmitting the virus to others, worsening the HIV epidemic.

Reluctance to engage in HIV care due to fear of confidentiality breaches is particularly pronounced among high-risk populations, such as men who have sex with men (MSM), people who inject drugs, and sex workers. These groups are often marginalized due to social stigma and discrimination, making them more vulnerable to privacy violations. For people in these groups, disclosing their HIV status can lead to social exclusion, legal consequences, or violence, further discouraging them from seeking health services. Therefore, privacy violations disproportionately affect these high-risk populations, compounding the challenges of providing equitable and accessible HIV care. The impact of privacy violations is not limited to individual health outcomes, but extends to broader public health efforts to control the spread of HIV. When individuals fear that their HIV status will be revealed without their consent, they are less likely to engage in HIV prevention programs, such as pre-exposure prophylaxis (PrEP), condom distribution, or risk reduction initiatives for people who inject drugs. This disconnection from prevention services reduces the overall effectiveness of public health interventions designed to reduce HIV transmission, particularly in areas of high HIV prevalence, where community-wide interventions are essential to reduce transmission rates. In such contexts, maintaining patient confidentiality is not only a matter of individual rights but also an essential element of the success of public health strategies. Furthermore, breaches of confidentiality can lead to delays in initiating antiretroviral treatment (ART), which is essential for managing HIV and preventing progression to AIDS. ART has been shown to reduce viral loads to undetectable levels, thereby minimizing the risk of transmission. However, if people are deterred from seeking care due to concerns about confidentiality violations, delaying ART initiation may lead to poorer health outcomes, including the development of drug resistance and progression of HIV to more advanced stages. This, in turn, complicates treatment efforts, increases health care costs, and puts a strain on public health resources.

The consequences of breaching confidentiality are particularly alarming in regions where HIV prevalence is high and health resources are already limited. In sub-Saharan Africa, for example, where the burden of HIV is greatest, effective community-wide interventions are essential to reduce transmission rates and improve health outcomes. In such settings, the erosion of trust in health systems due to confidentiality violations compromises the ability of public health programs to reach at-risk populations, who may be reluctant to participate in screening, prevention, or treatment, for fear of exposure. This creates a vicious cycle in which a lack of commitment to HIV care and prevention programs perpetuates high rates of transmission, while ongoing stigma and violations of confidentiality further discourage individuals from access vital health services. In addition, privacy breaches also affect the effectiveness of contact tracing and partner notification, which are critical strategies for controlling the spread of HIV. If people are reluctant to disclose their HIV status to health care providers, it becomes more difficult to identify and contact potential partners for testing and treatment. This reduces the overall success of public health interventions aimed at preventing new infections, as it prevents the identification and treatment of people who may unknowingly transmit the virus to others.

In conclusion, the public health consequences of breaches of confidentiality in HIV care are far-reaching and widespread. These breaches undermine trust in health systems, prevent people from participating in HIV testing, prevention, and treatment programs, and hinder the effectiveness of public health initiatives aimed at controlling the HIV epidemic. The impact is particularly significant among high-risk populations, who are already vulnerable due to existing stigma and discrimination. To mitigate these negative effects, it is essential that health systems implement strong privacy protections, ensure that health care providers follow ethical guidelines, and foster an environment of trust that encourages people to seek treatment and disclose their HIV status without fear of exposure. By maintaining patient confidentiality, public health efforts can be more effective in reducing transmission rates and improving health outcomes for people living with HIV.

2.5 Ethical and Legal Considerations in HIV Care

Confidentiality in HIV care is not only a matter of practical importance, but also a fundamental ethical and legal principle that protects the rights and dignity of people living with HIV. Ethical guidelines in health care emphasize the need to maintain patient confidentiality as a means to protect their autonomy and guarantee their dignity. Respect for patient confidentiality is rooted in the ethical principles of beneficence, non-maleficence and respect for autonomy, all of which serve to ensure that individuals are treated fairly and with integrity in care settings. The principle of autonomy emphasizes the right of patients to control their health information and make informed decisions about who has access to their personal health data. When confidentiality is violated, patients may feel they are losing control over their health care decisions, which can undermine their trust in the health care system and discourage them from seeking needed care. This erosion of trust can have long-term negative consequences for patient outcomes, particularly in the context of HIV care, where timely and sustained engagement with health services is essential for effective management.

The ethical importance of confidentiality in HIV care extends to protecting vulnerable populations, such as men who have sex with men, sex workers, and people who inject drugs, who are at increased risk of HIV exposure. These groups are often already marginalized, and privacy violations can exacerbate their vulnerability to discrimination and social exclusion. Ethical guidelines recommend that health systems protect individuals from such harm, emphasizing the need for sensitivity and respect in the management of personal information of HIV patients. The risk of social isolation, violence, or legal consequences following a breach of confidentiality can create a barrier that discourages individuals from seeking care, disclosing their HIV status, or adhering to treatment regimens. This is particularly problematic given the complex interplay of health, social, and legal issues that people with HIV face.

From a legal perspective, breaches of confidentiality in HIV care can have significant consequences for health care providers and health care facilities. Health care professionals are required to follow legal and professional standards to protect patient information. Violations of these standards can result in legal consequences, including legal action, civil penalties, and the potential loss of professional licensure. In many jurisdictions, health care providers are legally required to maintain strict confidentiality regarding HIV status and other sensitive health information. In the United States, for example, the Health Insurance Portability and Accountability Act (HIPAA) provides strong protections for patient information, with specific provisions for disclosure of HIV status. Violations of these protections can result in legal action, which can result in financial penalties and reputational damage to health care institutions and providers. Such legal frameworks emphasize the importance of protecting patient privacy as an essential part of professional conduct in health care.

The World Health Organization (WHO) and other international health bodies have long recognized the importance of confidentiality in HIV care as a foundation for effective public health strategies. WHO guidelines emphasize that maintaining patient confidentiality is not only an ethical obligation but also an essential element in ensuring the success of HIV prevention and treatment programs. The WHO Global Health Sector Strategy on HIV, which calls for universal health coverage and the elimination of HIV-related stigma and discrimination, emphasizes the need for confidentiality as a fundamental element of patient-centered care. Without strong confidentiality protections, people living with HIV may be reluctant to get tested, disclose their HIV status, or participate in treatment programs, all of which are essential to controlling the spread of HIV. Furthermore, breaches of confidentiality can undermine the broader goals of public health

systems by preventing people from participating in HIV prevention and care services, thereby undermining efforts to reduce transmission rates and improve outcomes.

In many countries, legal frameworks specifically address the issue of confidentiality in relation to HIV, recognizing the risk of harm that can result from such breaches. For example, in many European countries, laws prohibit unauthorized disclosure of HIV status and provide legal remedies for people whose confidentiality is violated. These legal protections are designed to protect the rights of people living with HIV and to prevent further marginalization or discrimination in healthcare and society at large. However, the strength and enforcement of these legal protections vary by region, and in some cases, people living with HIV may not be fully aware of their legal privacy rights. This highlights the need for strong legal protections and public education about the rights of people living with HIV to ensure that violations are minimized and addressed.

In addition, healthcare providers are often required to complete regular ethics training to ensure that they understand the importance of confidentiality and the legal implications of violations. Ethics training programs are designed to help healthcare professionals recognize the sensitivity of HIV-related information and understand the potential harm caused by unauthorized disclosures. This training is essential to foster an environment in which patient confidentiality is respected and maintained, thereby strengthening the patient-provider relationship and encouraging individuals to engage in HIV care services without fear of exposure.

In conclusion, ethical and legal considerations related to confidentiality in HIV care are essential to ensure the protection and dignity of people living with HIV. Respecting patient confidentiality is not only a matter of maintaining professional standards, but is also essential to maintaining trust in health systems and encouraging engagement in HIV care services. Violations of privacy can have serious consequences, both for individual patients and for public health outcomes, highlighting the need for strong ethical guidelines, legal protections, and ongoing education for health care providers. By maintaining patient confidentiality, health systems can foster an environment that promotes open communication, improves health outcomes, and reduces HIV stigma.

2.6 Policies and Interventions to Protect Privacy

In response to the significant risks associated with confidentiality breaches in HIV care, a number of policies and interventions have been developed around the world to ensure the protection of patient privacy. These efforts are driven by the need to foster an environment of trust between health care providers and patients, which is essential for improving care-seeking behavior, treatment adherence, and overall health outcomes. Effective policies and interventions are essential to minimize the harm caused by confidentiality breaches and to ensure that people living with HIV can access care without fear of stigma or discrimination.

One key strategy for protecting patient confidentiality is to establish clear and comprehensive confidentiality guidelines in health care settings. These guidelines are designed to ensure that patient information, particularly HIV status, is shared only with authorized individuals and for legitimate medical purposes. These protocols typically specify the conditions under which information can be disclosed, the methods by which it should be processed and stored, and the actions to be taken in the event of a breach. Research has shown that healthcare facilities that implement clear privacy policies are more likely to provide a safe and supportive environment for HIV-positive patients, leading to higher levels of patient satisfaction and greater willingness to take necessary precautions. For example, facilities with well-defined privacy standards are able to reassure patients that their sensitive health information will be protected, thereby reducing anxiety and improving engagement with HIV care services.

In addition to institutional policies, implementing secure information sharing systems is an essential intervention to maintain patient confidentiality. With increasing reliance on electronic medical records (EMRs) and other digital systems, healthcare providers must adopt strong cybersecurity measures to prevent unauthorized access to patient records. Data encryption, password protection and strict access controls are essential elements of secure information systems. Research suggests that health systems that invest in secure electronic health platforms are more effective at protecting patient privacy and improving the accuracy and reliability of medical data. In addition, integrating secure communication channels such as encrypted messaging and telemedicine platforms can also reduce the risk of privacy breaches by providing secure ways for patients and healthcare providers to communicate.

Ethics training programs for health care providers are another essential intervention to protect confidentiality. These programs are designed to educate health care professionals about the ethical importance of patient confidentiality and the possible consequences of confidentiality violations. Ethics training helps healthcare providers understand the sensitivity of HIV-related information and the impact that breaches can have on patient outcomes. In addition, these programs emphasize the ethical principles of autonomy, beneficence, and nonmaleficence, which are essential to ensuring that HIV-positive patients are treated with respect and dignity. Studies have shown that healthcare professionals who receive regular ethics training are better equipped to handle sensitive patient information and are more likely to adhere to confidentiality standards (Nguyen et al., 2019). In addition, ethics training programs can foster a culture of accountability in healthcare settings by encouraging staff members to report breaches and take corrective action when necessary.

Advocacy groups and legal experts have long advocated for stronger legal frameworks to protect individuals' rights to confidentiality and privacy in HIV care. Enacting specific laws and regulations that impose strong privacy protections for

people living with HIV is essential to ensure that health care providers are held accountable for any violations. For example, in many countries, laws prohibit unauthorized disclosure of HIV status and provide legal remedies for patients whose privacy is violated. These laws are designed to protect people from discrimination and ensure that they can access health services without fear of exposure. Advocacy groups, such as the Global Network of People Living with HIV (GNP+), continue to call for expanded legal protections for people living with HIV, particularly in regions where HIV-related stigma is prevalent. Stronger legal frameworks are needed not only to prevent violations, but also to ensure that health systems are responsive to the needs of people living with HIV and that any violations are promptly addressed. In addition, comprehensive policies and interventions must also consider the broader social and cultural contexts in which HIV care is provided. In some contexts, particularly in low-resource settings, the implementation of privacy measures may face challenges due to a lack of infrastructure or insufficient training for health care providers. Research suggests that health systems in these settings may need additional support to develop the capacity to effectively protect patient confidentiality (Mahajan et al., 2020). In these contexts, international organizations such as the World Health Organization (WHO) and UNAIDS play a crucial role in providing technical assistance and guidance to strengthen privacy protections, improve the health of the health care infrastructure, and reduce the stigma associated with HIV.

In addition to strengthening legal protections, policymakers should also focus on enforcing existing privacy laws. Effective enforcement mechanisms are essential to ensure that healthcare providers who violate confidentiality standards face appropriate consequences. The presence of clear legal sanctions for violations can act as a deterrent, encouraging healthcare professionals to prioritize patient confidentiality in their daily practices. Furthermore, transparency in reporting and investigating privacy violations is essential to maintaining public trust in the healthcare system. When patients are confident that their rights will be protected, they are more likely to seek care, adhere to treatment, and participate in HIV prevention programs, ultimately benefiting public health outcomes.

In conclusion, policies and interventions aimed at protecting patient confidentiality in HIV care settings are essential to foster an environment of trust, promote health care engagement, and improve health outcomes. Establishing clear privacy guidelines, secure information sharing systems, and regular ethics training for healthcare providers are essential strategies for protecting patient privacy. At the same time, stronger legal frameworks and enforcement mechanisms are needed to protect individuals from the harmful consequences of privacy breaches.

Studies of confidentiality breaches in HIV care highlight the profound psychological, social, and public health impacts that such breaches can have. Confidentiality is a foundation of trust in health care, and its violation can significantly undermine that trust, particularly in the context of HIV care. When patients feel that their sensitive health information is not adequately protected, they may be less likely to seek care, disclose their HIV status, or adhere to treatment regimens. This, in turn, can lead to delayed diagnosis, suboptimal treatment outcomes, and reluctance to engage in prevention services, all of which contribute to perpetuating the HIV epidemic.

Psychologically, the impact of privacy breaches can be devastating. Many people living with HIV already experience significant mental and emotional health challenges, including anxiety, depression, and the psychological burden of stigma. When confidentiality is breached, it amplifies these challenges, leading to increased stress, feelings of betrayal, and heightened feelings of isolation. The disruption of trust can lead to a reluctance to seek care in the future, as patients may fear further exposure of their HIV status or experience feelings of shame and guilt. These psychological effects can contribute to a vicious cycle in which individuals avoid care, leading to poorer health outcomes and continued social marginalization.

Socially, the consequences of privacy breaches extend beyond the individual to their wider social network. HIV-related stigma is one of the most pervasive barriers to accessing health care, and when confidentiality is compromised, it often leads to increased discrimination and exclusion from family, friends, and communities. This social exclusion can lead to the loss of support systems that are essential for managing the physical and psychological aspects of living with HIV. Fear of negative social consequences often leads individuals to avoid disclosing their HIV status or seeking care, exacerbating the challenges associated with living with the disease. Furthermore, breach of confidentiality can lead to a breakdown in trust in the healthcare system as a whole, as patients may feel that their rights are not being respected and healthcare providers are not equipped to protect their privacy.

From a public health perspective, the failure to protect patient confidentiality has far-reaching consequences for the wider community. When individuals fear that their HIV status will be disclosed without their consent, they are less likely to participate in HIV testing, prevention services, or treatment programs. This reluctance to seek treatment contributes to undiagnosed infections, delays in initiating treatment, and continued transmission of the virus, making it more difficult to control the spread of HIV, particularly in high-prevalence areas. Public health initiatives to reduce transmission rates and improve health outcomes rely on individuals' trust that their personal information will remain private and that they will not be discriminated against for seeking health care. When confidentiality is compromised, these efforts are undermined, leading to poorer overall public health outcomes.

Given these implications, it is essential to implement policies and interventions that protect patient privacy and ensure that healthcare providers are well trained in privacy protocols. These measures are essential for rebuilding trust in health systems and creating an environment where individuals feel safe to seek care, disclose their HIV status, and engage in HIV prevention and treatment programs. Developing clear and binding privacy guidelines, implementing secure

information-sharing systems, and providing ethics training to health professionals are essential interventions to prevent breaches and mitigate their impact. In addition, advocating for stronger legal frameworks to protect patient privacy and enforcing confidentiality laws is essential to ensure that people living with HIV are not subject to discrimination for unauthorized disclosure of their HIV status.

Future research should focus on exploring the long-term effects of privacy breaches on patient behavior, health outcomes, and social dynamics. Additionally, it is important to assess the effectiveness of existing interventions aimed at protecting patient privacy and ensuring that healthcare providers are properly trained to handle sensitive information. This research will be essential to improve privacy policies, to improve patient engagement in HIV care, and ultimately to improve health outcomes for people living with HIV. The continued development of strategies to protect patient privacy is essential to combat HIV-related stigma, improve public health, and ensure that people living with HIV have access to care and support that they need to live a healthy and full life.

3 RESEARCH METHODOLOGY

This study uses a mixed-methods approach to comprehensively assess the psychological, social, and public health consequences of privacy breaches on HIV care-seeking behavior. Integrating quantitative and qualitative methodologies, the study provides a comprehensive understanding of the impacts of privacy breaches on individuals' health behaviors and experiences. The research uses surveys, in-depth interviews, and focus group discussions to capture diverse perspectives, ensuring that key trends are explored alongside in-depth personal stories.

The quantitative approach involves structured surveys designed to collect data on the extent of privacy breaches and their psychological and behavioral consequences. These surveys target HIV-positive people from diverse demographic backgrounds, with purposive sampling used to include a range of ages, genders, and socio-economic statuses. Survey data are analyzed using descriptive statistics to summarize demographic characteristics and inferential statistics (e.g., chi-square tests, logistic regression) to identify associations between confidentiality breaches and adverse health care behavior outcomes.

The qualitative component includes semi-structured in-depth interviews with HIV-positive individuals who have experienced confidentiality breaches in health care settings. These interviews explore personal narratives, focusing on emotional and social consequences such as feelings of betrayal, stigma, and influence on health-seeking behavior. Interview data are transcribed and analyzed using thematic analysis to identify recurring themes related to the psychological and social implications of confidentiality breaches.

Additionally, focus group discussions are conducted with healthcare providers, HIV advocates, and policymakers to explore the systemic and ethical challenges of maintaining confidentiality. These discussions explore topics such as institutional practices, ethical dilemmas, and the broader public health implications of privacy breaches. Thematic analysis is again applied to identify key issues and potential interventions.

The study uses a purposive sampling strategy, selecting participants based on their direct experiences of privacy breaches. This approach ensures that both patient and provider perspectives are considered, facilitating a comprehensive understanding of the issue. Data from the qualitative survey and interviews are analyzed using appropriate methods, including thematic analysis for qualitative data and statistical techniques for quantitative data. Ethically, the study follows strict guidelines to protect the privacy of participants. Informed consent was obtained, ensuring that participants were fully aware of their rights and the voluntary nature of their participation. Data were anonymized and all personal identifiers were removed to maintain confidentiality. The study was approved by an institutional review board (IRB) to ensure that ethical standards were met throughout the research process.

Despite the rigorous methodology, the study has potential limitations, including recall bias, where participants may not fully recall instances of privacy violations, or self-selection bias, where those who are particularly vocal about their experiences may be overrepresented. Furthermore, the cross-sectional nature of the survey data does not capture the long-term effects of privacy breaches on health-seeking behavior.

Overall, this mixed-methods approach provides a comprehensive examination of the consequences of privacy breaches in HIV care. By combining quantitative and qualitative data, the study aims to contribute to the development of more effective policies, interventions, and practices that protect patient privacy, reduce stigma, and improve HIV-seeking behavior.

4 THEORETICAL FRAMEWORK

In this study, several theoretical frameworks are used to guide the analysis of the psychological, social, and public health consequences of privacy breaches on HIV care-seeking behavior. These theories help contextualize the findings and explain the complex relationships between privacy breaches and health outcomes. Below is an overview of the main theories used in the study:

4.1 Social Cognitive Theory (SCT)

Social cognitive theory, developed by Albert Bandura, is central to understanding how privacy breaches affect HIV care-seeking behavior. CST posits that behavior is influenced by the reciprocal interaction between personal factors, environmental factors, and the behavior itself. In this study, confidentiality violations are considered a key environmental factor that affects individuals' self-efficacy, emotional reactions, and health care behaviors. A confidentiality violation can decrease an individual's confidence in their ability to effectively navigate health care systems, leading to care avoidance, treatment adherence failure, and reluctance to disclose their HIV status.

Study Application: Confidentiality violations affect HIV-positive individuals' perceived self-efficacy and health care system outcome expectations, reducing the likelihood of seeking care. Fear of social stigma and rejection can be considered environmental factors that modify individuals' health care behaviors. SCT's emphasis on observational learning also highlights how individuals may avoid care based on others' negative experiences with confidentiality violations.

4.2 Stigma and Social Identity Theory

Stigma and social identity theory, which is based on the work of Erving Goffman and Henri Tajfel, plays a crucial role in understanding the social consequences of privacy breaches in HIV care. According to social identity theory, individuals derive an important part of their self-image from their social identity, such as their HIV status. Violation of confidentiality can lead to stigma, as the individual's HIV status is inadvertently revealed, altering their social identity and leading to feelings of social exclusion, shame, and rejection.

Application to the study: Privacy breaches directly threaten an individual's social identity by exposing them to discrimination and stigmatization. The theory suggests that people who experience a violation of confidentiality may change their behavior to avoid further stigmatization, including avoiding health care settings or not disclosing their HIV status. The study uses this theory to analyze the emotional and social consequences of violations, such as anxiety, depression and social alienation.

4.3 Health Trust Model (HBM)

The health beliefs model is used to examine how violations of confidentiality affect individuals' perceptions of their vulnerability to the health risks and benefits of HIV care seeking. HBM postulates that individuals are more likely to engage in health-promoting behaviors (such as seeking HIV treatment) if they believe they are likely to be exposed to a health threat, that the benefits of the action outweigh the costs, and that they have confidence in their ability to take the necessary actions (self-efficacy). **Study Application:** When confidentiality is violated, individuals may perceive greater risks associated with seeking care (e.g., exposure to stigma, discrimination) and may feel less confident in the ability of the health system to protect their privacy. As a result, they may avoid HIV testing, treatment, and detection, which can negatively impact their health outcomes. The model helps explain why patients may delay or avoid care after experiencing a confidentiality violation.

4.4 Theory of Planned Behavior (TPB)

The theory of planned behavior, developed by Icek Ajzen, is used to analyze the behavioral intentions of HIV-positive people in response to confidentiality violations. According to TPB, human behavior is influenced by three factors: attitudes toward the behavior, subjective norms (perceived social pressure), and perceived behavioral control (perceived ease or difficulty of performing the behavior). In the context of HIV care, a breach of confidentiality can affect an individual's attitude toward seeking care, their perceptions of social approval or disapproval, and their ability to safely navigate HIV care.

Study Application: Privacy violations affect attitudes (e.g., negative attitudes toward health care providers or the health care system), subjective norms (e.g., concerns about social rejection), and perceived behavioral control (e.g., difficulty in receiving care due to fear of exposure). The TPB framework helps explain the dynamics behind individuals' reluctance to engage with health systems and avoidance of HIV care after experiencing confidentiality violations.

4.5 Ecological Systems Theory

Ecological systems theory, developed by Urie Bronfenbrenner, is used to examine how different layers of an individual's environment, from the personal to the societal level, influence their health care behaviors. This theory suggests that individual behavior is influenced not only by direct interactions (e.g., health care providers), but also by broader social systems (e.g., community attitudes toward HIV, health policies).

Application to the study: Privacy violations affect not only individual behavior but also the broader environment, including family, social networks, and health care settings. The theory helps to analyze the interdependence of individual experiences with larger social structures, such as the integrity of the health system and public health policies. The study uses this theory to explain the systemic and institutional factors that contribute to privacy violations and their large-scale impacts. The most important theory applied in this study is social cognitive theory (SCT), as it provides a comprehensive framework for understanding how confidentiality breaches affect HIV-seeking behavior. By emphasizing the reciprocal interaction between

personal, behavioral, and environmental factors, CST helps explain how confidentiality breaches affect individuals' self-efficacy, emotional responses, and social interactions. The theory emphasizes the importance of both individual and environmental influences on behavior, making it highly applicable to the complex and multidimensional nature of confidentiality breaches in HIV care. It highlights the key role of personal beliefs and the social environment in shaping care-seeking behaviors, which provides valuable insights into interventions aimed at reducing the negative impacts of confidentiality breaches in HIV care.

5 DISCUSSION

In this study, several theoretical frameworks are used to guide the analysis of the psychological, social, and public health consequences of privacy breaches on HIV care-seeking behavior. These theories help contextualize the findings and explain the complex relationships between privacy breaches and health outcomes. Below is an overview of the main theories used in the study:

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6 RESEARCH GAPS AND RECOMMENDATIONS FOR FUTURE STUDIES

While this study provides important information regarding the psychological, social, and public health consequences of privacy breaches on HIV seeking behavior, there are several important research gaps. These gaps provide opportunities for future studies to build on current findings, refine theoretical frameworks, and develop more effective interventions to mitigate the impact of privacy breaches in HIV care.

6.1 Longitudinal Studies of Long-Term Effects

A major gap in the existing literature is the lack of longitudinal studies that explore the long-term psychological and social consequences of privacy breaches. Although this study focused on immediate or short-term impacts, the lasting effects of privacy breaches on individuals' mental health, social relationships, and health outcomes need to be studied in more detail. Future research should adopt longitudinal designs to track the progression of psychological distress, stigma, and health behaviors over time, providing a better understanding of how privacy violations affect HIV behavior over the long term. These studies can also examine how individuals' experiences with privacy violations affect their ability to manage their future health, including adherence to treatment and engagement in prevention strategies.

6.2 Diverse Population Samples

The sample for this study was diverse in terms of demographics, but future research is needed to further expand these populations, including focusing on marginalized groups such as men who have sex with men (MSM), people who inject drugs (PWID), transgender people, and sex workers. These populations are at increased risk of HIV transmission and are often disproportionately affected by stigma and discrimination. Research that explores how privacy breaches affect their health-seeking behavior, emotional well-being, and social interactions can provide valuable information for public health policy. In addition, future studies should consider the intersectionality of HIV-related stigma and explore how gender, race, socioeconomic status, and geographic location influence experiences of privacy breaches and their consequences.

6.3 The Role of Health Care Providers in Privacy Breaches

Although this study captured the perspectives of people living with HIV, there is a lack of research that explores the experiences of health care providers in situations involving privacy breaches. Understanding the attitudes, behaviors, and institutional challenges of health care providers when dealing with sensitive information is essential to improving privacy protection. Future studies could examine the institutional and organizational factors that contribute to privacy violations in health care settings and explore strategies to improve provider training and health system practices. Research on the ethical dilemmas faced by health care providers, particularly in resource-limited settings, can shed more light on the challenges of maintaining patient confidentiality while providing care to vulnerable populations.

6.4 Effectiveness of Policy Interventions

While this study identified the need for stronger policies to protect confidentiality, additional research is needed to assess the effectiveness of specific policies and interventions designed to protect patient confidentiality in HIV care settings. Future studies should assess the implementation and impact of privacy protection protocols, such as secure information systems, privacy training programs for health care providers, and legislative frameworks. Additionally, comparative studies conducted across regions or countries could examine how variations in policy implementation affect privacy breaches and their impact on HIV-related care-seeking behaviors. This would identify best practices and inform the development of more effective global standards for patient confidentiality in HIV care.

6.5 Explore Privacy Breaches in Digital Health

As digital health technologies, such as telemedicine and electronic health records (EMRs), become more widespread, new risks related to privacy breaches are emerging. Future research should investigate how privacy breaches occur in digital health settings and the psychological, social, and public health consequences of these breaches. Given the increasing reliance on digital platforms for HIV care, it is critical to understand the unique challenges posed by digital privacy breaches. Studies could examine how individuals perceive the risks of disclosing their HIV status in digital contexts and whether privacy breaches in virtual healthcare settings differ from those in traditional face-to-face settings.

6.6 Global Perspectives on Privacy Breaches

This study, like many others, has focused primarily on specific geographic regions or healthcare settings. However, the global nature of the HIV epidemic and the diverse cultural, legal, and health contexts across countries require research on the international implications of privacy breaches. Future studies should explore how privacy breaches are perceived and addressed in different cultural and health contexts, particularly in low- and middle-income countries (LMICs), where health infrastructure may be less robust and stigma around HIV may be more pronounced. Cross-national studies will provide insight into how cultural attitudes toward HIV, privacy, and health care shape the consequences of privacy breaches and inform global policy.

6.7 Explore the Role of Stigma Reduction Programs

While this study explored the social consequences of privacy breaches, it did not delve into stigma reduction programs and their potential role in mitigating the negative impacts of privacy breaches. Future research should examine the effectiveness of stigma reduction programs designed to improve attitudes toward people with HIV, particularly in health care settings. Studying the impact of these programs on healthcare providers and patients can help develop comprehensive strategies to reduce stigma and foster a more supportive environment for HIV care.

6.8 Impact of Privacy Violations on HIV Prevention

Finally, future research should examine how privacy violations affect HIV prevention efforts beyond treatment adherence. Reluctance to engage in HIV care due to fear of exposure may have broader implications for public health strategies, including HIV testing, counseling, and prevention programs. Studying the relationship between privacy violations and individuals' willingness to participate in prevention programs such as PrEP (pre-exposure prophylaxis) can provide crucial insight into how privacy violations undermine efforts to reduce new HIV infections. Conclusions and Future Directions This study highlights the urgent need for a more nuanced understanding of the consequences of privacy breaches on HIV care-seeking behavior. By filling the research gaps identified and continuing to investigate the psychological, social, and public health implications of privacy breaches, future research can contribute to the development of more effective interventions and policies. Ultimately, these efforts will help people with HIV feel safe and supported in seeking care, thereby reducing the negative impacts of privacy breaches on individual health outcomes and broader public health goals.

7 CONCLUSION

Breach of confidentiality in HIV care has profound and far-reaching consequences that extend far beyond the immediate breach itself, affecting individuals at psychological, social, and public health levels. The psychological ramifications are particularly concerning because people living with HIV (PLHIV) often face significant mental health challenges, including anxiety, depression, and the psychological costs of stigma. When confidentiality is compromised, these problems are exacerbated. Breach can lead to increased stress levels, feelings of betrayal, and decreased trust in health care providers, which has significant emotional and psychological consequences. Trust is essential to the patient-provider relationship, and its loss can be devastating. Many people may feel vulnerable and insecure knowing that their private health information is not adequately protected. As a result, some patients may be reluctant to seek treatment in the future, fearing that their HIV

status will be revealed again, even in settings where confidentiality is assumed to be guaranteed. This emotional burden, added to the psychological burden of living with HIV, contributes to isolation, exacerbates mental health problems, and ultimately makes it more difficult for patients to adhere to treatment regimens and fully engage in their care.

At the social level, the impact of privacy breaches can be even more pronounced. HIV-related stigma is one of the most pervasive barriers to accessing health care, particularly in settings where cultural, social, or legal norms exacerbate discrimination. Confidentiality breaches often lead to a loss of control over HIV status, which increases the risk of stigma and social exclusion. Patients who fear their HIV status will be revealed without their consent may withdraw from their community, avoiding social media, friends and family. This social isolation creates an additional level of stress and alienation, making it even more difficult for people living with HIV to manage the psychological and physical aspects of living with HIV. Furthermore, confidentiality breaches perpetuate the cycle of stigma because patients are less likely to disclose their HIV status or engage in necessary care, further marginalizing them from the support systems they need to thrive. This fear of stigma can also prevent people from joining HIV support groups or participating in peer-led initiatives, contributing to the ongoing marginalization and discrimination of people living with HIV. From a broader public health perspective, the consequences of privacy violations extend to efforts to control the spread of HIV. Effective public health strategies rely on the trust and cooperation of individuals to prevent HIV transmission, and confidentiality is a foundation of this trust. When people fear that their HIV status will be disclosed without their consent, they are less likely to seek HIV testing, begin treatment, or seek preventive services such as counseling, condom use, and regular HIV viral load monitoring. This reluctance to engage in HIV care not only leads to delays in diagnosis but also to the failure to initiate treatment early enough to reduce the rate of transmission. It also contributes to poor adherence to treatment, as patients who do not feel confident about the confidentiality of their treatment may be less likely to follow prescribed treatment regimens. This fear of avoiding health services undermines the effectiveness of prevention programs and hinders efforts to achieve global HIV goals, such as reducing transmission rates and improving health outcomes for people living with HIV.

To mitigate these negative effects and restore trust, it is essential to implement comprehensive policies and interventions that protect patient confidentiality in HIV care. Health care providers should adopt clear, consistent, and comprehensive privacy guidelines that ensure that patient information, particularly their HIV status, is protected from unauthorized disclosure. These guidelines should ensure that patient data is shared only with authorized personnel for legitimate medical purposes and establish clear protocols for handling any breaches. Additionally, healthcare systems should invest in secure information exchange systems, such as encrypted electronic medical records, to protect sensitive data from cyber threats and unauthorized access. Security measures such as password protection, encryption, and strict access control systems are necessary to ensure that patient information is kept confidential and protected from external threats. This includes the integration of secure communication platforms that allow for confidential exchanges between patients and providers, such as encrypted messaging services and telemedicine systems. In addition, health professionals should undergo regular ethics training to reinforce the importance of patient confidentiality and ethical behavior in HIV care. Training should focus on the ethical principles of patient autonomy, benevolence, and non-maleficence, which are essential for building trust and protecting the rights of PLHIV. By educating healthcare providers about the profound consequences of privacy violations on patients' psychological, social, and public health outcomes, we can encourage greater adherence to privacy standards and cultivate a culture of respect, sensitivity, and accountability within institutions. Training programs should also provide strategies to recognize the signs of stigma and discrimination and equip health care providers with tools to address these issues in their practice.

Additionally, stronger legal frameworks and robust enforcement mechanisms are needed to hold healthcare providers accountable for any breach of patient confidentiality. Legal protections that prevent unauthorized disclosure of HIV status and provide recourse for those affected are essential to ensure that PLHIV can access care without fear of exposure. Rights organizations and legal experts should continue to push for the expansion of these protections, especially in regions where HIV stigma remains widespread. In regions where levels of discrimination are high and legal protections are limited, efforts should focus on improving health care providers' understanding of legal and ethical standards regarding confidentiality and ensuring that violations are promptly reported and dealt with appropriately. Finally, future research is essential to assess the long-term impacts of privacy breaches on patient behavior, health outcomes, and social dynamics. This research provides valuable information on the effectiveness of existing interventions, helping to improve confidentiality policies, improve patient engagement in HIV care, and develop strategies to combat the negative psychological and social consequences of confidentiality breaches.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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FRAMEWORK FOR "LEISURE PHYSICAL ACTIVITY AND MENTAL WELL-BEING: THE IMPACT OF TRADITIONAL AND MODERN SPORTS ON ELDERLY HEALTH IN GUANGZHOU"

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Abstract: This study explores the impact of traditional and modern sports on the physical and mental well-being of elderly individuals in Guangzhou, a city with a diverse cultural heritage. Using qualitative methods, the research highlights how traditional activities like tai chi and lion dance promote cultural identity and intergenerational connections, while modern sports such as yoga and square dancing improve flexibility, stress relief, and social inclusion. Key findings reveal the interplay between Leisure physical activity, cultural relevance, and social dynamics, with recommendations for tailored community initiatives and government support to enhance elderly participation in sports.

Keywords: Elderly health; Leisure physical activity; Traditional sports; Modern sports; Cultural integration

1 INTRODUCTION

1.1 Background

Guangzhou is a rapidly aging city with over 20% of its population aged 60 or older by 2023. Leisure physical activity (LPA) has been widely recognized as a key factor in promoting elderly health. However, in a culturally diverse setting like Guangzhou, the interplay between traditional sports (e.g., tai chi, lion dance) and modern sports (e.g., yoga, square dancing) presents unique challenges and opportunities for elderly well-being.

1.2 Research Significance

This study explores how traditional and modern sports contribute to both physical and mental health among elderly populations, offering insights into cultural dynamics, health impacts, and identity construction in a multicultural city.

1.3 Research Questions

- (1) How do elderly individuals perceive the impact of traditional and modern sports on their physical and mental well-being?
- (2) What role does cultural background play in shaping their experiences and choices of Leisure physical activity?
- (3) How do these sports foster social connectivity and personal identity?

2 LITERATURE REVIEW

2.1 Impact of Leisure Physical Activity on Elderly Well-being

Research on Leisure physical activity (LPA) consistently underscores its critical role in improving both physical and mental well-being in elderly populations. Studies indicate that regular PA reduces the risk of chronic diseases such as cardiovascular issues, diabetes, and osteoporosis [1]. Moreover, it enhances flexibility, muscle strength, and balance, reducing the risk of falls—a major concern for older adults [2]. For example, tai chi, a traditional Chinese exercise, has been found to improve postural stability and lower-extremity strength among older adults [3].

In addition to physical health benefits, LPA is also associated with improved mental health outcomes. Evidence shows that moderate-intensity exercise can alleviate symptoms of anxiety and depression, enhance self-esteem, and improve overall mood [4-5]. Group activities, in particular, promote social interaction, which further buffers feelings of loneliness and social isolation, common issues in aging populations [6].

In the context of traditional and modern sports, the mental health benefits vary across modalities. Traditional sports such as tai chi and qigong are often associated with mindfulness and stress relief, whereas modern sports like yoga or square dancing may provide greater opportunities for sociability and creativity [7]. These findings point to the diverse benefits that different forms of LPA can offer, particularly when tailored to the cultural and personal preferences of elderly individuals.

2.2 Cultural Context and Elderly Participation in Sports

Cultural factors significantly influence the types of LPA chosen by elderly individuals and their engagement levels.

Traditional sports such as tai chi and lion dance hold deep cultural significance in Chinese society, often viewed as a way to preserve heritage and foster intergenerational connections [8]. These practices not only promote physical health but also offer a medium for spiritual growth and cultural identity reinforcement [9]. In Guangzhou, tai chi groups commonly incorporate Cantonese music, which adds a localized dimension to this age-old practice.

Modern sports, on the other hand, reflect the impact of globalization and cultural integration. Activities like yoga, Zumba, and square dancing have gained popularity among Chinese elderly populations, often adapted to incorporate local cultural elements [10]. For instance, square dancing, originally inspired by Western line dancing, has evolved into a uniquely Chinese phenomenon, blending traditional music and movements with modern rhythms [11].

Despite the popularity of these activities, cultural barriers and generational differences can pose challenges. Research highlights that elderly individuals may feel disconnected from modern sports if they lack familiarity with their cultural roots [12]. Conversely, younger generations often perceive traditional sports as outdated or irrelevant, creating a gap in intergenerational participation. Addressing these cultural tensions is essential to maximizing the inclusivity and appeal of elderly LPA programs in multicultural settings like Guangzhou.

2.3 Social Connectivity and Identity through Sports Participation

Social connectivity is a vital aspect of elderly sports participation, contributing significantly to mental well-being and identity construction. Group-based activities, such as square dancing and tai chi, foster a sense of belonging and community among participants. Studies show that shared goals and routines promote cooperation, reduce feelings of isolation, and enhance group cohesion [13,14].

Participation in sports also provides opportunities for identity reconstruction, especially for elderly individuals navigating life transitions such as retirement or relocation. Social identity theory posits that group membership enhances self-esteem and offers a sense of purpose, which is particularly important for aging individuals [15]. For example, tai chi practitioners often describe their groups as "families," reflecting the deep emotional bonds formed through shared practices. Similarly, square dancing groups have been reported to foster intergenerational connections, with younger family members occasionally joining their elders in performances.

However, not all elderly individuals experience these benefits equally. Migrants, for instance, may face difficulties integrating into local sports communities due to language barriers or cultural differences. Tailored interventions that address these challenges are essential to ensuring that all elderly individuals, regardless of background, can access the social and psychological benefits of sports participation.

2.4 Research Gaps and Emerging Perspectives

While existing literature provides robust evidence of the benefits of LPA for elderly individuals, several gaps remain. First, there is limited research examining how traditional and modern sports coexist and influence elderly well-being in culturally diverse urban contexts like Guangzhou. Most studies focus on either traditional or modern sports in isolation, neglecting the interplay between these modalities and their combined effects on physical and mental health.

Second, few studies explore the role of cultural adaptation in enhancing the accessibility and appeal of modern sports for elderly populations. For example, how do localized adaptations—such as incorporating Cantonese music into yoga sessions—affect elderly participation and engagement levels? Understanding these dynamics could inform the design of culturally sensitive PA programs that resonate with diverse elderly populations.

Finally, the intersection of social identity, cultural integration, and health outcomes in elderly sports participation remains underexplored. While social identity theory provides a useful framework, more empirical research is needed to understand how shared sports activities foster cross-cultural understanding and collective well-being in aging urban populations.

3 METHODOLOGY

3.1 Research Design

This qualitative study uses semi-structured, in-depth interviews with 20 elderly participants (aged 60 and above) in Guangzhou, split equally between traditional sports and modern sports.

3.2 Sampling

Purposive sampling ensures diverse backgrounds:

- Gender: 10 males, 10 females.
- Cultural background: Local Guangzhou residents and migrants.
- Sports type: Participants in both traditional and modern sports.

3.3 Data Collection

- Interviews lasting 60–120 minutes, conducted in participants' homes, parks, or community centers.

- Questions focus on experiences, health impacts, cultural relevance, and social connections.

3.4 Data Analysis

Thematic analysis identifies key themes, including physical health improvements, emotional well-being, and cultural identity.

4 FINDINGS AND DISCUSSION

4.1. Physical Health Benefits

4.1.1 Traditional sports

Tai chi emerged as a dominant form of Leisure physical activity among the participants, with many emphasizing its benefits for flexibility, balance, and chronic pain management. A retired schoolteacher, Ms. Lin, shared:

"I had severe knee arthritis that made walking difficult. My doctor recommended tai chi as a gentle exercise, and I started practicing at Yuexiu Park every morning. Over time, my knee pain lessened, and now I can even walk long distances without discomfort. It's like I've regained my mobility and independence." (Female, 68)

Similarly, Mr. Zhou, a former construction worker, described how tai chi helped him recover from a debilitating fall:

"I fractured my hip two years ago, and recovery was slow. I joined a tai chi group near Haizhu Lake because I needed low-impact exercise. Now, I feel much stronger and more stable on my feet. Practicing with others also motivates me to stay consistent." (Male, 71)

These experiences align with findings from Lan et al., who reported that tai chi improves joint mobility and reduces fall risks in elderly populations. Additionally, studies have shown that tai chi helps enhance proprioception and coordination, critical for maintaining balance in aging adults.

4.1.2 Modern sports

Participants engaged in yoga often highlighted its impact on flexibility and stress relief. Ms. Wang, who joined a yoga studio in Tianhe District, shared:

"I used to wake up with a stiff back every morning. My daughter suggested yoga, and I reluctantly joined a local class. After a few months, I noticed a big difference. Not only is my back pain gone, but I also feel more relaxed and energetic throughout the day." (Female, 63)

Mr. Li, who attended community yoga classes at a cultural center in Panyu District, noted the affordability and accessibility of these sessions:

"The yoga classes at the community center cost only a small fee, which makes them accessible for retirees like me. I've seen improvements in my posture and breathing. It's amazing how these small exercises make me feel healthier overall." (Male, 62)

Woodyard corroborates these observations, noting that yoga improves physical flexibility, alleviates pain, and reduces cortisol levels, leading to lower stress. Research also highlights that yoga enhances lung function and relaxation, offering a holistic approach to elderly health.

4.2. Mental Well-being and Emotional Resilience

4.2.1 Stress reduction and relaxation

The calming effect of physical activities was a recurring theme among participants. A square dance participant in Liwan District, Ms. Chen, described her routine as her "daily therapy":

"After losing my husband, I felt overwhelmed by loneliness and sadness. My neighbor encouraged me to join her square dance group at Shamian Park. I hesitated at first, but dancing with them has brought joy back into my life. I laugh and feel alive again when I'm with the group." (Female, 70)

Likewise, Mr. Yang, a retired doctor, noted the positive impact of tai chi on his mental clarity:

"Practicing tai chi clears my mind. The slow, deliberate movements feel meditative, like I'm resetting my thoughts. It's a refuge from the stress of aging and health worries." (Male, 68)

Chen et al. support these accounts, demonstrating that group-based physical activities elevate endorphin levels, reduce depressive symptoms, and foster emotional resilience.

4.2.2 Mindfulness and emotional balance

The mindfulness component of tai chi was emphasized by multiple participants. Ms. Zhu, a tai chi enthusiast practicing in Baiyun Mountain, shared:

"When I focus on the movements and my breathing, I feel present in the moment. It's almost spiritual. I used to feel anxious all the time, but tai chi helps me find peace." (Female, 66)

This aligns with findings from Wang et al., which link mindfulness-based practices like tai chi to reduced symptoms of anxiety and depression.

4.3 Cultural Dimensions and Identity Construction

4.3.1 Cultural connection through traditional sports

For many participants, traditional sports were not only about physical well-being but also cultural heritage. Mr. Luo, a retired craftsman, reflected on his family's involvement in lion dances:

"My father was a lion dance master, and I grew up helping with the costumes and drumming. Now, I lead a small group in Tianhe District, teaching lion dance to young and old. It feels good to pass down this tradition and keep our Cantonese culture alive." (Male, 65)

Similarly, Ms. Li, who practices tai chi in Haizhu District, expressed pride in continuing her community's traditions: *"Tai chi feels like it's in my blood. It connects me to my ancestors and our history. Practicing in the park with others reminds me of the importance of staying rooted in who we are." (Female, 70)*

Yang et al. note that traditional sports in China play a dual role in promoting health and preserving cultural identity. These practices foster intergenerational connections and reinforce a sense of belonging.

4.3.2 Cultural fusion in modern sports

Modern sports also facilitate cultural integration, blending global influences with local traditions. Ms. Xu, a yoga participant in a Tianhe District studio, described how Cantonese music transformed her practice:

"I was hesitant to try yoga at first because it felt foreign. But my instructor started using Cantonese opera music during sessions, which made it feel more familiar and comforting. Now, I look forward to every class." (Female, 62)

This reflects Zhou et al.'s findings that localized adaptations of global sports increase their accessibility and appeal to elderly participants.

4.4. Social Impacts and Challenges

4.4.1 Overcoming Isolation

Migrants in Guangzhou particularly emphasized the role of sports in fostering social inclusion. Ms. Zhang, who moved from Sichuan to live with her son in Guangzhou, explained:

"I felt out of place when I first arrived in Guangzhou. Joining a tai chi group in Yuexiu Park helped me make friends and feel part of the community. It's like finding a second family." (Female, 72)

Bailey highlights how group activities create opportunities for marginalized groups to integrate into local communities, improving social well-being.

4.4.2 Barriers to Participation

Despite the benefits, participants also described barriers. Mr. He, a retired factory worker, noted financial constraints:

"I want to join a yoga class, but the fees are too high for someone on a fixed pension. The free tai chi groups in the park are my only option." (Male, 68)

Additionally, Ms. Deng, a square dance participant, raised concerns about space limitations:

"Our group often struggles to find a suitable place to practice. Public squares are crowded, and we sometimes face complaints about the noise." (Female, 64)

Addressing these challenges requires targeted interventions, such as subsidized programs and better infrastructure for elderly LPA.

5 RECOMMENDATIONS

5.1 Community-Based Initiatives

Community-level actions play a vital role in increasing elderly participation in Leisure physical activity (LPA) and addressing barriers identified in this study. One essential strategy is to offer free or low-cost programs targeted at elderly participants, especially for those from low-income backgrounds. For example, parks like Yuexiu Park or Haizhu Lake in Guangzhou could partner with local organizations to provide free tai chi, square dance, or yoga classes. Evidence shows that cost is a significant deterrent for elderly individuals to engage in structured PA. A participant in this study expressed,

"I love yoga, but the high fees discourage me. Free or affordable classes in nearby parks would help a lot." (Male, 68). In addition, organizing inclusive sports festivals can foster cultural exchange and social bonding among elderly individuals from diverse backgrounds. For example, annual events celebrating both traditional (e.g., tai chi, lion dance) and modern sports (e.g., yoga, aerobics) could enhance community cohesion. Such festivals could integrate music, performances, and interactive workshops to attract broader participation. A square dance participant mentioned,

"Participating in a group dance during the community festival helped me meet new friends and feel more connected." (Female, 65).

Research supports the idea that group-based sports activities improve social cohesion and reduce isolation, especially among elderly populations in urban areas.

Furthermore, training community leaders is critical to the success of such initiatives. Qualified trainers can help adapt LPA programs to the specific needs of elderly participants, considering their physical limitations and cultural preferences. For instance, involving bilingual trainers can ensure accessibility for elderly migrants who may face language barriers.

5.2 Government Policies

Government intervention is essential to address systemic barriers to elderly LPA participation. The first step is to provide subsidies for elderly sports programs and facilities, particularly for lower-income districts in Guangzhou, such as Baiyun and Liwan. Subsidies can support free classes, improve facilities, and ensure accessibility for all elderly

residents. Zhao et al. highlight that subsidized sports programs have significantly increased elderly participation in rural Chinese communities.

Additionally, developing culturally sensitive campaigns to promote LPA among diverse elderly populations is crucial. Campaigns should emphasize the health benefits of LPA while respecting cultural values and traditions. For example, promotional materials can highlight tai chi's cultural heritage and modern sports' global relevance. Integrating traditional Chinese medicine (TCM) principles, such as the balance of "yin and yang," into messaging can resonate more deeply with elderly participants. A tai chi participant remarked,

"When I see messages linking tai chi to maintaining balance in life, it motivates me to stay consistent with my practice." (Female, 66).

Governments should also establish public-private partnerships to leverage funding and expertise from businesses, NGOs, and local community organizations. For instance, partnerships with fitness centers or technology companies can help introduce digital fitness tools, such as apps or wearable devices, tailored for elderly users (Wang et al., 2018).

5.3 Future Research

While this study provides valuable insights, there is a need for further research to address unresolved questions. One priority is to investigate the long-term health outcomes of elderly participation in hybrid sports activities (a mix of traditional and modern sports). Longitudinal studies can assess how consistent engagement in hybrid activities impacts physical health, emotional well-being, and social integration over time. For example, does participating in yoga infused with Cantonese opera music offer unique benefits compared to traditional yoga?

Another avenue for research is to examine gender-specific barriers and motivations for LPA participation. This study observed differences in activity preferences, with women favoring group activities like square dancing and men gravitating toward individual sports like tai chi. Understanding the gendered dimensions of LPA can inform tailored interventions that address specific challenges, such as social stigma for male participation in group dancing or accessibility concerns for female participants in yoga.

Finally, future studies should explore how digital tools can bridge accessibility gaps. For example, virtual tai chi classes or fitness apps tailored to elderly needs can engage participants who face mobility or time constraints. Recent studies indicate that digital platforms have shown promise in encouraging LPA among elderly individuals in urban environments.

6 CONCLUSION

This study underscores the profound impact of Leisure physical activity on elderly health and well-being, particularly in Guangzhou, a city rich in both cultural heritage and modern influences. Participation in traditional sports, such as tai chi and lion dance, preserves cultural identity and fosters intergenerational connections, while modern sports like yoga and aerobics introduce innovative ways to improve physical and mental health. By blending tradition with modernity, Leisure physical activity acts as a bridge, promoting cultural integration and personal growth among Guangzhou's elderly population.

The findings highlight the need for tailored community initiatives and robust government policies to address barriers to participation. Free or low-cost programs, inclusive sports festivals, and culturally sensitive campaigns can significantly enhance accessibility and inclusivity. Simultaneously, further research into hybrid sports activities, gender-specific barriers, and digital fitness tools can offer deeper insights to optimize interventions.

Ultimately, Leisure physical activity is not merely a health intervention but a tool for building social cohesion, preserving cultural heritage, and empowering elderly individuals to lead fulfilling lives. Through collaborative efforts between communities, governments, and researchers, Guangzhou can become a model city for active aging in an urban multicultural context.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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IMPACTS OF SPOTLIGHT EFFECT ON PERFORMANCE ANXIETY AND SELF-CONFIDENCE AMONG UNDERGRADUATE ATHLETES OF THE UNIVERSITY OF PORT HARCOURT

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Abstract: This study investigated the impacts of the spotlight effect on performance anxiety and self-confidence among undergraduate athletes at the University of Port Harcourt. The spotlight effect refers to the tendency of individuals to overestimate the extent to which they are the focus of others' attention, which can lead to heightened anxiety and diminished confidence, especially in competitive sports environments. The research employed a quantitative approach, using a structured questionnaire divided into four sections: demographic information, performance anxiety, self-confidence, and coping strategies. The sample size consisted of 60 undergraduate athletes, both male and female, representing various sports disciplines. Data were analyzed using descriptive statistics, independent t-tests, and one-way ANOVA to assess differences based on gender and sport type (team vs. individual). The findings revealed a significant relationship between the spotlight effect and increased performance anxiety, with male athletes experiencing higher levels of anxiety compared to females. Additionally, athletes participating in individual sports reported lower self-confidence under the spotlight effect than those involved in team sports. The analysis of coping strategies highlighted that athletes employ various techniques, including relaxation exercises, mental visualization, and peer support, to mitigate the negative impacts of the spotlight effect. The study concludes that the spotlight effect significantly influences athletes' psychological states, affecting their anxiety levels and self-confidence, with notable differences across gender and sport type. It recommends targeted mental training programs, gender-specific support, and simulation of high-pressure environments to help athletes manage the pressures of being observed during competition. These interventions could contribute to improving overall athletic performance and well-being.

Keywords: Spotlight effect; Performance anxiety; Self-confidence; Undergraduate athletes; University of Port Harcourt; Sport type; Gender differences; Coping strategies

1 INTRODUCTION

The psychological concept known as the spotlight effect refers to an individual's tendency to overestimate the extent to which their actions and appearance are observed and scrutinized by others. This phenomenon stems from a cognitive bias that humans naturally focus more on themselves than others do, leading to a misperception of how much attention they receive from others [1]. In social settings, people often assume they are being watched more than they really are, which can lead to heightened self-consciousness. In performance-based contexts like sports, athletes may believe their mistakes, behavior, or appearance are being heavily judged by spectators, teammates, or coaches. This perception can increase anxiety and stress, particularly in high-pressure situations such as competitions or key events [2].

In sports, the spotlight effect is particularly relevant due to the public and competitive nature of athletic performance. Athletes often feel as though they are under constant observation, whether during training, games, or everyday interactions with their teams. The presence of spectators, media coverage, and the importance placed on performance outcomes can amplify the feeling of being in the spotlight [3]. For undergraduate athletes, this sensation may be heightened by the pressure to prove their skills, live up to expectations, and secure future opportunities in sports or education. Consequently, the spotlight effect plays a crucial role in shaping both their mental state and physical performance.

Understanding the spotlight effect is significant because it directly impacts two key psychological factors in sports: performance anxiety and self-confidence. Performance anxiety refers to the stress or nervousness that athletes feel when they are about to perform in a high-stakes environment. It can lead to physical symptoms such as sweating, trembling, or an increased heart rate, as well as mental effects like fear of failure or difficulty concentrating [4]. When athletes believe that all eyes are on them, as suggested by the spotlight effect, their performance anxiety can become more intense, often hindering their ability to execute skills properly during competition.

On the other hand, self-confidence in sports refers to an athlete's belief in their ability to perform well. High levels of self-confidence have been linked to better performance outcomes, as athletes with confidence tend to take more risks, recover quickly from mistakes, and remain focused under pressure [5]. However, the spotlight effect can erode this confidence by making athletes overly concerned with how they are perceived, leading to self-doubt and second-guessing. When athletes

perceive themselves as constantly being judged, their self-confidence may waver, resulting in hesitancy or fear during key moments in competition [6].

The importance of understanding the spotlight effect within the context of sports lies in its potential to either enhance or hinder an athlete's performance. If coaches, trainers, and athletes themselves can recognize the presence of the spotlight effect and its influence on anxiety and self-confidence, they can take steps to mitigate its negative effects. Psychological strategies such as mindfulness, positive self-talk and reframing techniques can help athletes shift their focus away from perceived external judgments and concentrate on their performance [7]. This can lead to reduced anxiety and a boost in self-confidence, ultimately improving overall performance outcomes.

For undergraduate athletes, who are often in a developmental phase of both their academic and athletic careers, managing the spotlight effect is crucial. These athletes may already face various pressures, such as maintaining academic performance, meeting team expectations, and navigating their social environments. The additional psychological burden of the spotlight effect can exacerbate existing stressors, making it harder for them to perform at their best [8]. Understanding this phenomenon could be key to enhancing their mental resilience and long-term success both on and off the field.

In the context of university sports, particularly in institutions like the University of Port Harcourt, recognizing and addressing the spotlight effect could be a game-changer for athlete development. University athletes often deal with local fame, media attention, and the expectations of their peers, which can amplify feelings of being constantly observed [9]. By integrating awareness of the spotlight effect into athletic programs, universities could help athletes develop stronger mental tools for managing performance anxiety and boosting self-confidence, leading to better overall results in competitions.

Given the competitive nature of modern sports, particularly at the university level, the ability to handle pressure and maintain confidence is essential for success. Athletes who can manage the spotlight effect are more likely to remain composed during high-pressure situations and perform at their peak. Understanding this phenomenon not only benefits individual athletes but can also enhance team dynamics, as athletes with higher self-confidence and lower anxiety are often better leaders and collaborators on the field [10].

1.1 Research Questions

1. What is the relationship between the spotlight effect and performance anxiety among undergraduate athletes of the University of Port Harcourt?
2. How does the spotlight effect influence the self-confidence levels of undergraduate athletes of the University of Port Harcourt during competitive sports events?
3. What are the gender differences, in the experience of the spotlight effect among undergraduate athletes of the University of Port Harcourt?
4. What coping strategies do undergraduate athletes of the University of Port Harcourt employ to manage the negative impacts of the spotlight effect on their sports performance?

1.2 Hypothesis

1. There is no significant difference in the experience of the spotlight effect between undergraduate athletes participating in team sports and those participating in individual sports at the University of Port Harcourt.
2. There is no significant difference in the experience of the spotlight effect between male and female undergraduate athletes at the University of Port Harcourt.

2 LITERATURE REVIEW

2.1 The Spotlight Effect and Its Cognitive Foundations

The spotlight effect was first formally studied by Gilovich, Medvec, and Savitsky [11], who demonstrated that individuals tend to overestimate how much they are noticed by others in social situations. Their research revealed that this effect is rooted in egocentric thought processes—people focus on themselves and thus mistakenly assume that others are equally focused on them. This has implications for athletes who feel that all eyes are on them during performance, leading to higher stress levels [11]. In the sports context, this cognitive bias becomes particularly relevant. Greenlees, Eynon, and Thelwell [2] examined how athletes perceive themselves during public performances and concluded that the spotlight effect is often more pronounced in situations with large audiences, media attention, or high stakes. Athletes frequently overestimate the amount of scrutiny from spectators and coaches, which heightens their self-consciousness and anxiety.

2.2 Performance Anxiety in Athletes

Performance anxiety is a well-studied concept in sports psychology, often linked with pre-performance jitters and nervousness. The spotlight effect exacerbates this anxiety, as athletes feel they are being watched and judged, leading to an increase in physical symptoms such as elevated heart rate, sweating, and muscle tension. Turner and Jones [4] discussed

how the presence of perceived evaluators amplifies performance anxiety, particularly in individual sports where the athlete's focus is more self-directed. The authors noted that anxiety often results in a "choking" phenomenon, where athletes underperform under pressure due to heightened arousal levels. Further, Grossbard et al. [12] found that athletes with a heightened sense of self-awareness due to the spotlight effect tend to experience concentration disruption and worry, both of which negatively impact performance. They concluded that strategies aimed at reducing the spotlight effect, such as reframing thoughts or engaging in mindfulness, could significantly reduce performance anxiety.

2.3 The Role of Self-Confidence in Athletic Performance

Self-confidence, defined as the belief in one's ability to perform well, plays a pivotal role in athletic success. High self-confidence has been consistently linked to better performance outcomes, risk-taking, and perseverance. Machida, Ward, and Vealey [5] found that athletes with higher self-confidence tend to perform better because they are less likely to be affected by mistakes and external judgments. However, the spotlight effect can diminish self-confidence by making athletes overly concerned with how others perceive their performance, leading to self-doubt and hesitation. Baumeister [13] described the phenomenon of "choking under pressure" as a common occurrence when self-confidence is undermined by the perception of being scrutinized. When athletes focus more on how they are being viewed than on their actual performance, they tend to second-guess themselves, which negatively affects their execution of skills. This is consistent with the findings of Hanton, Mellalieu, and Hall [14], who identified that athletes who experience higher levels of self-confidence tend to be more resilient under pressure, showing that mitigating the spotlight effect could help preserve athletes' confidence.

2.4 Gender and the Spotlight Effect

Research suggests that gender differences may exist in the way the spotlight effect influences performance anxiety and self-confidence. Nicholls et al. [15] found that female athletes were more prone to experiencing self-consciousness and social anxiety in competitive settings compared to their male counterparts. This difference may be attributed to societal pressures on female athletes to conform to certain standards of appearance and behavior, which intensifies the feeling of being in the spotlight. The study highlighted the need for gender-specific strategies in managing the spotlight effect, particularly in team sports where group dynamics may play a significant role in performance perception.

2.5 The Role of Experience and Expertise

The impact of the spotlight effect also varies depending on an athlete's level of experience. Myers, Hill, and Worsfold [9] examined university-level athletes and found that novices were more affected by the spotlight effect than experienced athletes. Novice athletes often lacked the coping mechanisms needed to deal with the pressure of public scrutiny, leading to increased performance anxiety and reduced self-confidence. On the other hand, experienced athletes were better equipped to manage the pressures of being observed, often using mental resilience strategies developed over years of competition. In addition, Lazarus, Porat, and Stephan [8] found that athletes who had been exposed to regular high-pressure environments, such as elite competitions, developed an ability to perform under the spotlight. Their study emphasized the importance of incorporating psychological training that addresses the spotlight effect in athletic programs to build mental resilience in younger athletes.

2.6 Coping Strategies for the Spotlight Effect

Several coping mechanisms have been proposed to help athletes manage the spotlight effect and its associated anxiety. Brown and Fletcher [7] explored the use of mindfulness-based interventions in reducing performance anxiety caused by the spotlight effect. Their study demonstrated that athletes who practiced mindfulness were able to shift their focus away from external judgments and concentrate more on their performance. Other strategies, such as cognitive restructuring and positive self-talk, have been shown to improve self-confidence by reframing negative perceptions [1]. Similarly, Pineda-Espejel et al. [16] advocated for the use of psychological skills training, including visualization and goal-setting, to mitigate the effects of the spotlight effect. These interventions allow athletes to mentally prepare for high-pressure situations by simulating the feeling of being watched, thus desensitizing them to the pressures of public performance.

2.7 Team vs. Individual Sports

Research indicates that the spotlight effect may manifest differently in team sports compared to individual sports. O'Connor and Arnold [17] suggested that in team sports, the attention is often distributed among players, which can alleviate the individual sense of being in the spotlight. However, this effect can also depend on an athlete's role within the team. Star players or those in key positions may still experience heightened self-consciousness due to the centrality of their roles. In contrast, athletes in individual sports, such as track and field or tennis, may feel a more direct and intense form of the spotlight effect, as the focus is entirely on them.

3 MATERIALS AND METHODS

This study adopted a descriptive survey design to explore the impact of the spotlight effect on performance anxiety and self-confidence among undergraduate athletes at the University of Port Harcourt. A survey design was chosen to capture participants' self-reported perceptions and experiences related to the spotlight effect in real-life sports scenarios. This design allowed for the collection of quantitative data, which was used to identify patterns and relationships between the spotlight effect, performance anxiety, and self-confidence. The population for this study comprised 144 undergraduate athletes enrolled in the University of Port Harcourt, specifically those actively participating in sports competitions at the university level. These athletes came from various sports disciplines, including team sports (football and basketball) and individual sports (athletics and tennis). The estimated population size was 144 athletes. This population was targeted because of their regular involvement in competitive sports, which often puts them under scrutiny, making them more likely to experience the spotlight effect.

A stratified random sampling technique was employed to select participants for the study. The stratification was based on the type of sport (team sports vs. individual sports) and gender (male vs. female athletes). This ensured that a representative sample of athletes from different sports and genders was included in the study. From the population of 144 athletes, a sample size of 60 athletes was determined using Cochran's formula for determining sample size in large populations. The sample was proportionally divided, with 45 athletes representing team sports and 15 representing individual sports. The primary instrument for data collection was a self-structured questionnaire. The questionnaire was designed in Likert scale format, with responses ranging from 1 (Strongly Disagree) to 4 (Strongly Agree), to quantify the athletes' levels of anxiety, self-confidence, and spotlight effect perception.

To ensure the validity of the instrument, the questionnaire was subjected to expert review by three professionals in sports and exercise science. Their feedback was incorporated to refine the clarity, relevance, and appropriateness of the items. Additionally, a pilot study was conducted with 20 athletes (not part of the main study) to test the reliability of the instrument. The internal consistency of the questionnaire was measured using Cronbach's alpha with a value of 0.85 indicating good reliability. Data collection was conducted over a two-week period. The researcher distributed the questionnaires to athletes before or after their training sessions to minimize disruption. Participants were briefed on the purpose of the study and assured of the confidentiality of their responses. The athletes were given approximately 20 minutes to complete the questionnaire. A total of 60 completed questionnaires were collected and used for analysis.

The collected data were analyzed using descriptive statistics of means and standard deviations while inferential statistics of t-test and one-way ANOVA were used to test hypotheses. All analyses were performed using SPSS version 25, and the significance level was set at $p < 0.05$ for all statistical tests. The findings were presented in tables for clarity. Informed consent was obtained from all participants prior to their involvement in the study. Participants were assured that their responses would remain confidential and anonymous. They were also informed that their participation was voluntary and that they could withdraw from the study at any time without any consequences.

4 RESULTS

Table 1 Mean and Standard Deviation Summary of the Relationship between the Spotlight Effect and Performance Anxiety among Undergraduate Athletes of the University of Port Harcourt

S/NO	ITEMS	SA (4)	A (3)	D (2)	SD (1)	TWS (Total Weighted Score)	X (Mean)	Standard Deviation	Remark
1	I feel more anxious when I think that everyone is watching me during competitions.	20	25	10	5	115	1.92	0.78	Moderate Anxiety
2	My anxiety levels increase when I feel like I am the center of attention in a competition.	25	20	10	5	120	2.00	0.76	Moderate Anxiety
3	Knowing that others are judging me makes me more nervous before a competition.	30	15	10	5	135	2.25	0.71	Moderate Anxiety
4	The fear of being observed closely impacts my ability to focus during sports events.	18	25	12	5	111	1.85	0.82	Moderate Anxiety
5	My performance anxiety is heightened when I believe people expect me to perform perfectly.	22	25	8	5	124	2.07	0.77	Moderate Anxiety
Grand mean									

The table 1 above illustrates the responses of undergraduate athletes at the University of Port Harcourt regarding the relationship between the spotlight effect and performance anxiety. Overall, a moderate level of performance anxiety is observed across the five statements, with mean scores ranging from 1.85 to 2.25, indicating that athletes generally experience heightened anxiety when they feel observed during competitions. The standard deviations suggest a relatively consistent response pattern among participants, though slight variations exist. The highest average score (2.25) corresponds

to the anxiety related to being judged by others, indicating that the pressure of external evaluations significantly impacts their mental state. This analysis highlights the critical role of perceived observation in influencing athletes' anxiety levels, suggesting a need for effective coping strategies to manage performance anxiety in competitive settings.

Table 2 Mean and Standard Deviation Summary of how Spotlight Effect Influence the Self-Confidence Levels of Undergraduate Athletes of the University of Port Harcourt during Competitive Sports Event

S/NO	ITEMS	SA (4)	A (3)	D (2)	SD (1)	TWS (Total Weighted Score)	X (Mean)	Standard Deviation	Remark
1	The feeling of being observed makes me doubt my abilities during competitions.	25	20	10	5	120	2.00	0.85	Moderate Impact
2	When I think others are watching me, my self-confidence decreases.	22	25	8	5	125	2.08	0.79	Moderate Impact
3	I find it hard to maintain confidence when I believe the spotlight is on me during a game.	20	20	15	5	115	1.92	0.82	Moderate Impact
4	My self-assurance is weakened when I feel like everyone is scrutinizing my performance.	30	15	10	5	135	2.25	0.71	Moderate Impact
5	Despite being watched by others, I remain confident in my abilities.	15	20	15	10	105	1.75	0.90	Moderate Impact
Grand Mean							2.00		

The data presented in the table 2 demonstrates the influence of the spotlight effect on self-confidence among undergraduate athletes at the University of Port Harcourt. The mean scores range from 1.75 to 2.25, indicating a generally moderate impact of being observed on self-confidence during competitions. The highest mean score (2.25) reflects the belief that scrutiny negatively affects self-assurance, while the lowest mean score (1.75) indicates that some athletes still maintain confidence despite being watched. The standard deviations suggest a consistent response pattern among participants, highlighting the pervasive nature of performance anxiety in competitive settings. Overall, the findings emphasize the importance of addressing self-confidence issues among athletes, particularly in high-pressure environments where they feel observed, suggesting a need for targeted interventions to enhance their psychological resilience.

Table 3 Mean and Standard Deviation Summary of Gender Differences in the Experience of the Spotlight Effect among Undergraduate Athletes of the University of Port Harcourt

S/NO	ITEMS	SA (4)	A (3)	D (2)	SD (1)	TWS (Total Weighted Score)	X (Mean)	Standard Deviation	Remark
1	As a male/female athlete, I feel more pressured by the spotlight effect than the opposite gender.	20	25	10	5	130	2.17	0.81	Moderate Impact
2	I believe that male athletes experience the spotlight effect more than female athletes.	18	22	15	5	124	2.07	0.78	Moderate Impact
3	I believe that female athletes experience the spotlight effect more than male athletes.	25	15	15	5	135	2.25	0.76	Moderate Impact
4	Gender impacts how much I feel observed and judged during competitive sports.	30	20	5	5	145	2.42	0.69	Moderate Impact
5	I think the spotlight effect affects both genders equally in sports performance.	10	10	20	20	110	1.83	0.85	Moderate Impact
Grand Mean							2.03		

The data displayed in the table 3 provides insights into gender differences in the experience of the spotlight effect among undergraduate athletes at the University of Port Harcourt. The mean scores range from 1.83 to 2.42, indicating that while both genders experience pressure related to being observed, the intensity varies. The highest mean score (2.42) reflects the belief that gender significantly impacts feelings of observation and judgment; while the lowest mean score (1.83) suggests that some athletes perceive the spotlight effect as equally impactful on both genders. Standard deviations across the responses indicate consistent perceptions among participants, highlighting that the spotlight effect is a common concern. These findings suggest that both male and female athletes face challenges related to self-perception and judgment during competitions, pointing to the necessity for targeted psychological interventions that address these gender-specific experiences in competitive sports settings.

Table 4 Mean and Standard Deviation Summary of the Coping Strategies Undergraduate Athletes of the University of Port Harcourt Employ to Manage the Negative Impacts of the Spotlight Effect on Their Sports Performance

S/NO	ITEMS	SA (4)	A (3)	D (2)	SD (1)	TWS (Total Weighted Score)	X (Mean)	Standard Deviation	Remark
1	I use relaxation techniques, like deep breathing, to reduce the stress caused by the spotlight effect.	25	20	10	5	130	2.17	0.81	Moderate Impact
2	Focusing on my own performance rather than the audience helps me deal with the spotlight effect.	30	15	10	5	135	2.25	0.78	Moderate Impact
3	I try to mentally block out the crowd or audience to stay focused during a game.	28	18	10	4	134	2.23	0.76	Moderate Impact
4	Visualizing successful performance helps me overcome the pressure of being watched.	26	20	8	6	130	2.17	0.74	Moderate Impact
5	Talking to a coach or teammate before a game helps me reduce the anxiety caused by the spotlight.	20	22	10	8	122	2.03	0.79	Moderate Impact
6	I rely on pre-competition routines to manage my anxiety about being observed.	22	18	15	5	119	1.98	0.83	Moderate Impact
Grand Mean							2.14		

Table 4 above presents the coping strategies used by undergraduate athletes at the University of Port Harcourt to manage the spotlight effect during sports competitions. The grand mean score of 2.14 suggests that, on average, the athletes moderately agree with employing these coping mechanisms. The most commonly used strategy was "focusing on my own performance rather than the audience" (mean = 2.25), while the least employed strategy was relying on pre-competition routines (mean = 1.98). The relatively low standard deviations across items indicate consistency in responses, meaning that these coping strategies are widely shared among athletes. However, the moderate level of agreement also implies that while these strategies are utilized, they may not fully alleviate the stress and anxiety associated with the spotlight effect. Therefore, more targeted interventions might be necessary to help athletes better manage this pressure.

5 HYPOTHESES

Ho1: There is no significant difference in the experience of the spotlight effect between male and female undergraduate athletes at the University of Port Harcourt.

Table 5 T-test Summary of Difference in the Experience of the Spotlight Effect between Male and Female Undergraduate Athletes at the University of Port Harcourt

Gender	n	\bar{x}	S.D	df	t-cal.	t-crit.	Decision
Male	35	3.45	0.50	58	9.14	2.00	Reject H ₀
Female	25	2.90	0.45				
Total	60						

Level of significance = 0.05

As shown in table 5, based on the t-test analysis of gender differences in the experience of the spotlight effect, the calculated t-value (t-cal = 9.14) is much higher than the critical t-value (t-crit = 2.00) at 58 degrees of freedom (df) and a significance level of 0.05. This indicates a significant difference between male and female undergraduate athletes at the University of Port Harcourt regarding how they experience the spotlight effect. The mean score for male athletes ($\bar{x} = 3.45$) is higher than that of female athletes ($\bar{x} = 2.90$), suggesting that male athletes tend to feel more observed and judged during competitions compared to their female counterparts. Consequently, we reject the null hypothesis, affirming that gender plays a significant role in the experience of the spotlight effect among these athletes.

Ho2: There is no significant difference in the experience of the spotlight effect between undergraduate athletes participating in team sports and those participating in individual sports at the University of Port Harcourt.

Table 6 One-way ANOVA Summary of Sport Type Differences Undergraduate Athletes of the University of Port Harcourt

Source	Type III Sum of Squares	Df	Mean Square	F	Significance (p-value)	Partial Eta Squared
Corrected Model	1.541	1	1.541	146.91	1.55×10^{-17}	0.717
Intercept	12.212	1	12.212	51.08	0.000	0.574
Sport Type (VAR00002)	1.541	1	1.541	146.91	1.55×10^{-17}	0.717
Error	0.609	58	0.0105			
Total	458.000	60				
Corrected Total	2.15	59				
Source	Type III Sum of Squares	Df	Mean Square	F	Significance (p-value)	Partial Eta Squared

As shown in table 6, the one-way ANOVA results in Table 6 provide clear evidence to reject the null hypothesis (H_0) that there is no significant difference in the experience of the spotlight effect between undergraduate athletes participating in team sports and those participating in individual sports at the University of Port Harcourt. The results show a highly significant F-value of 146.91 with an extremely low p-value of 1.55×10^{-17} , which is well below the significance threshold of 0.05. This indicates that there is a statistically significant difference in the spotlight effect experienced by athletes based on their sport type. Furthermore, the partial eta squared value of 0.717 suggests that approximately 71.7% of the variance in the spotlight effect is explained by the type of sport (team vs. individual). Therefore, athletes participating in individual sports experience the spotlight effect differently than those in team sports, likely due to the increased individual attention and pressure experienced in solo events.

6 DISCUSSION OF FINDINGS

The results of this study reveal significant differences in the experience of the spotlight effect between male and female undergraduate athletes at the University of Port Harcourt. Male athletes reported a higher mean score (3.45) compared to their female counterparts (2.90), suggesting that male athletes perceive themselves as being under greater scrutiny during competitive events. This finding is consistent with previous research which suggests that male athletes often feel more pressure to perform under the gaze of spectators and are more susceptible to the spotlight effect [18].

The spotlight effect refers to the phenomenon where individuals believe they are being observed and judged more than they actually are, leading to heightened self-consciousness and performance anxiety [11]. For athletes, this can manifest as performance anxiety, reduced self-confidence, and increased pressure to meet perceived expectations. Male athletes, in particular, may experience this effect more acutely due to societal expectations that place a high value on their athletic performance and success [19]. In contrast, female athletes may not internalize these expectations to the same extent, which could explain their lower mean score in the study. The significant t-value ($t = 9.14$) and low p-value ($p < 0.05$) indicate that gender significantly impacts how athletes experience the spotlight effect. This finding aligns with research by Martens et al. [20], which found that male athletes often report higher levels of performance anxiety compared to female athletes, particularly in environments where they feel closely observed. The increased self-consciousness among male athletes may be tied to traditional notions of masculinity, which emphasize competitiveness and success in sports [21].

This study also supports the theory that individual psychological factors, such as self-confidence and anxiety, are deeply affected by external social perceptions. Athletes who believe they are being judged or observed closely are more likely to experience reduced self-confidence, which can negatively impact their performance [22]. Male athletes may internalize these feelings more strongly, resulting in greater performance anxiety when under the perceived spotlight. Interestingly, female athletes may have developed coping mechanisms to mitigate the effects of the spotlight, which could explain their relatively lower anxiety levels. Research has shown that female athletes often engage in self-regulation strategies, such as focusing on personal goals or team success, which may shield them from the negative impacts of the spotlight [23]. These findings highlight the importance of gender-sensitive approaches in sports psychology to address the unique experiences and challenges faced by male and female athletes.

7 CONCLUSION

This study highlights significant gender differences in the experience of the spotlight effect among undergraduate athletes at the University of Port Harcourt, with male athletes reporting higher levels of self-consciousness and performance anxiety compared to their female counterparts. The findings suggest that societal expectations and perceived scrutiny play a more prominent role in shaping the psychological responses of male athletes, potentially affecting their self-confidence and performance. These results underscore the need for gender-sensitive interventions in sports psychology to help athletes manage the pressures of competitive environments and reduce the impact of the spotlight effect on performance. Addressing these factors can lead to improved well-being and performance outcomes for athletes.

8 RECOMMENDATIONS

Based on the above conclusion this study therefore recommends that:

1. The management of the University of Port Harcourt should develop mental training programs that focus on strategies such as mindfulness, relaxation techniques, and cognitive-behavioral interventions to help athletes manage performance anxiety caused by the spotlight effect.
2. Coaches and sports psychologists in the University of Port Harcourt should design training sessions that simulate high-pressure competition environments. This can help athletes become accustomed to performing under scrutiny and maintain their self-confidence during competitive sports events.
3. Coaches the University of Port Harcourt should employ gender-specific psychological approaches to mitigate the impact of the spotlight effect on their performance.

4. Undergraduate athletes in the University of Port Harcourt should be encouraged to develop peer support networks or mentoring relationships with more experienced athletes who have learned effective coping strategies for managing the spotlight effect. This will help them employ effective coping mechanisms to handle the pressures of being observed during competitions.

CONFLICTING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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THE PHENOMENON OF "STUDY BUDDY" AMONG COLLEGE STUDENTS: MOTIVATIONS AND INTERACTION PATTERNS

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Abstract: The concept of a "study buddy" has emerged as a new social phenomenon, which is a product of the rapid development of internet socialization. "Study buddy social culture refers to the temporary social relationships and activities formed by individuals due to common interests, hobbies, or needs." In the context of contemporary college students, the term "study buddy" is increasingly understood and defined as a cooperative partner for both academic and recreational activities. "Study buddy socialization" provides students with high-quality emotional value, offering precise companionship. However, it also brings potential risks concerning personal safety, information security, and other related concerns. This study on the phenomenon of "study buddy socialization" among college students aims to provide a comprehensive understanding of the evolving ideological trends of this demographic, helping to grasp the rules of students' physical and mental development, their socializing needs, and to enhance the accuracy and effectiveness of ideological and political education in universities, thereby facilitating the growth and success of students.

Keywords: College students; Study buddy; Interaction patterns

1 INTRODUCTION

Against the backdrop of the dual trends of the widespread expansion of higher education and the digital transformation, the learning methods of college students are undergoing profound changes. In recent years, the phenomenon of "study buddies" has grown exponentially among college students as a new form of peer-assisted learning. This phenomenon is not only prevalent in offline campus life but also spreads widely across social media platforms. For example, the topic "studybuddy" on Rednote has reached over 230 million views, the related discussions on Weibo have exceeded 500,000 posts, and the question "How to find the right study buddy?" on Zhihu has garnered 120,000 views. The rise of this new learning model reflects the contemporary college students' need to supplement traditional classroom teaching and highlights the unique collaborative learning preferences of Generation Z learners[1].

Compared with traditional institutionalized study groups, "study buddies" exhibit three typical characteristics: First, in terms of organizational structure, they are informal, typically consisting of 2-3 students who voluntarily form a group based on common learning objectives, without relying on teacher assignments or course requirements. Second, in terms of interaction, the relationship is based on equality, where there is no fixed "teacher-student" hierarchy. Finally, in terms of functional orientation, study buddies serve multiple purposes, addressing academic needs while also fulfilling a social companionship function. This unique organizational form provides a new perspective for re-examining the peer learning mechanism.

Current research on peer learning primarily focuses on formal educational settings. However, insufficient attention has been given to informal learning alliances, such as "study buddies," which are spontaneously formed by students. This research gap prevents a comprehensive understanding of the true peer support networks of contemporary college students and limits our ability to deeply understand the new forms of peer-assisted learning in the digital age. Particularly in the post-pandemic era, with blended online and offline learning becoming the new normal, investigating this flexible and diverse peer assistance model has important theoretical and practical significance[2].

Based on this, this study focuses on two core issues: first, the formation drivers of study buddies; second, the interaction patterns of study buddies. By addressing these issues, this study aims to provide new insights for the construction of learning support systems in higher education, while also enriching the theoretical research in the field of informal learning.

2 THE MULTIFACETED DRIVERS OF STUDY BUDDY FORMATION

2.1 Direct Drive from Academic Pressure

In the context of increasingly fierce competition in higher education, academic pressure has become the most direct and primary driving factor for college students to form study buddy relationships. According to survey data, most students stated that "dealing with academic pressure" is their primary reason for seeking a study buddy. The formation of this phenomenon has a deep educational sociological background and is based on real-world demands.

From the specific manifestations of academic pressure, it is first reflected in course assessments. The ongoing deepening of teaching reforms in higher education has led to increasingly diversified assessment methods, with new forms of assessment such as group presentations, term papers, and lab reports steadily increasing, alongside the traditional final exams. This change requires students to maintain consistent learning efforts throughout the semester,

rather than relying solely on cramming at the end. Secondly, the rising demands of research training have also intensified academic pressure. With increasing emphasis on cultivating undergraduate research abilities, participation in innovation and entrepreneurship projects, subject competitions, and other research activities has continuously risen. These activities often require team collaboration, and study buddies naturally become the most basic form of research teams. Thirdly, pressure from qualification exams related to career development cannot be overlooked. Long-term preparations for exams such as postgraduate entrance exams, language tests for studying abroad, and civil service exams particularly require stable study partners[3]. This companionship not only provides study supervision but also, more importantly, psychological support.

From the perspective of coping mechanisms, study buddies provide a unique buffering role. The Social Comparison Theory can well explain this phenomenon. When students observe their buddy's learning progress, it fosters a sense of positive competition. Surveys show that 72.8% of students acknowledge that their buddy's learning performance influences their own effort levels. Additionally, according to Social Support Theory, the emotional support between study buddies can effectively alleviate academic anxiety[4]. When facing learning difficulties, students with a study buddy are significantly more likely to seek help compared to those studying alone.

From the grade level perspective, the phase-specific changes in academic pressure also influence the formation of buddy relationships. First-year students mainly seek buddies to adapt to university learning methods; second-year students are more likely to form study buddy relationships for foundational major courses; and senior students solidify their buddy relationships due to demands such as graduation projects and job preparation. This evolution reflects the dynamic adjustment of the functions of study buddies.

The development of digital learning environments further strengthens the connection between academic pressure and the formation of study buddy relationships. The popularization of learning management systems (such as Moodle and Chaoxing) makes academic progress visible, with 83.7% of students stating they would use system data to find potential study buddies with similar progress. At the same time, online learning communities (such as Zhihu Learning Circle, Bilibili Study Rooms) provide new channels for pressure relief and buddy matching, and this trend was particularly evident during the pandemic.

2.2 Internal Drive of Psychological Needs

The transformation and development of society have disrupted the existing patterns and significantly increased social mobility, with more and more university students leaving their hometowns to study in provinces and cities outside their places of origin[5]. This frequent movement has caused a certain degree of alienation in the connection between university students and their families, making kinship relationships unable to meet the immediate needs of students. Additionally, university students find themselves in a fast-paced societal environment, facing the dual pressures of academics and survival[5]. Some students become exhausted by the complexities of interpersonal interactions and maintaining social relationships, preferring simpler social models. "Buddy socializing" allows university students to quickly gain high-quality social experiences in a short amount of time. Shallow social relationships like "meal buddies," "movie buddies," and "fitness buddies" satisfy the fragmented and fragmented social needs of modern university students, breaking the boundaries of traditional social methods, eliminating the need for various social etiquettes, and saving time and energy in socializing. As a result, "buddy socializing," a shallow social model, has become increasingly popular among university students because it can meet their basic social needs. When placed in unfamiliar environments and crowds, university students, who pursue individuality, are more likely to choose a social model that satisfies personal needs while avoiding excessive time consumption. "Buddy socializing" exactly meets this demand[6].

2.3 Pragmatic Consideration of Resource Complementarity

"Buddy socializing," as a supplement to intimate relationships, is a form of utilitarian friendship with boundaries and an innovative social method that aligns with the development of the times. Traditional social relationships based on kinship or geographical proximity tend to have higher levels of similarity in terms of cognition and thinking among individuals. However, the development of contemporary society requires more diverse cognition, broader perspectives, and the collision of ideas. The emergence of "buddies" serves as a convenient way for young university students to broaden their knowledge and "reverse connect." Through buddies from all corners of the country, university students can stay informed about the latest news, find new inspiration for their studies and work, and leverage the new form of group cooperation in "buddy socializing" to share a larger temporary resource database in the network society. The "reverse connection" refers to individuals disconnecting the burdensome pressure chains to regain time and freedom in certain situations. This disconnection is not a complete severance of all chains but a selective method that helps individuals live better. Although university students are disconnected from previous kin-based socializing, they continuously form new social ecosystems in the process of individual collectivization, and "buddy socializing" is one of the new social patterns.

3 INTERACTION PATTERNS OF STUDY BUDDIES

The learning buddy model, an important learning approach in modern education, especially emphasizes the interaction and collaboration between learners. In this model, learners are no longer simply recipients of knowledge, but rather, they explore and construct knowledge together with their buddies, promoting the internalization and application of

knowledge[7]. The interactive forms of learning buddy models are diverse and adaptable to different learning contexts and goals. Based on dimensions such as the content, method, and frequency of interaction, the interactive modes of learning buddies can be divided into various types, which will be discussed in detail below.

3.1 Mutual Teaching and Learning Mode

The mutual teaching and learning mode is the most common form of interaction in the learning buddy model. In this mode, learners advance their learning progress by teaching and learning from each other. Each learning buddy has their strengths or specialties, and when they can clearly divide labor and share knowledge, learning efficiency is often significantly improved. The core characteristics of this interaction mode are reciprocity and mutual benefit. Learners are no longer passive recipients of information, but active participants, teaching their knowledge while learning new content from their partners[8]. For example, in certain subjects, student A may excel in mathematics, while student B is stronger in language and literature. When these two students become learning buddies, they can help each other improve their knowledge in the respective areas through communication and teaching. The mutual teaching and learning mode not only facilitates the transfer of knowledge but also deepens learners' understanding of what they have learned. In practice, the mutual teaching and learning mode is particularly suitable for fields with high diversity and complexity of knowledge. In academic learning environments, cooperation between buddies can complement individual deficiencies in certain knowledge areas and, through teaching each other, increase mutual motivation and interest in learning.

3.2 Collaborative Learning Mode

The collaborative learning mode focuses on completing learning tasks through group cooperation. In this mode, learners collaborate and interact to leverage each individual's strengths and specialties, using collective intelligence to solve problems. This interaction mode is common in group projects, team discussions, and joint research, aiming to enhance group learning outcomes through interaction and cooperation among team members. The collaborative learning mode has several distinct characteristics.

3.3 Task Allocation and Role Clarity

In collaborative learning, tasks are usually allocated according to each student's strengths and interests. Each learning buddy takes on different tasks or roles to ensure the efficient completion of learning activities. For example, in a group project, one member might be responsible for research and data analysis, while another might be responsible for writing the report and summarizing findings.

3.4 Collective Thinking and Knowledge Sharing

Through collective discussion and collaboration, learning buddies share each other's knowledge and perspectives. This knowledge sharing not only deepens the understanding of the learning content but also broadens one's thinking and viewpoint, allowing learners to approach problems from different angles.

3.5 Mutual Support and Feedback

The interaction mode in collaborative learning emphasizes mutual support and real-time feedback. When learners encounter difficulties or confusion, they can rely on their buddy's assistance and advice. This timely feedback helps resolve problems quickly and promotes self-reflection and progress.

One key benefit of the collaborative learning mode is its ability to promote the development of social skills through task cooperation. In this mode, learners not only enhance their knowledge level but also develop skills like teamwork, communication, and problem-solving, which are crucial for their future careers and social adaptability.

3.6 Discussion and Debate Mode

The discussion and debate mode promotes deep thinking and the development of critical thinking through the clash of ideas between learning buddies. In this mode, learning buddies exchange opinions, analyze arguments, and debate issues to gain a deeper understanding of learning content and expand their thinking. This interaction mode emphasizes the diversity of ideas and the collision of perspectives, aiming to help students form clear, rational, and profound viewpoints through debate and discussion. For example, in fields like history, philosophy, or social sciences, learners can debate in groups to explore different theories and hypotheses, leading to a deeper understanding of the content. The core characteristic of the discussion and debate mode lies in its requirement for deep thinking. Through mutual debates, learners must not only showcase their knowledge but also respond to others' doubts and defend their viewpoints convincingly. This process helps learners enhance not only their knowledge level but also their critical thinking, logical reasoning, and effective communication skills. Furthermore, the discussion and debate mode helps students understand the diversity and complexity of knowledge. By colliding different viewpoints, learners realize that each knowledge

point may have multiple interpretations and perspectives. This thinking exercise is vital for developing students' future capacity for knowledge innovation and problem-solving.

3.7 Situational Learning Mode

The situational learning mode is an interaction model that places learners in real or simulated contexts. In this mode, learners do not only learn from books and theoretical knowledge but gain knowledge and experience through practical operation, case analysis, and situational simulations. Learning buddies play an important role in situational learning as they can jointly explore solutions through real-time interaction. One key feature of the situational learning mode is the practicality and applicability of the learning content. In this mode, learners continually adjust their learning strategies based on mistakes and feedback from practice, and the interaction with their buddy accelerates problem-solving. Situational learning usually involves solving complex problems and making decisions in real contexts, which helps learners develop the ability to apply knowledge in practice. For example, in medical education, students can simulate patient scenarios to learn how to diagnose and treat. In this process, learning buddies collaborate, discuss different treatment options, and improve their practical skills and decision-making abilities.

4 CONCLUSION

the interactive modes of learning buddies play a multifaceted role in education. From mutual teaching and learning to collaborative learning, discussion and debate, and situational learning, each interaction mode has its unique advantages and applicable contexts. Through these interactions, learners not only gain a better grasp of knowledge but also enhance their critical thinking, communication, and teamwork skills. With the continuous development of educational technology and teaching methods, the interactive modes of learning buddies will be applied in more educational practices, becoming an important force in driving educational innovation and improving learning outcomes.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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RELATIONSHIP BETWEEN JOB WELL-BEING AND TURNOVER INTENTION OF DOCTORAL TEACHERS IN UNIVERSITIES

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Abstract: This study aims to explore the relationship between job well-being and turnover intention among doctoral teachers in universities. A questionnaire survey method was used to collect data from doctoral teachers in several universities in Henan Province, using the Job Well-Being Scale and the Turnover Intention Scale. The results show that job well-being is significantly negatively correlated with turnover intention, and the main factors affecting job well-being of doctoral teachers in universities are analyzed. This study provides a reference for enhancing the stability of the teaching staff in universities and optimizing talent management strategies.

Keywords: Doctoral teachers; Job well-being; Turnover intention

1 INTRODUCTION

Talent is the core competitiveness of universities. As the backbone of teaching and scientific research in universities, the stability and work enthusiasm of doctoral teachers are crucial to the development of universities. In recent years, with the increasing social competition and the enhancement of talent mobility, the phenomenon of teacher turnover in universities has increasingly attracted attention. The turnover of teachers not only affects the normal teaching order, but also adversely affects discipline construction and scientific research innovation [1]. As an important indicator to measure individual work experience, job well-being has a significant impact on employees' work attitudes and behaviors. Studies have shown that higher job well-being can improve employees' job satisfaction, work engagement, and organizational commitment, thereby reducing turnover intention and absenteeism, and improving work performance and organizational efficiency [2]. Conversely, lower job well-being may lead to negative emotions among employees, reduce work enthusiasm, and even lead to turnover. Therefore, paying attention to the job well-being of university teachers is of great practical significance for stabilizing the teaching staff and enhancing the overall competitiveness of universities.

This study aims to explore the relationship between job well-being and turnover intention among doctoral teachers in universities in Henan Province, and further analyze the main factors affecting teachers' job well-being, in order to provide empirical evidence and policy recommendations for reducing teacher turnover rates and stabilizing the teaching staff.

2 LITERATURE REVIEW

2.1 Research Status of Job Well-Being

Job well-being (JWB) refers to the pleasure and satisfaction that employees experience at work, as well as the positive emotional and cognitive evaluation of the work itself. It is a specific manifestation of well-being in the work context, reflecting an individual's positive subjective experience and feelings about work. Domestic and foreign scholars have conducted extensive research on job well-being, exploring its constituent elements, influencing factors, measurement methods, and the relationship between it and work-related variables.

2.1.1 Conceptual definition of job well-being

Job well-being is a multi-dimensional concept. Early research mainly focused on job satisfaction. With the deepening of research, scholars gradually realized that job well-being includes not only cognitive evaluation, but also emotional experience. For example, the subjective well-being model proposed by Diener et al. believes that job well-being includes three dimensions: positive affect, negative affect, and life satisfaction[3]. Warr proposed a job well-being model consisting of job satisfaction, positive affect, and low negative affect from the perspective of the work environment[4]. In recent years, some scholars have begun to pay attention to the dynamic and developmental nature of job well-being. For example, the job demands-resources model proposed by Bakker and Demerouti believes that job well-being is the result of the interaction between job demands and job resources[5].

2.1.2 Measurement of job well-being

In order to accurately measure job well-being, scholars have developed a variety of measurement tools. Commonly used measurement tools include the Job Description Index (JDI), the Minnesota Satisfaction Questionnaire (MSQ) [6], the Job Well-being Scale, and the Subjective Well-being Scale (SWBS). These measurement tools have their own characteristics, and researchers can choose appropriate tools according to research purposes and objects.

2.1.3 Influencing factors of job well-being

The factors affecting job well-being are multi-faceted, which can be summarized as individual factors and organizational factors. Individual factors include personality traits[7], work values, self-efficacy[8], and emotional intelligence. Organizational factors include salary and benefits, work environment, interpersonal relationships, career development opportunities, perceived organizational support, job autonomy, work stress, work-life balance, and organizational culture[9].

2.2 Research Status of Turnover Rate

Employee turnover rate refers to the proportion of employees who leave the organization within a certain period of time. A higher turnover rate will bring many adverse effects to the organization. Therefore, studying the causes and influencing factors of employee turnover and taking effective measures to reduce the turnover rate is an important topic in organizational management.

2.2.1 Definition and types of turnover

Turnover refers to the behavior of employees leaving their organization and terminating their employment relationship. According to different classification criteria, turnover can be divided into voluntary turnover and involuntary turnover, controllable turnover and uncontrollable turnover, functional turnover and dysfunctional turnover, etc.

2.2.2 Calculation of turnover rate

The formula for calculating the turnover rate is: Turnover rate = (Number of employees who left / Total number of employees at the beginning of the period) × 100%.

2.2.3 Reasons for employee turnover

The reasons for employee turnover are complex and diverse, including both individual-level factors and organizational-level factors. Individual factors include seeking better career development opportunities, excessive work pressure, work-life imbalance, mismatch between personal values and organizational culture, and family reasons. Organizational factors include unreasonable salary and benefits, poor promotion channels, poor work atmosphere, lack of training and development opportunities, unfair performance appraisal, and organizational changes. Studies have shown that employees' organizational commitment and job satisfaction are important factors affecting their turnover intention [10].

2.2.4 Costs of turnover

Employee turnover will bring direct and indirect costs to the organization. Direct costs include costs for exit interviews, recruitment, screening, and training. Indirect costs include loss of efficiency, loss of knowledge, impact on morale, impact on customer relations, and impact on organizational reputation.

2.2.5 Relationship between turnover rate and job well-being

A large number of studies have shown that job well-being is significantly negatively correlated with employees' turnover intention. The higher the job well-being of employees, the lower the possibility of their turnover. Hulin proposed that job dissatisfaction is the main reason for employees' turnover intention [11]. Mobley et al. further developed Hulin's model [12]. Zhao and Liu proposed the Unfolding Model of Turnover, believing that employees' turnover decisions are not always rational and may sometimes be triggered by sudden events [13]. Although different scholars have proposed different turnover models, they all emphasize the important role of job well-being in employees' turnover decisions.

2.3 Research Hypotheses

Based on the above literature review, this study proposes the following research hypotheses:

H1: There is a significant negative correlation between job well-being and turnover rate among doctoral teachers in universities.

H2: Salary and benefits, career development opportunities, work environment, and interpersonal relationships have a significant impact on the job well-being of doctoral teachers in universities.

3 RESEARCH METHODS

3.1 Research Objects

The survey objects of this study are doctoral teachers in several universities in Henan Province. A stratified random sampling method was used. A total of 600 questionnaires were distributed, and 480 valid questionnaires were returned, with an effective recovery rate of 80%.

The sample structure is as follows: Among the valid samples, there were 280 male teachers, accounting for 58.3%, and 200 female teachers, accounting for 41.7%. The age distribution was: 192 people aged 25-35, accounting for 40%; 168 people aged 36-45, accounting for 35%; and 120 people aged 46 and above, accounting for 25%. The distribution of teaching years was: 144 people with less than 5 years of teaching experience, accounting for 30%; 192 people with 6-10 years of teaching experience, accounting for 40%; and 144 people with 11 or more years of teaching experience, accounting for 30%.

3.2 Research Tools

This study used a questionnaire survey method and used the following two scales to collect data:

3.2.1 Job well-being scale

The Job Well-being Scale compiled by Smith et al. was used [14]. The scale includes three dimensions: job satisfaction, positive affect, and low negative affect, with a total of 18 items. A 5-point Likert scale was used for scoring, with 1 indicating "very dissatisfied" and 5 indicating "very satisfied." The Cronbach's α coefficient of this scale is 0.92.

3.2.2 Turnover intention scale

The Turnover Intention Scale compiled by Mobley et al. was used [12]. The scale includes three dimensions: turnover intention, looking for alternative jobs, and considering resignation, with a total of 6 items. A 5-point Likert scale was used for scoring, with 1 indicating "strongly disagree" and 5 indicating "strongly agree." The Cronbach's α coefficient of this scale is 0.88.

3.3 Data Analysis Methods

SPSS 26.0 software was used to process and analyze the collected data. The specific methods include:

- (1) Descriptive statistical analysis: Calculate the mean, standard deviation, skewness, and kurtosis of each variable.
- (2) Independent sample t-test and analysis of variance: Test whether there are significant differences in job well-being and turnover intention among teachers with different demographic variables.
- (3) Correlation analysis: Use Pearson correlation analysis to test the relationship between job well-being and turnover rate.
- (4) Regression analysis: Use multiple linear regression analysis to analyze the factors affecting job well-being.

4 Research Results

4.1 Descriptive Statistical Analysis Results

Table 1 shows the mean, standard deviation, skewness, and kurtosis of each variable. The results show that doctoral teachers have a high level of job well-being (mean = 3.85) and low turnover intention (mean = 2.12). The skewness and kurtosis values of each variable are between plus and minus 1, indicating that the data basically conform to a normal distribution.

Table 1 Descriptive Statistical Analysis Results of Each Variable

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Job Well-Being	3.85	0.62	-0.25	-0.10
Turnover Intention	2.12	0.58	0.30	0.20
Job Satisfaction	3.90	0.70	-0.30	0.05
Positive Affect	3.75	0.80	-0.20	-0.15
Low Negative Affect	2.30	0.75	0.40	0.30
Turnover Intention	2.20	0.60	0.25	0.15
Looking for Alternative Jobs	2.05	0.55	0.35	0.25
Considering Resignation	1.95	0.50	0.45	0.40

4.2 Analysis of Differences in Job Well-Being and Turnover Intention Among Teachers with Different Demographic Variables

The results show that there is no significant difference in job well-being and turnover intention between male and female teachers; teachers aged 36-45 have the highest job well-being, and teachers aged 25-35 have the highest turnover intention; teachers with more than 11 years of teaching experience have the highest job well-being, and teachers with less than 5 years of teaching experience have the highest turnover intention.

4.3 Correlation Analysis Results Between Job Well-Being and Turnover Intention

Table 2 shows the correlation coefficients between job well-being and its dimensions and turnover intention.

Table 2 Correlation Analysis Results Between Job Well-Being and Its Dimensions and Turnover Intention

Variable	1	2	3	4	5	6	7	8
1. Job Well-Being	1							
2. Job Satisfaction	0.85**	1						
3. Positive Affect	0.70**	0.60**	1					
4. Low Negative Affect	-0.80**	-0.70**	-0.55**	1				
5. Turnover Intention	-0.65**	-0.60**	-0.50**	0.70**	1			
6. Turnover Intention	-0.60**	-0.55**	-0.45**	0.65**	0.90**	1		
7. Looking for Alternative Jobs	-0.55**	-0.50**	-0.40**	0.60**	0.85**	0.75**	1	
8. Considering Resignation	-0.50**	-0.45**	-0.35**	0.55**	0.80**	0.70**	0.65**	1

Note: ** indicates a significant correlation at the 0.01 level (two-sided).

The results show:

(1) Job well-being is significantly negatively correlated with turnover intention ($r = -0.65$, $p < 0.01$), supporting research hypothesis H1.

(2) Job satisfaction is an important factor affecting teachers' turnover intention.

4.4 Regression Analysis Results of Factors Affecting Job Well-Being

The regression analysis results of salary and benefits, career development opportunities, work environment, and interpersonal relationships on job well-being are as follows: Salary and benefits, career development opportunities, work environment, and interpersonal relationships all have a significant positive impact on job well-being ($p < 0.01$), supporting research hypothesis H2. Among them, interpersonal relationships have the greatest impact on job well-being ($\beta = 0.32$), followed by work environment ($\beta = 0.28$), career development opportunities ($\beta = 0.20$), and salary and benefits ($\beta = 0.15$). The model explains 68% of the variance in job well-being ($R^2 = 0.68$).

5 DISCUSSION

One of the main findings of this study is that there is a significant negative correlation between job well-being and turnover rate among doctoral teachers in universities. This result is consistent with the conclusions of a large number of previous studies, emphasizing the key role of job well-being in employees' turnover decisions [15]. Specifically, when teachers are satisfied with their work, experience positive emotions, and are less affected by negative emotions, they are more inclined to stay in their current positions.

5.1 Impact of Job Well-Being on Turnover Rate

The improvement of job well-being means that teachers obtain more recognition and satisfaction at work, which directly enhances their degree of investment in work and their sense of belonging to the organization. Positive emotional experiences can help teachers better cope with work pressure and challenges, enhance their psychological resilience, and reduce the occurrence of job burnout. Therefore, universities should pay attention to teachers' emotional experiences and strive to create a positive work atmosphere.

5.2 Importance of Job Satisfaction

Job satisfaction is an important factor affecting teachers' turnover intention. If teachers are dissatisfied with factors such as teaching tasks, scientific research pressure, relationships with colleagues and leaders, and school rules and regulations, they are more likely to have thoughts of leaving. Therefore, universities should pay attention to teachers' job satisfaction, promptly understand their needs and dissatisfaction, and take effective measures to solve them, in order to reduce the turnover rate of teachers.

5.3 Main Factors Affecting Teachers' Job Well-Being

Salary and benefits, career development opportunities, work environment, and interpersonal relationships are important factors affecting the job well-being of doctoral teachers in universities. Among them, interpersonal relationships have the greatest impact on teachers' job well-being. Harmonious colleague relationships and a good team atmosphere are essential. A good work environment, reasonable salary and benefits, and good career development opportunities are also important factors in improving teachers' job well-being. Therefore, universities should establish a scientific and reasonable salary system, improve career development mechanisms, and provide teachers with good working conditions and development platforms.

In summary, the results of this study emphasize the important role of job well-being in stabilizing the teaching staff in universities, and reveal the key factors affecting teachers' job well-being. These findings have important implications for human resource management practices in universities. Universities should pay attention to teachers' job well-being, take comprehensive measures to improve teachers' work experience, reduce turnover rates, and thus provide strong talent support for the sustainable development of schools.

6 CONCLUSION

- (1) There is a significant negative correlation between job well-being and turnover rate among doctoral teachers in universities.
- (2) Salary and benefits, career development opportunities, work environment, and interpersonal relationships have a significant impact on the job well-being of doctoral teachers in universities.

7 SUGGESTIONS

- (1) Pay attention to teachers' job well-being and create a positive work environment. Universities should pay attention to teachers' work experience, establish harmonious colleague relationships, create a positive work atmosphere, reduce teachers' work pressure, and improve their job well-being.
- (2) Improve the salary and benefits system and increase teachers' salary. Universities should establish a scientific and reasonable salary system, improve teachers' income levels, and ensure that their labor receives due remuneration.
- (3) Provide good career development opportunities and promote teachers' personal growth. Universities should provide diversified career development channels for teachers, help them realize personal value, and enhance their confidence in career development.
- (4) Optimize talent management strategies and reduce teacher turnover rates. Universities should establish and improve talent management systems, improve performance appraisal mechanisms, provide teachers with good working conditions and development platforms, reduce their turnover intention, and maintain the stability of the teaching staff.

8. RESEARCH LIMITATIONS AND PROSPECTS

This study has certain limitations. First, the research objects are limited to doctoral teachers in universities in Henan Province, and the generalizability of the research results may be limited. Second, this study adopts a cross-sectional research design, which makes it difficult to reveal the causal relationship between job well-being and turnover rate. Future research can use a longitudinal research design to further explore the dynamic relationship between the two. In addition, future research can also explore other factors that may affect teachers' job well-being and turnover, such as organizational culture and leadership behavior, in order to more comprehensively understand the turnover behavior of university teachers.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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SAFETY AND FUN: FINDING THE RIGHT BALANCE FOR A HAPPY AND FULFILLING LIFE

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Abstract: This essay delves into the critical interplay between two fundamental aspects of human life: safety and fun. It begins by clearly defining these terms. "Safety" is characterized as the reasonable control over conditions or hazards that may lead to physical or psychological harm, encompassing measures that protect individuals from accidents, illnesses, or adverse mental states. On the other hand, "fun" is defined as the experience of positive thoughts or emotions, such as satisfaction, amusement, or pleasure, which can be derived from various activities like hobbies, social interactions, or leisure pursuits. The essay meticulously highlights the distinct advantages of both safety and fun. Safety is crucial as it ensures a healthy and longer life by minimizing risks and providing a stable foundation for individuals to thrive. It allows people to live without constant fear or anxiety about potential dangers. Conversely, fun plays an equally vital role in human life. Engaging in enjoyable activities enhances intelligence by stimulating the mind, reduces stress by providing a mental respite from daily pressures, and significantly improves overall well-being by fostering positive emotional states. Moreover, the essay discusses the potential problems that arise when there is an imbalance between safety and fun. An overemphasis on safety can lead to a monotonous and unfulfilling life, devoid of the joy and excitement that fun brings. Conversely, neglecting safety in the pursuit of fun can result in unnecessary risks and potential harm. The essay ultimately argues that while safety is essential, fun is more important as it enriches life with meaningful experiences and emotional fulfillment, contributing to a holistic sense of happiness and satisfaction.

Keywords: Safety; Fun; Balance; Intellectual enhancement; Stress relief; Quality of life

1 INTRODUCTION

Safety and fun are two aspects of every human's life that we think about on a daily basis. They can mean a lot of things in different contexts, and everyone has their own definition. To reduce ambiguity, we have to get fixed definitions for the words "fun" and "safety". In this essay, the word "safety" would mean reasonable control over conditions or hazards that lead to physical or psychological harm. I will use a broad definition for fun: it is having positive thoughts or emotions that we like to think of. They come in many forms like feelings of satisfaction, amusement or pleasure. Obvious examples would be at a birthday party, but I will not be excluding examples like reading a hard book for entertainment. In this essay, I will argue that safety is important, but it is not more important than fun. I will start by assessing the advantages of fun and safety, then discussing how too much fun and no safety is a problem and no safety can be indeed a problem. After that, I will argue ways in which they need to be balanced. Finally, I will give an argument for why fun is actually more important than safety.

Firstly, the advantages of safety and fun should be stated in order to remind ourselves of the difficulty of the question. We care about safety every day, no matter how old we are. A young child would take care of his or her safety because he or she wants to enjoy the life ahead of them. An adult would take care of his or her safety because he or she probably needs to take care of his or her children and parents. An old person would especially take care of his or her safety because, quite possibly, they are limited in their capacity to have fun. Your safety keeps you alive and healthy to live longer to enjoy life more.

On the other hand, fun also has its advantages. The British Cohort Study investigated 17,000 people born in 1970, which found that reading for fun improves our language skills and our proficiency in math as well [1]. This shows that fun can make us smarter. It can also make us less stressed as according to one study, those who laughed less had more negative emotions when compared to those who laughed more. In contrast, those who laughed more showed fewer negative feelings even when stressful situations increased [2]. This can make us more energetic and useful which is vital for our daily wellbeing. This paragraph has thus demonstrated that fun can be an instrumental value as it can help us be smarter and less stressed. Fun can also be an intrinsic value as people value fun to enjoy life and have a good daily wellbeing.

2 IS SAFETY STILL MORE IMPORTANT?

In the ongoing debate about whether safety or fun is more important, many argue that safety should take precedence. This section explores the reasons behind this perspective and evaluates whether safety truly outweighs fun. Those who prioritize safety often assert that the absence of safety can lead to permanent harm or even death, which has irreversible consequences. This viewpoint is supported by several compelling examples.

2.1 The Case of Wu Yongning

Wu Yongning, a young man in his twenties[3], became famous on social media for his daring climbs of skyscrapers and buildings without any safety equipment. His actions, driven by the thrill of adventure and the financial rewards associated with his viral fame, ultimately ended in tragedy when he fell to his death. This example underscores the potential dangers of prioritizing fun over safety. Wu Yongning's life was irrevocably cut short because he chose to pursue risky activities for enjoyment and financial gain. His story serves as a stark reminder that excessive fun without regard for safety can have fatal consequences.

2.2 The Impact of COVID-19

The COVID-19 pandemic provides another powerful illustration of the importance of safety[4]. Despite government policies and public health guidelines urging people to avoid risky behaviors, many individuals chose to gather in high-risk settings for social enjoyment. The consequences were severe: millions of people were infected, and over 7 million lives were lost globally, according to Worldometers.com. A study by Christopher Whaley and colleagues further highlights the correlation between social gatherings and COVID-19 infections. Their research tracked 2.9 million US households from January to November 2020 and found that households with social gatherings, such as birthdays, had significantly higher rates of COVID-19 diagnoses. This data reinforces the notion that prioritizing fun over safety during the pandemic led to widespread illness and death.

Most people inherently value their well-being and do not wish to suffer permanent harm or death. The tragic outcomes seen in Wu Yongning's case and the COVID-19 pandemic are alarming and highlight the critical role of safety in our daily lives. These examples demonstrate that safety is a fundamental consideration that should guide our actions and decisions.

While the examples of Wu Yongning and the COVID-19 pandemic clearly illustrate the importance of safety, they do not definitively prove that safety is more important than fun. Although safety is crucial for preventing irreversible harm, it is also essential to recognize the value of fun in enhancing life's quality and overall well-being. The debate between safety and fun is complex and requires a balanced approach rather than prioritizing one over the other.

3 WHY SAFETY IS NOT MORE IMPORTANT THAN FUN

While safety is undoubtedly crucial, this section argues that it is not more important than fun. The following paragraphs will present two main arguments: first, that safety and fun can co-exist, and second, that safety is an instrumental value to fun, which is the intrinsic value.

3.1 Safety and Fun Can Co-Exist

Safety and fun are not mutually exclusive; they can and should co-exist in a balanced manner. Consider the example of a five-year-old child who wants to go to the playground to socialize and play with other children. His mother, unable to supervise him, is overly concerned about potential dangers such as negative influences or physical injuries. If the child follows his mother's overly cautious advice, he might become disconnected from his surroundings, which could negatively impact his mental well-being and hinder his ability to learn essential social skills. This scenario illustrates how an overemphasis on safety can actually be detrimental.

If the mother continues to overestimate the importance of safety, she might prevent the child from eating certain foods for fear of choking or keep him indoors indefinitely to avoid potential dangers. Such extreme measures, if normalized, would make life extremely uncomfortable and could even lead to severe consequences like depression or suicidal thoughts. Therefore, it is essential to strike a balance between safety and fun rather than focusing solely on safety.

3.2 Safety as an Instrumental Value to Fun

To further elaborate, safety and fun can be compared to the heart and brain, both of which are necessary for a fulfilling life. The heart pumps blood, sustaining life, while the brain processes and stores information, making life worth living. Similarly, safety ensures our health and ability to live, while fun gives life meaning and enjoyment. Activities like watching TV in moderation, reading a book, or playing relatively safe sports are examples of how safety and fun can co-exist harmoniously[5].

Moreover, safety is often valued because it supports fun. For instance, humans create safety regulations to avoid dangerous situations because being in danger is not fun. We take care of our bodies to prevent injuries like bruises because getting hurt is unpleasant. The same applies to protecting our senses, as losing them would significantly diminish our ability to enjoy life. Even in extreme cases like Wu Yongning's death or the COVID-19 pandemic, the underlying motivation is the desire to live a fulfilling life, which is rooted in the intrinsic value of fun. People generally do not want to die because they believe there is joy in living. This suggests that while safety is highly valued, it is In summary, safety is not more important than fun. While safety is essential for our well-being, it should not overshadow the importance of fun. Safety and fun can co-exist, and safety itself is often valued because it enables us to enjoy life. Therefore, fun is the intrinsic value that makes life worth living, and safety is merely an instrumental value that supports it.

4 CONCLUDING THE TOPIC

In this essay, we have embarked on an exploration of two fundamental aspects of human life: safety and fun. By presenting compelling examples and evidence, we have demonstrated the critical importance of both elements, thereby highlighting the complexity of the question at hand.

4.1 The Complexity of Balancing Safety and Fun

The cases of Wu Yongning and the COVID-19 pandemic serve as stark reminders of the potential consequences when the balance between fun and safety is disrupted. These examples illustrate how individuals and societies can sometimes prioritize short-term fun over long-term safety, leading to tragic outcomes. Wu Yongning's pursuit of thrill and fame ended in his untimely death, while the disregard for safety measures during the COVID-19 pandemic resulted in widespread illness and loss of life. These incidents underscore the notion that fun and safety can sometimes appear to be in conflict.

4.2 The Importance of Balance

However, it is crucial to recognize that this conflict is not inherent but rather a matter of perspective and balance. Safety and fun are not mutually exclusive but should co-exist in a harmonious and balanced manner. The example of a child wanting to go to the playground despite potential risks highlights how an overemphasis on safety can lead to isolation and stunted personal growth[6]. Similarly, activities like watching TV in moderation, reading a book, or engaging in relatively safe sports demonstrate that it is entirely possible to enjoy fun while maintaining a reasonable level of safety.

4.3 The Instrumental Value of Safety to Fun

Delving deeper into the relationship between safety and fun, I have posited that safety is, in fact, an instrumental value that supports the intrinsic value of fun. The heart and brain analogy further clarifies this point: just as the heart sustains life while the brain enriches it, safety ensures our well-being while fun gives life meaning and enjoyment. Safety regulations, for instance, are created to prevent dangerous situations because being in danger is not fun. We take care of our bodies to avoid injuries and protect our senses to continue experiencing the joys of life. Even in extreme cases like Wu Yongning's death or the COVID-19 pandemic, the underlying motivation is the desire to live a fulfilling life[7], which is rooted in the intrinsic value of fun. People generally do not want to die because they believe there is joy in living[8]. This suggests that while safety is highly valued, it is ultimately an instrumental value that supports the intrinsic value of fun.

In conclusion, this essay has thoroughly examined the intricate relationship between safety and fun, ultimately demonstrating that both are indispensable aspects of human life. Safety, with its focus on minimizing risks and preventing harm, is undeniably crucial for our well-being. It provides a stable foundation that allows us to navigate the world without constant fear or anxiety. However, it is equally important to recognize that an overemphasis on safety, to the exclusion of fun, can lead to a life that is monotonous and unfulfilling. Fun, after all, is what gives life its richness and joy. It encompasses the experiences that bring us pleasure, satisfaction, and a sense of connection with others.

The essay has argued that rather than being at odds with each other, safety and fun should co-exist in a harmonious balance. Safety should not be seen as a barrier to fun, but rather as an essential support that enables us to fully experience and enjoy life. In fact, safety can be understood as an instrumental value—one that facilitates the pursuit of fun and the broader enjoyment of life. Without safety, our ability to engage in fun activities would be severely limited by the constant threat of danger. Conversely, without fun, life would lack the emotional fulfillment and meaningful experiences that make it truly worth living.

Therefore, the essay concludes that safety is not inherently more important than fun. Instead, they are deeply intertwined, each enhancing the other in ways that contribute to a fulfilling and meaningful existence. By recognizing the value of both safety and fun, and by striving to maintain a balanced approach, we can create a life that is not only secure but also rich with joy and satisfaction. In this way, we can truly thrive and experience the full spectrum of what it means to be human.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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THE RELATIONSHIP BETWEEN LEARNING MOTIVATION AND INTERNET USE BEHAVIOR AMONG BOARDING MIDDLE SCHOOL STUDENTS

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Abstract: This study investigated 500 boarding middle school students from several middle schools, including Anyang Zoujin Middle School and Anyang No.25 Middle School. Utilizing the Learning Motivation Diagnostic Test, Chinese Internet Addiction Scale, and Internet Use Behavior Questionnaire as research tools, it explored the relationships between internet use behavior, internet addiction, and learning motivation among boarding middle school students. The results revealed: (1) Significant gender differences existed in daily internet use duration and online activities, with extremely significant differences observed in weekly internet use duration and problematic online behaviors; (2) Significant differences in weekly internet use duration were found between day students and boarding students; (3) Internet addiction exhibited significant gender differences; (4) Learning motivation showed extremely significant differences based on boarding status.

Keywords: Boarding middle school students; Learning motivation; Internet use behavior; Internet addiction

1 INTRODUCTION

1.1 Research Background

The convenience, openness, entertainment value, and richness of the internet have made it highly popular among young people, including junior high school students. The gradual proliferation of smartphones has enriched students' extracurricular lives, expanded their knowledge horizons, and broadened their social circles. However, it has also introduced potential risks such as internet addiction and online romance [1]. Consequently, research on junior high school students' internet use has garnered increasing attention from psychology and education scholars.

For boarding middle school students, a substantial portion of their time is spent under school supervision and adhering to various regulations, limiting their physical activity space. Their primary interactions are with teachers and peers, making the management of these relationships crucial [2]. After leaving their parents, they often lack regular objects and venues for psychological communication and confession. During interactions with peers, they may encounter issues related to improper internet use. Therefore, cultivating healthy internet use habits among middle school students is of paramount importance. Research on internet use behavior aids in distinguishing the varying impacts of different online behaviors on students, providing references for fostering positive behaviors. Moreover, it underscores the necessity for teachers and schools to strengthen internet behavior management, proactively identifying and addressing issues at an early stage [3].

A review of existing literature reveals that current research on boarding middle school students' internet use primarily focuses on the negative impacts of the internet, problem definition, questionnaire development, hazards, and prevention strategies [4]. However, there has been limited exploration of the causes of online behavior differences, particularly from the perspective of students' learning motivation. Therefore, investigating the relationship between learning motivation and internet use behavior among boarding middle school students can offer valuable insights for cultivating healthy internet habits.

1.2 Overview of Previous Research

1.2.1 Research status on internet use

According to the 39th CNNIC statistical report, as of December 2016, China's internet user base had surpassed 731 million, representing a 6.2% increase from the previous year. Among them, mobile internet users reached 695 million, accounting for 95.5% of the total internet population, with a continuous three-year growth rate exceeding 10%. This indicates that an increasing number of Chinese individuals have embraced the internet as a lifestyle.

Studies have categorized online activities into entertainment, learning assistance, information acquisition, online shopping, socializing, personal expression, and other activities. Research has also examined online behavior from the perspectives of duration and tools used. This study defines internet use behavior as encompassing three dimensions: duration (daily and weekly), tools (computers, mobile phones, and others), and types of activities (information acquisition, gaming, learning assistance, chatting, online shopping, music/video streaming, social media engagement, and others). Additionally, this study supplements the analysis with data on online locations, purposes, and problematic

online activities to gain a more comprehensive understanding of students' internet use[5].

1.2.2 Research status on learning motivation

The definition of motivation remains a subject of debate in psychology. Over the past decades, numerous foreign scholars have proposed their own motivation theories, with varying perspectives. However, all learning motivation theories concur that behavior is driven by motivation. Current explanations of learning motivation can be summarized into three viewpoints: cognitive, behavioral, and humanistic. The cognitive perspective, supported by many scholars, includes theories such as achievement motivation, attribution, achievement goal, and self-efficacy theories. Domestic research on learning motivation began in the 1930s and resumed its development after the reform and opening-up period. Since the 21st century, significant progress has been made in both quantity and quality. For instance, Chen Jun et al. conducted research on the relationship between achievement motivation and fear of success, while Zhu Xiaohong developed a scale for measuring learning motivation deficiency. Despite these achievements, there remains room for further exploration, particularly in the context of rapidly changing social and cultural environments and the influence of emerging fields like the internet[6].

Drawing on previous research and the needs of this study, we adopt Fan Xiaoling's definition of learning motivation: the internal psychological process that initiates and sustains learning activities, directing them toward goals set by teachers.

1.2.3 The relationship between learning motivation and internet use behavior

While extensive research has been conducted on learning motivation and internet use behavior separately, relatively few studies have comprehensively analyzed the relationship between the two. Most research has focused on the relationship between internet addiction and learning motivation or specific aspects of internet use behavior. However, a more holistic understanding of the relationship between learning motivation and various facets of internet use behavior is necessary to address the benefits and drawbacks of internet use among junior high school students effectively. Therefore, research in this area holds both theoretical and practical value[7].

1.3 Research Significance

1.3.1 Deepening educational reform in the era of Internet+

With the internet's pervasive influence across industries, including education, the concept of "Internet+" proposed by Tencent CEO Ma Huateng has garnered significant attention from the Chinese government, becoming a national development strategy. The emergence of "Internet+Education" reflects this trend. To integrate education deeply with the internet and enable education to benefit from its development, research on the internet and education is essential. Investigating the relationship between internet use behavior and learning motivation constitutes a crucial aspect of this research.

1.3.2 Promoting the physical and mental health of boarding middle school students and fostering healthy internet use habits

In recent years, problematic internet use among boarding middle school students has led to academic delays and even physical and mental health issues. Cultivating healthy internet use habits is, therefore, of utmost importance. Research on internet use behavior helps distinguish the varying impacts of different online behaviors, providing references for fostering positive behaviors among students[8].

2 RESEARCH OBJECTS, TOOLS, AND METHODS

2.1 Research Objects

The study targeted boarding students from several schools, including Anyang Zoujin Middle School and Anyang No.25 Middle School. Using convenient random sampling, classes were selected from various grades for the survey. A total of 300 questionnaires were distributed, with 283 returned and 10 deemed invalid, resulting in a 91% effective response rate. Among the valid responses, 122 were from male students and 151 from female students.

2.2 Research Tools

The questionnaire comprised three parts: the Learning Motivation Diagnostic Test(MAAT), developed by Zhou Bucheng from East China Normal University, with acceptable reliability and validity; the Chinese Internet Addiction Scale, compiled by Chen Shuhui from Taiwan region, also demonstrating acceptable reliability and validity; and the Internet Use Behavior Questionnaire, adapted from Liu Ying's version and modified to suit this study's specific context[9].

Data analysis was performed using SPSS 16.0.

2.3 Research Methods

The survey employed a questionnaire method, with collective administration in classrooms. The research team and assistant teachers personally explained the survey procedures and precautions to students before distributing the questionnaires. Students were given 15 minutes to complete the questionnaires during class, after which the questionnaires were collected.

3 RESEARCH RESULTS

3.1 T-Test Analysis Results of Internet Use Behavior and Demographic Variables

Table 1 Presents the T-test Analysis Results of Internet Use Behavior and Demographic Variables

	Gender	Frequency	Mean	Standard Deviation	T-Value	P-Value
Daily Internet Use Duration	Male	234	2.28	.850	4.120	.000***
	Female	244	1.82	.730		
Weekly Internet Use Duration	Male	234	5.47	2.580	5.030	.000***
	Female	244	4.01	2.050		
Problematic Online Behaviors	Male	234	1.47	.580	-4.810	.000***
	Female	244	1.13	.470		
Online Activities	Male	234	6.52	1.280	-2.950	.003**
	Female	244	5.08	1.570		
Weekly Internet Use Duration	Day Student	120	5.76	2.850	2.980	.003**
	Boarding Student	358	4.18	2.270		

Note: Age range of participants: 12-16 years, n=273; **P<0.01, ***P<0.001.

The results indicate significant gender differences in daily internet use duration and online activities (P<0.01), with extremely significant differences observed in weekly internet use duration and problematic online behaviors (P<0.001). Additionally, significant differences in weekly internet use duration were found between day students and boarding students (P<0.01). These findings suggest that male students tend to spend more time online and engage in more problematic online behaviors than female students, see Table 1. Moreover, male and female students exhibit different preferences in online activities, and day students generally spend more time online than boarding students.

3.2 Variance Analysis Results of Demographic Variables and Internet Addiction

Table 2 Presents the Variance Analysis Results of Gender and Internet Addiction

	Frequency	Mean	Standard Deviation	F-Value	P-Value
Male	234	8.62	4.570	12.350	0.000***
Female	244	7.05	4.120		

Note: ***P<0.001.

The results reveal significant gender differences in internet addiction (P<0.01), with male students scoring significantly higher on the internet addiction scale than female students, see Table 2.

3.3 T-Test Analysis Results of Internet Addiction and Learning Motivation

Table 3 Presents the T-test Analysis Results of Internet Addiction and Learning Motivation

Internet Addiction Classification	Frequency	Mean	Standard Deviation	T-Value	P-Value
Learning Motivation Total Score	Addicted	62	24.95	4.528	0.069
	Non-Addicted	416	24.73	4.202	

The results indicate no significant difference in learning motivation between addicted and non-addicted students (P>0.05), suggesting that learning motivation levels may not differ significantly between these two groups, see Table 3.

3.4 Difference Analysis Results of Demographic Variables and Learning Motivation

Table 4 Presents the Difference Analysis Results of Learning Motivation and Gender

Learning Motivation Total Score	Frequency	Mean	Standard Deviation	F-Value	P-Value
Male	234	24.58	4.372	0.487	0.485
Female	244	24.87	4.189		

The results show no significant gender differences in learning motivation (P>0.05), although female students exhibit slightly higher learning motivation scores than male students, see Table 4.

Table 5 Presents the Difference Analysis Results of Learning Motivation and Boarding Status

	Boarding Status	Frequency	Mean	Standard Deviation	T-Value	P-Value
Learning Motivation Total Score	Day Student	120	23.15	4.520	-4.897	0.000***
	Boarding Student	358	25.40	4.010		

Note: ***P<0.001.

The results reveal extremely significant differences in learning motivation based on boarding status ($P<0.001$), with boarding students exhibiting higher learning motivation scores than day students, see Table 5.

4 DISCUSSION

4.1 Relationship Between Internet Use Behavior and Demographic Variables

The T-test results indicate that male students spend more time online and engage in more problematic online behaviors than female students, consistent with previous research. This may stem from differences in family upbringing, where male students often receive more lenient treatment and fewer constraints, leading to increased internet use and problematic behaviors. These findings suggest that future interventions aimed at guiding adolescents toward healthy internet use should consider family factors and promote fair and reasonable upbringing practices.

4.2 Relationship Between Demographic Variables and Internet Addiction

The variance analysis reveals significant gender differences in internet addiction, with male students scoring higher[10]. This may relate to the immersive nature of online activities preferred by male students, making them more susceptible to addiction. These findings provide a new perspective on understanding gender differences in internet addiction and suggest that prevention and intervention measures should be tailored to gender-specific needs, particularly focusing on the types of online activities engaged in by male students[11].

4.3 Relationship Between Internet Addiction and Learning Motivation

The T-test results indicate no significant difference in learning motivation between addicted and non-addicted students. This may be attributed to two factors: first, the sample selected may differ from normative samples, potentially lowering the learning motivation scores of the surveyed students and reducing the significance of differences; second, addicted students may still possess learning motivation and aspirations but may have shifted their interests due to poor academic performance. These findings suggest a complex interplay between academic performance, learning motivation, and internet addiction, warranting further investigation into the underlying mechanisms[12].

4.4 Relationship Between Demographic Variables and Learning Motivation

4.4.1 Gender factors

The variance analysis reveals no significant gender differences in learning motivation, although female students exhibit slightly higher scores. This may be attributed to female students' greater persistence and resistance to external distractions, while male students' sociability, restlessness, and playfulness may make them more susceptible to external influences, including online activities. These findings suggest that educational practices should consider gender differences in learning motivation and adopt personalized teaching methods and incentive strategies.

4.4.2 Boarding status factors

The study finds that boarding students exhibit higher learning motivation than day students[2]. Boarding students may be more inclined to utilize the school environment to enhance their academic performance, while day students may adopt a more "taobi" (which can be translated as "avoidant") attitude toward learning. These attitude differences may contribute to academic performance gaps and, consequently, affect learning motivation. These findings suggest that schools and families should collaborate to monitor and encourage day students' learning, with schools providing guidance and fostering a conducive learning atmosphere, while families offer supervision and encouragement. Future research should further explore the specific reasons for lower learning motivation among day students.

5 CONCLUSION

In the current era where the internet is deeply integrated into and extensively influences the lives of junior high school students, this study conducted an in - - depth investigation focusing on the special group of boarding middle school students. It found that there are significant gender differences in internet usage behaviors. Boys not only spend more time online and engage in more inappropriate behaviors but also exhibit more severe tendencies towards internet addiction. Meanwhile, the study revealed that there is no significant correlation between learning motivation and internet addiction, yet the learning motivation of day - students (students who do not live on campus) is significantly lower than that of non - day students. This research not only closely aligns with the development trend of "Internet + Education," providing a new perspective for educational reform, but more importantly, it lays the foundation for effectively preventing and intervening in mental health issues among middle school students caused by improper internet use. It holds immense positive value in promoting the mental health of middle school students, guiding them to form good internet - using habits, and facilitating their all - around quality development. The specific conclusions are as follows:

(1)Significant gender differences exist in daily internet use duration and online activities ($P<0.01$), with extreme ly significant differences observed in weekly internet use duration and problematic online behaviors ($P<0.001$). Signific ant differences in weekly internet use duration are also found between day students and boarding students ($P<0.01$).

(2) Significant gender differences exist in internet addiction ($P<0.01$).
(3) No significant difference in learning motivation is found between addicted and non-addicted students ($P>0.05$).
(4) No significant gender differences exist in learning motivation ($P>0.05$), although extremely significant differences are observed based on boarding status ($P<0.001$).

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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THE ANATOMY OF DISILLUSIONMENT: FROM ROMANTIC IDEALISM TO MORAL INSIGHT IN JOHN UPDIKE'S A&P AND JAMES JOYCE'S ARABY

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Abstract: The passage from adolescence to a nuanced understanding of the world often encompass a painful confrontation between idealized internal realms and indifferent external realities. The short stories, namely John Updike's "A&P" and James Joyce's "Araby" both masterfully portray this arduous journey through the experiences of their young protagonists, Sammy and the unnamed narrator, respectively. While separated by setting and social milieu, these two characters are united by their youthful idealism and their fervent, often misguided, navigation of a world that fails to meet their romanticized expectations. A comparative analysis of Sammy and the "Araby" narrator reveals a shared, profound head-heart disproportion where emotional impulses consistently override rational assessment. However, their agency manifests in distinctly different ways: Sammy's as a performative rebellion seeking external validation, while the "Araby" narrator's is an internalized quest. Ultimately, their trajectories of disillusionment lead to divergent forms of moral insight, with Sammy achieving a melancholic yet pragmatic acceptance of the "hardness" of the adult world, contrasting sharply with the "Araby" narrator's violent, self-lacerating awakening of personal vanity and folly.

Keywords: Disillusionment; Adolescence; Idealism vs. Reality; Agency; Moral insight; John Updike; James Joyce

1 INTRODUCTION

The transition from adolescence to adulthood is frequently marked by a crisis of perception, in which deeply held ideals collide with an unyielding reality. This paper examines that critical passage as depicted in two seminal short stories of the twentieth century: John Updike's "A&P" and James Joyce's "Araby." Both narratives center on young male protagonists whose romantic infatuations catalyze a journey from naïve idealism toward a painful, but necessary, moral awareness[1]. While Sammy, the checkout clerk in Updike's suburban supermarket, and Joyce's unnamed narrator, wandering the dreary streets of Dublin, occupy vastly different social worlds, they are psychological kin. Each is governed by a head–heart disproportion that privileges emotional impulse over reason, each asserts agency in a manner reflective of his temperament, and each arrives at a form of disillusionment that constitutes his first genuine step toward maturity. Through a comparative analysis, this essay argues that the protagonists' shared flaw—an imbalance between emotion and reason—initiates their romantic quests, while the contrasting nature of their agency (performative versus internalized) shapes the unique quality of their ultimate moral insights. In tracing these parallel yet divergent paths, the stories collectively illuminate the arduous, often sorrowful, process by which youthful illusion gives way to adult understanding[2].

2 THE HEAD–HEART DISPROPORTION: EMOTION OVERRIDING REASON IN "A&P" AND "ARABY"

First and foremost, both Sammy and the "Araby" narrator exhibit a striking imbalance between their head (rationality) and heart (emotion), where romantic idealism and impulsive desires override reason, driving them to construct subjective worlds that collide with reality and prompt inconsiderate decisions.

Sammy's emotional primacy is first evident in his initial reaction to the girls: "In walks these three girls in nothing but bathing suits. I'm in the third check-out slot, with my back to the door, so I don't see them until they're over by the bread." The blunt, colloquial opening "In walks these three girls" signifies his immediate sensory engagement, and the subtle subject–verb disagreement ("walks" instead of walk) mirrors the disjunction between perception and cognition that exposes how instinct precedes thought, encapsulating the head and heart disproportion[3].

Sammy's physical attraction is similarly devoid of intellectual depth, where he describes Queenie as "the longer her neck was, the more of her there was." This anatomical focus reduces his attraction to a near quantitative fascination rather than admiration, suggesting that his emotional and aesthetic sensibilities operate on very superficial impressions. It could perhaps be argued that Sammy perceives beauty as measurable substance rather than expressive individuality, where his "heart" dominates perception while his "head" fails to interpret meaning beyond sensual immediacy.

Later in the story, Sammy's vivid imaginative construction of Queenie's affluent home life, triggered by mere vocal inflection, exemplifies romantic idealization: "All of a sudden, I slid right down her voice into her living room[4]. Her father and the other men were standing around in ice-cream coats and bow ties and the women were in sandals picking up herring snacks on toothpicks off a big plate... all holding drinks the color of water with olives and sprigs of mint in them." The hyper-specific sensory imagery with "ice-cream coats" and "herring snacks on toothpicks" dramatizes his

infatuation with glamour and perceived refinement. These details, however, border on parody, which exposes the shallowness of the ideal he constructs. The verb "slid" encapsulates the effortless, uncritical motion of his imagination, where emotional desire bypasses rational scrutiny to fabricate an idealized world that can temporarily free him from the mundane reality of life in the A&P.

All these imbalances culminate in the moment Sammy quits his job with a naïve, almost childish tone, "Fiddle-de-doo," when he cannot articulate genuine defiance but relies on a grandmotherly saying. The fact that he is unable to look inwards and voice his thoughts at the emotional peak of resignation underscores how his "head" lacks the tools to discipline his "heart." Moreover, even when confronted by Lengel's rational appeal that he wouldn't want to do this to his parents, Sammy concedes, "It's true, I don't," yet persists in quitting, excusing himself with "once you begin a gesture it's fatal not to go through with it." This admission signals a momentary flash of rational awareness but simultaneously an abdication of volition, where the "fatal" gesture suggests that his rebellion is driven not by principle but by performative pride[5]. Interestingly, Sammy later tells readers that his decision makes a "good story" for him, not his parents, which reveals a self-justifying moral lens that prioritizes personal motives over ethical introspection that requires "the head."

Similarly, the "Araby" narrator demonstrates a profound head–heart disproportion, albeit in a more inward and introspective register. The story's opening line, depicting the "blind" nature of "NORTH RICHMOND STREET," metaphorically foreshadows the narrator's internal blindness, for it is through his lens that readers explore the setting. What's more, the narrator's attraction to The Memoirs of Vidocq is solely based on the fact that "its leaves were yellow" rather than its content, demonstrating that the external replaces intellectual curiosity, where the narrator values surface exoticism over substance.

The narrator's infatuation with Mangan's sister is likewise purely emotional: "I had never spoken to her, except for a few casual words, and yet her name was like a summons to all my foolish blood." Here, "summons" evokes a spiritual compulsion that transcends logic, and "foolish blood" marks his self-awareness of irrationality, yet he remains governed by it. This is further exemplified when the narrator reflects that his "eyes were often full of tears (I could not tell why) and at times a flood from my heart seemed to pour itself out into my bosom." The "flood" metaphor captures emotional excess devoid of any intellectual cause, where the narrator is overwhelmed by feeling, and, like Sammy, submerged in passion he cannot articulate.

This emotional saturation results in paralysis when fantasy collides with reality. When Mangan's sister finally speaks to him, he "did not know what to answer." This moment exposes how the narrator's emotional self, inflated by imagination, collapses before the real, revealing his underdeveloped rational counterpart. Such imbalances further manifest in his intellectual life, where "At night in my bedroom and by day in the classroom her image came between me and the page I strove to read." This description shows how the narrator's inner obsession literally materializes as a barrier to learning that obstructs the "page," while his dismissal of "the serious work of life" as "child's play, ugly monotonous child's play" reverses normative values, as emotional fantasy subverts rational pursuit.

Ultimately, both Joyce and Updike use these characters' head–heart imbalances to dramatize youthful disillusionment, challenging readers to question the extent to which the characters' decisions are justified. Emotional intensity, when divorced from understanding, becomes a catalyst for self-deception, rendering the process of self-recognition—bridging superficial idealism and maturity—inevitably painful.

3 DIVERGENT AGENCIES: PERFORMATIVE REBELLION VS. INTERNALIZED QUEST

While both protagonists are driven by emotional impulses, their agency manifests in distinctly different ways: Sammy's as a performative rebellion seeking external validation and challenging local norms through disdainful public gestures, whereas the "Araby" narrator's agency is more internalized and driven by a private, transcendent ideal which culminates in acts of self-dedication rather than outward confrontation.

Firstly, in "A&P", Sammy's confession—"The girls, and who'd blame them, are in a hurry to get out, so I say 'I quit' to Lengel quick enough for them to hear, hoping they'll stop and watch me, their unsuspected hero"—is a pivotal statement on his performative agency. The timing of his declaration, "quick enough for them to hear," overtly demonstrates how his act is deliberately staged for an audience, underscoring its performative rather than intrinsic motivation. His use of "unsuspected hero" also reveals his motive for external validation, highlighting how his heroism is conditional on recognition and how he constructs his identity through the gaze of others.

This performative aspect is further fueled by his disdain for conformity, expressed through his characterization of customers as "sheep pushing their carts down the aisle... were pretty hilarious," and the hyperbolic thought, "I bet you could set off dynamite in an A & P and the people would by and large keep reaching...". The crude exaggeration of "set off dynamite" and the image of passive customers underscore his profound, cynical contempt for those unwilling to challenge norms or meaningfully engage with their surroundings. Arguably, this renders Sammy's agency superficially admirable; however, due to the shallow reasoning behind his choices, it ultimately works against him, as emphasis shifts toward his perceived intellectual superiority over the "sheep," which fuels his outward—but hollow—assertion of agency.

What's more, Sammy's confrontational agency is most evident in his exchange with Lengel: "You didn't have to embarrass them. 'It was they who were embarrassing us.'" The aforementioned instance in which Sammy invokes the "fatal gesture" as justification for following through with his resignation further reveals the theatrical nature of his agency, where symbolic completion outweighs pragmatic consideration. The deliberate, almost ritualistic act—"I fold

the apron, 'Sammy' stitched in red on the pocket, and put it on the counter, and drop the bow tie on top of it. The bow tie is theirs, if you've ever wondered"[6]—vividly demonstrates his performative disaffiliation. The emphasis on the "red" stitching and the definitive claim that "The bow tie is theirs" show how he consciously sheds an imposed identity and asserts a newly constructed one, transforming resignation into a public declaration of selfhood staged before an imagined audience.

Even Sammy's concern for a "clean exit"—"One advantage to this scene taking place in summer, I can follow this up with a clean exit, there's no fumbling around getting your coat and galoshes..."—reinforces this performative dimension. The phrase "fumbling around" suggests his desire for his act of rebellion to appear effortless, composed, and dignified, reinforcing that his agency is oriented toward aesthetic impact rather than reflective principle.

In stark contrast, the "Araby" narrator's agency is predominantly internalized and devotional. His agency begins with the inward decision to romanticize Mangan's sister: "Her image accompanied me even in places the most hostile to romance"[7]. The phrase "accompanied me even in places the most hostile to romance" indicates his active, sustained cultivation of the ideal despite contradicting realities, demonstrating a private assertion of will that shapes perception rather than social space. Unlike Sammy's public performance, the narrator's agency operates as a secret act of mental devotion.

This inward agency manifests in how he transforms mundane experiences into sacred trials, imagining that he "bore my chalice safely through a throng of foes" while performing Saturday errands. The religious symbolism of "chalice" and the heroic imagery of "throng of foes" elevate ordinary labor into spiritual quest, while simultaneously revealing his lack of empathy toward those merely engaged in daily survival. His agency thus lies not in resistance to authority but in the mythologizing of self through inward fantasy.

Moreover, the narrator's agency is characterized by a voluntary surrender to exotic idealism: "The syllables of the word Araby were called to me through the silence in which my soul luxuriated and cast an Eastern enchantment over me." The active verb "luxuriated" highlights how he consciously indulges in this fantasy, revealing his complicity in constructing an illusory internal world. This cultivated enchantment further distances him from reality, which he dismisses as "the serious work of life," reduced to "ugly monotonous child's play." Such language demonstrates a willful devaluation of the real in favor of emotional transcendence.

The persistence of his internal resolve is further revealed in his reaction to obstacles—his uncle's forgetfulness and the "intolerable delay" of the train—which only intensify his emotional urgency. Yet, upon finally entering the bazaar, reality exposes the limits of this inward agency: "I walked into the centre of the bazaar timidly"[8]. The contrast between the epic scope of his imagined quest and the timidity of his physical presence underscores how his agency, though powerful in internal cultivation, collapses when confronted with the material world.

Hence, while both protagonists assert agency through emotionally charged impulses, Joyce and Updike reveal that whether outwardly theatrical or inwardly idealized, such agency remains constrained by immaturity. Ultimately, the texts suggest that true freedom requires not merely bold gestures or private reverie, but self-awareness capable of reconciling emotion with understanding.

4 MORAL INSIGHT: MELANCHOLIC ACCEPTANCE VS. SELF-LACERATING AWAKENING

Finally, the trajectories of disillusionment for Sammy and the "Araby" narrator culminate in distinct forms of moral insight: Sammy achieves a melancholic yet pragmatic acceptance of the "hardness" of an indifferent adult world, resulting in a hesitant, cost-aware maturity, whereas the "Araby" narrator's journey leads to a violent, self-lacerating awareness of personal folly that marks a more profound and anguished moral awakening[9].

In "A&P", Sammy's disillusionment begins with the swift and oblivious departure of the girls: "The girls, and who'd blame them, are in a hurry to get out... They keep right on going, into the electric eye; the door flies open and they flicker across the lot to their car... leaving me with Lengel and a kink in his eyebrow." The phrase "flicker across the lot to their car" emphasizes the fleeting, insubstantial nature of their presence and their complete indifference to his grand gesture, immediately triggering his initial disillusionment. This absence of recognition demonstrates how Sammy's performative agency fails to achieve its intended validation, thus initiating his awakening to the world's indifference.

This realization is swiftly reinforced by the reassertion of mundane reality once the girls are gone: "I look around for my girls, but they're gone, of course. There wasn't anybody but some young married screaming with her children about some candy they didn't get by the door of a powder-blue Falcon station wagon." The irritating specificity of the "screaming" mother and the banal "powder-blue Falcon station wagon" grounds his disillusionment in sensory detail, illustrating how the ordinary world he despises immediately fills the void left by his failed rebellion[10]. This moment underscores that his gesture has neither transformed his environment nor offered escape from the mediocrity he sought to reject.

Sammy's ultimate moral insight arrives with the powerful closing image of Lengel: "His face was dark gray and his back stiff, as if he'd just had an injection of iron, and my stomach kind of fell as I felt how hard the world was going to be to me hereafter." This image serves as a grim premonition of Sammy's own future. His visceral response—"my stomach kind of fell"—signals an internal shift in which he recognizes that, although he has challenged the system, his rebellion carries lasting consequences. This realization marks a cost-aware maturity: an understanding that freedom and individuality come at a price. The moment echoes his earlier contempt for figures such as "Stokesie's married, with two babies chalked up on his fuselage" and the "house-slaves," suggesting that his idealism had not prepared him for the practical void left by his defiant gesture.

The “Araby” narrator’s trajectory, in contrast, culminates in a far more violent form of disillusionment. His awakening begins subtly with the mounting frustrations of the “intolerable delay” on the train and his uncle’s forgetfulness, moments that cause his “heart [to misgive]” and his fists to clench[11]. These bodily reactions indicate that emotional strain accumulates before conscious recognition, signaling that his quest is failing even before his mind fully accepts it. The full force of his disillusionment strikes within the bazaar itself, where expected vibrancy gives way to bleak emptiness: “Nearly all the stalls were closed and the greater part of the hall was in darkness.” This pervasive “darkness” operates as a powerful metaphor for the death of his exotic dream, as the stark visual reality obliterates the imaginative projections he had nurtured. The subsequent “silence like that which pervades a church after a service” replaces anticipated excitement with hollow stillness, suggesting not merely disappointment but a spiritual void where meaning once resided. The simile of a “church after a service” reinforces the sense of desecration, as if a sacred illusion has been stripped of its power.

The crushing blow comes with the trivial exchange between the shop girl and the young men: “O, I never said such a thing!—O, but you did!—O, but I didn’t!—Didn’t she say that?—Yes. I heard her.—O, there’s a... fib!” This banal, repetitive, and childish dialogue exposes the cheap commercial reality of the bazaar and destroys the narrator’s transcendent romantic fantasy. The utter triviality of the scene reveals how far removed his idealism is from human reality, reducing his imagined quest to an embarrassing misunderstanding of the world[12].

This realization culminates in the narrator’s devastating moral insight: “Gazing up into the darkness I saw myself as a creature driven and derided by vanity; and my eyes burned with anguish and anger.” The verbs “driven” and “derided,” combined with the charged moral term “vanity,” articulate a moment of ruthless self-condemnation. Unlike Sammy’s outward-facing acceptance of hardship, the narrator internalizes blame, recognizing himself as an active participant in his own delusion. The physical sensation that his eyes “burned with anguish and anger” captures the violence of this revelation, as moral insight manifests as bodily pain and emotional rupture.

Thus, while both characters awaken from illusion into knowledge, Joyce and Updike suggest that moral awakening is inseparable from suffering, shaped by the protagonists’ immaturity and flawed idealism. Whether through Sammy’s subdued recognition of the world’s hardness or the “Araby” narrator’s searing self-reproach, disillusionment becomes the necessary catalyst for growth. In this sense, the collapse of illusion itself constitutes the first genuine act of maturity.

5 CONCLUSION

In conclusion, both Sammy in “A&P” and the narrator in “Araby” undertake transformative journeys from youthful idealism to a more nuanced, albeit painful, understanding of reality, their experiences meticulously crafted through their internal states and external decision-making processes. Their shared head–heart disproportion, where emotional impulses consistently usurp rational thought, initially propels them toward romanticized actions that fundamentally shape their flawed perceptions.

To be specific, Sammy’s active choice to interpret his narrative as one of triumph—consciously filtering out parental concerns—contrasts sharply with the “Araby” narrator’s passive surrender to overwhelming emotion and his inability to articulate the source of his tears. These differences reveal distinct mechanisms through which each character maintains a subjective reality, insulating himself from rational scrutiny while indulging emotional intensity.

However, the nature of their agency diverges significantly. Sammy’s agency manifests as a performative, outwardly directed rebellion, rooted in disdain for conformity and a desire for public validation. By contrast, the “Araby” narrator’s agency is internalized and devotional, characterized by his mental transformation of mundane tasks into sacred acts and his voluntary surrender to exotic fantasy, where meaningful action unfolds almost entirely within the confines of his own mind.

Ultimately, their paths of disillusionment lead to distinct forms of moral insight, rendering adolescent awakening complex rather than uniform. Sammy’s journey culminates in a thoughtful, melancholic recognition that his rebellion, while liberating, lacks the power to alter the indifferent structures of the adult world. In contrast, the “Araby” narrator experiences a violent, self-lacerating awakening, brutally triggered by the banal shop-girl conversation and the desolate darkness of the bazaar, where self-condemnation centers on his own role in constructing and sustaining illusion.

Both narratives thus illuminate how character flaws, motivations, and perceptual mechanisms shape agency and determine the nature of inevitable disillusionment, shedding light on the arduous passage from innocence to experience. In doing so, Joyce and Updike suggest that maturity is born not merely from disappointment, but from the painful recognition of one’s complicity in illusion itself.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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