

Review and Discussion on the Antecedent Variables and Significance of Degree of Fear of Crime

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Abstract

In recent years, research on fear of crime has predominantly centered on its potential causes and consequences. As the research progresses, the number and scope of antecedent variables have been expanding, presenting researchers with a broader range of opportunities and choices. However, this proliferation of antecedent variables has also complicated the understanding of the variable relationships inherent in fear of crime research. Notably, certain antecedent variables yield contradictory research outcomes, which can lead to confusion and misunderstandings. Utilizing the four explanatory models of “victimization,” “vulnerability,” “disorder,” and “social integration,” this paper comprehensively examines eleven significant antecedents related to fear of crime studies and their associated paradoxes. Furthermore, it delves into the implications of the level of fear of crime, aiming to aid researchers in obtaining a clearer comprehension of the antecedents of fear of crime and the significance represented by their degree through structured review and analysis.

Keywords

Fear of Crime (FoC), Antecedent Variables, Degree Analysis, Explanatory Model, Personal Factors

1. Antecedent Variables of Fear of Crime

In recent years, studies on the fear of crime have predominantly focused on elucidating the potential causes of this fear and exploring the conceivable consequences it may bring. Upon closer examination, it becomes apparent that nu-

merous scholars are particularly interested in investigating the possible predictive roles of personal and theoretical factors in determining an individual's fear of crime (Lane & Kuhn, 2019: p. 25).

After reviewing and analyzing the primary research findings from developed countries like the United States, it has been observed that numerous factors influence fear of crime. However, in these studies, the four primary explanatory models of "victimization," "vulnerability," "disorder," and "social integration" serve as the main categories, with various influencing factors further subdivided under each of these headings. These subdivisions primarily encompass aspects such as policing, public order, daily activities, risk perception, victimization, age, gender, special identity, community factors, urban planning, physical and mental illnesses, population density, occupation, income, education level, and race. These factors are visually represented in **Figure 1** below.

Researchers investigate the factors depicted in the image for several reasons. Firstly, to clarify the relationship between these factors and fear of crime, understanding how they influence one another. Secondly, to determine how fear of crime, influenced by these factors, affects individual behavior. Lastly, to identify more effective methods of managing fear of crime, ultimately aiming to eliminate or minimize its impact on individuals. This section summarizes the influencing factors of fear of crime, facilitating a deeper understanding of related research.

1.1. Policing and Fear of Crime

The study of FoC originated from examining the correlation between policing and this fear. The impetus behind commencing with policing lies in the historical context when the notion of FoC emerged. At that time, the persistently high crime rate was a pressing concern for American society. In the 1970 U.S. election campaign, reducing crime rates and allaying the widespread FoC became a central theme for almost all candidates. This societal focus led to increased government funding and support for the police, thus initiating research into the relationship between policing and FoC. Block (1971) introduced a pivotal idea in his research, suggesting that while fear might be the foundation for establishing a police system, it is not a sustainable tool for police development during peaceful times. However, when crime rates escalate and FoC becomes a societal issue, it



Figure 1. Classification chart of antecedent variables of FoC.

may become a primary reason for public support of the police (Block, 1971: pp. 91-101). Concurrently, some empirical researchers on FoC believed that the police, tasked with addressing criminal issues, should also undertake to mitigate the heightened FoC (Bennett, 1991: pp. 1-14). Subsequently, investigations and studies on the relationship between policing and FoC have delved deeper into the connections between policing mechanisms, policing satisfaction, and FoC. These studies underscore the significant role of the police in mitigating FoC. By addressing community issues, enhancing citizens' sense of security, and boosting their expectations of happiness, the police can influence individual fears of crime and improve residents' overall well-being (Skogan, 1990).

Patrolling is an essential component of policing, and the mode of patrol adopted is intricately linked to its overall effectiveness. Scholars have delved into the relationship between patrol methods and FoC. Kelling's (1981) investigation into the correlation between police patrol modes and FoC in Newark, New Jersey, revealed that cycling patrols have a notable impact on reducing citizens' FoC (Kelling, 1981). However, it's worth noting that cycling patrols were not the predominant method during that era and were scarcely implemented in various regions. So, how effective is the more traditional foot patrol? Trojanowicz's (1986) research on the influence of foot patrols on FoC indicated that, despite being a hallmark of policing, foot patrols did not significantly reduce FoC (Trojanowicz, 1986: pp. 157-178). The researcher attributed the divergence in effectiveness between the two patrol methods primarily to the speed of police response. Faster response times were found to correlate with a more pronounced reduction in FoC (Pate et al., 1986). This insight influenced shifts in policing strategies, prompting updates in equipment and methods to prioritize efficiency and responsiveness. Certainly, the aforementioned studies merely scratch the surface. Numerous additional investigations have demonstrated that a broader interpretation of policing, coupled with the implementation of community policing practices, can effectively alleviate public FoC (Williams & Patel, 1987: pp. 53-70). In smaller and medium-sized cities, these measures yield even more favorable outcomes (Adams et al., 2005: pp. 43-54). Researcher emphasized that the primary objective of community policing is to elevate the police presence in localized areas, subsequently mitigating individual FoC and augmenting overall well-being (Zhao, Thurman, & Lovrich, 1995: pp. 11-28). Beyond this heightened presence, other scholars have underscored the significance of community policing in reducing FoC. They posit that community policing fosters mutual familiarity and trust between law enforcement and the public, ultimately aiming to diminish individuals' FoC through strengthened relationships (Scheider, Rowell, & Bezdikian, 2003: pp. 363-386). However, contrasting viewpoints exist. In 2004, Skogan and Frydl conducted a reevaluation of the correlation between community policing and FoC, revealing findings that contradicted previous research. Their study indicated that community policing has a limited impact on FoC (Skogan & Frydl, 2004). Similarly, Scheider et al. (2003) observed the limi-

tations of community policing, particularly in large cities where complex factors influence FoC, finding its effectiveness in reducing fear to be minimal (Scheider et al., 2003: pp. 363-386). Research suggests that in urban environments, one of the most effective methods of reducing FoC through policing is by increasing police force numbers. Studies show that this approach significantly reduces urban FoC (Zhao, Scheider, & Thurman, 2002: pp. 273-299). Nonetheless, scholars maintain that community policing still holds promise in mitigating FoC, but its full potential remains untapped. Lord et al. (2009) advocate for both community and traditional policing to adopt more citizen-friendly practices, focusing on maintaining police-community relations, ensuring order through non-intrusive means, and addressing practical community issues. Such an approach is deemed essential to meet public expectations and needs, thereby enhancing the effectiveness of FoC reduction (Lord, Kuhns, & Friday, 2009: pp. 574-594). Fulfilling these expectations and needs represents a focal point for future research on the relationship between policing and FoC. Studies have found that enhancing citizens' understanding of policing through guidance can significantly reduce FoC and bolster community belonging and well-being compared to traditional policing strategies (Davis & Miller, 2002: pp. 93-111).

From the aforementioned summary of research findings on the correlation between policing and FoC, it becomes evident that there exist numerous contrasting studies in this domain, presenting substantial discrepancies. This paper posits that several factors underlie these inconsistencies. Primarily, the definition of FoC itself remains a persistent challenge, as elaborated by Lagrange et al. in 1992 (Lagrange et al., 1992. pp. 311-334). The inconsistency in measurement tools has also posed a significant hurdle in early FoC studies, as highlighted by Farrall et al. in 1997 (Farrall et al., 1997: pp. 658-679). These issues often lead to conceptual ambiguity and confusion. For instance, in Chinese research, the FoC, perception of victimization risk, and public security are often intertwined, creating a muddled concept. Similarly, such blurred definitions are prevalent in studies conducted in the United States and other countries, as noted by Cordner in 2012 (Cordner, 2012). Although researchers in developed countries like the United States have made efforts to distinguish these concepts, as exemplified by Rountree and Land's work in 1996, the problem of overlapping definitions persists globally (Rountree & Land, 1996: pp. 1353-1374). This conceptual blurring directly impacts the accuracy of research and analysis on FoC, emphasizing the importance of clarifying definitions in this field. Hence, this paper dedicates a significant portion to precisely defining the FoC, aiming to address this fundamental issue.

Secondly, policing is deeply embedded within the social environment and aims to ensure public security. However, both the social environment and standards of public security are subject to change. Evidently, significant disparities exist between policing models in China and the United States, encompassing variations in law enforcement practices, the likelihood of employing stringent

measures, and the allocation of responsibilities. Moreover, police responses to identical situations differ across various cities. Given this multitude of disparities and shifts, conducting a globally consistent and highly unified study poses significant challenges. In their comprehensive review and meta-analysis exploring the relationship between policing and FoC, [Bennett, Holloway, and Farrington \(2006\)](#) observed a scarcity of unified studies on the topic. Many investigations tend to focus exclusively on a specific aspect of policing, neglecting others ([Bennett, Holloway, & Farrington, 2006: pp. 437-458](#)). This narrow focus often leads to an imbalance in research priorities and subsequently contributes to conflicting findings within the field.

However, no matter how contradictory the research results are, most of the research on the relationship between policing and FoC can effectively guide the change of policing strategy. When residents feel that the police are effectively reducing crime and fully responding to residents' expectations and needs, they will feel protected and their FoC will decrease accordingly ([Box, Hale, & Andrews, 1988: pp. 340-356](#)). [Skogan \(2009\)](#) gave a brief and powerful summary of the relationship between policing and FoC in his research. He mentioned that people's comprehensive judgment on how the police handle crime-related problems and life problems can improve people's confidence in policing, which will directly affect people's happiness and FoC ([Skogan, 2009: pp. 301-318](#)).

1.2. Risk Perception, Victimization Perception and Fear of Crime

[Warr and Stafford \(1983\)](#) identified the attributes of personal FoC in their examination of fear of victimization and criminality. They asserted that "when individuals become aware of the emotional response triggered by the FoC, it becomes evident that they have realized their vulnerability to victimization." For instance, "when an escaped serial killer is on the loose, searching for his next target, individuals' perception of their risk of victimization increases." Due to a heightened sense of personal victimization compared to regular random crimes, people tend to believe they are more susceptible to becoming victims. This underscores the significance of assessing risk perception factors independently from factors related to the FoC ([Warr & Stafford, 1983: pp. 1033-1043](#)). [Ferraro's \(1996\)](#) investigation into female victims and specific crimes committed against women provided deeper insights into this issue. He further emphasized that the FoC is intricately linked to individuals' risk perception and factors related to victimization ([Ferraro, 1996: pp. 667-690](#)).

[Sutton and Farrall \(2005\)](#) delved into the dynamics of risk perception and victimization level on FoC in their re-examination of women's fear of criminality. Their findings can be summarized as follows: Firstly, an individual's FoC will increase significantly when both risk perception and victimization level (severity of the crime) are high. Secondly, if only one of the two factors—risk perception or victimization perception—is elevated, the FoC among individuals will not rise significantly. Lastly, a low FoC is observed when both risk perception and victi-

mization level are low (Sutton & Farrall, 2005: pp. 212-224). To illustrate this mechanism, consider the following scenario: if an individual perceives a high degree of victimization for murder, but assesses the likelihood of murder occurring (risk perception) as low, their fear of being murdered remains low.

Subsequently, as research progressed on the correlation between risk perception, victimization degree, and FoC, an increasing number of researchers have identified risk perception as a crucial intermediary variable linking environmental factors and FoC. Notably, Doob and Macdonald (1979) investigated the relationship between the duration and frequency of television viewing and victim perception, as well as FoC. Their study suggested that media reports influence risk perception, which subsequently impacts individual FoC (Doob & Macdonald, 1979: pp. 170-179). In simpler terms, if the media reports a high number of crimes in a specific area over a period, it elevates residents' risk perception and FoC. Furthermore, Bankston, Jenkins, Thayer-Doyle, and Thompson (1987) proposed that residential location shapes an individual's FoC through risk perception (Bankston, Jenkins, Thayer-Doyle, & Thompson, 1987: p. 98). Summarizing their key findings, factors such as the frequency of criminal activities near the residence, the responsiveness of the local police, and the stringency of security measures in the vicinity all influence risk perception, which in turn affects FoC. This, essentially, represents an early indicator of potential disorder. Ferraro (1995) further consolidated the intermediary factors between environmental variables and risk perception into an "integrated model of factors affecting FoC," encompassing both objective and subjective aspects. Within this framework, risk perception falls under the subjective aspect, while the objective aspect is further categorized into ecological, macro, and micro components (Ferraro, 1995: pp. 142-153).

Certain studies concentrate on the factors influencing the perception of victimization severity (crime gravity). Nagao and Davis conducted an empirical investigation in 1980, utilizing simulation judgment methodology, to explore the correlation between perceived factors of victimization severity and an individual's FoC. Their research revealed that prior victimization experiences and an individual's comprehension of criminal behavior are primary determinants of the perceived level of victimization. Notably, individuals who had previously been victims of rape exhibited significantly elevated fear levels compared to those who hadn't (Nagao & James, 1980: pp. 190-199). These investigations into the perceived factors of victimization severity laid a solid foundation for the subsequent establishment of a disorder model aimed at elucidating the underlying reasons for FoC.

In addition to the aforementioned research avenues, scholars have also introduced the theory of daily life, which integrates risk perception, victimization perception, and the concept of "disorder." However, this paper posits that exploring the relationship between daily behaviors, the immediate living environment, and FoC constitutes a distinct research path in the field of FoC studies. This uniqueness stems from the brevity of its existence; the direction was first

proposed in 1990 but has rarely been explored since 1998. Furthermore, it serves as a component within the theory of daily activities, a long-standing element in various explanatory models. Essentially, the theory of daily activities bridges victimization perception and disorder. Although this approach has introduced novel perspectives to the study of FoC, its findings lack sufficient innovation, much like what the disorder model can already explain. According to Warr's 1990 theory of daily activities, FoC is influenced by the criminal opportunities generated by individuals in their everyday lives. Research on FoC ought to focus on the demographic with the highest levels of fear. Through empirical studies of this high-fear group, environmental characteristics associated with heightened fear can be summarized. Subsequently, it becomes necessary to analyze the latent criminal opportunities inherent in these environmental features and investigate the correlation between such opportunities and FoC within these environments (Warr, 1990: pp. 891-907).

From the framework of this theory, two primary factors emerge clearly: first, the theoretical structure exploring the connection between individual risk perception and FoC, aligned with the victimization perception paradigm; second, the theoretical outline addressing the relationship between physical and social disorder, and FoC, as defined by the disorder model. Evidently, the theory of daily activities amalgamates various theories and models. In delving deeper into the theory of daily activities, researchers have advocated for a more detailed environmental classification. Specifically, they emphasize the need to identify which aspects of an individual's immediate surroundings evoke a fear of becoming a victim of crime, necessitating a thorough analysis of the diverse elements within that environment (Warr, 1990: pp. 891-907). Concerning the matter of environmental categorization, and considering the correlation between environmental types and FoC, environmental analysis factors can be further segmented into objective and subjective components. Objective factors encompass physical disorder concepts such as the level of darkness in the environment and the presence of strangers. In contrast, subjective factors give more weight to an individual's feelings and emotional responses within the environment, encompassing sensations of strangeness, loneliness, and anxiety experienced by the individual.

As research into the theory of daily activities and environmental analysis intensifies, the unique characteristics of community environments and the various factors influencing individual behavior patterns within those environments have increasingly become focal points in the study of FoC. Robinson (1998) postulated that the presence of a significant number of potential offenders in the immediate vicinity of one's residence can notably impact the level of FoC among community members. Using students as an example, he noted that when criminal suspects primarily target other students, the entire student population becomes potentially vulnerable, as they are all engaged in the daily activities of these suspects. Consequently, if criminal suspects are identified within the student community, other members of that community are likely to experience a

heightened sense of FoC (Robinson, 1998: pp. 19-32). Wayne et al. (1996) undertook an empirical investigation into the correlation between individuals' behavioral patterns within their environment and their FoC. This study provided a causal explanatory mechanism for exploring the link between environmental analysis and FoC (Wayne et al., 1996: pp. 635-655). Osgood examined how the amount of time spent socializing with peers influences FoC. His findings indicated that in groups where peer social relations are tight-knit and exhibit more deviant behaviors, the presence of criminal suspects within these relationships leads to a lower FoC among other individuals. Conversely, in groups with strong peer social bonds but fewer deviant behaviors, the existence of criminal suspects heightens the FoC among other group members.

1.3. Community Factors and Fear of Crime

Rohe & Burby (1988) postulate that FoC has been established to exert various deleterious effects on individuals' quality of life. Among the multitude of variables influencing FoC, community composition, which is intricately linked to living conditions, emerges as a pivotal factor. The complexity of the community directly correlates with the degree of FoC experienced by individuals, with more complex communities eliciting greater fear (Rohe & Burby, 1988: pp. 700-720). A study conducted among 267 non-elderly residents of public housing developments explored residents' FoC within these communities. The findings revealed a positive correlation between residents' FoC and the community's composition. This relationship is primarily influenced by factors such as residents' personal qualities, the community's maintenance capabilities, and behavioral norms. As the community composition becomes more complex, these factors are more likely to have a negative impact, thereby elevating residents' FoC. Sarah, Billie, and Matthew's study delved into the connection between neighborhood design and residents' FoC in newly developed suburban housing. They emphasized the influence of community population complexity on residents' FoC, introducing the concept of "neighborhood design." Their survey indicated that compact, walkable communities foster a greater sense of safety among residents (Foster, Giles-Corti, & Knuiman, 2010: pp. 1156-1165). Drawing upon predecessor's ideas, Roberts and Gordon (2016) investigated FoC in South Africa. Their research indicated that disrupted neighborhood relations within a community can escalate residents' FoC (Roberts & Gordon, 2016: pp. 49-60). As research on the community-crime perception relationship evolves, increasing attention is being directed towards exploring the link between community factors and FoC. For instance, Doran and Burgess (2011) employed a geographic information system in their FoC research, noting that community disorder leads to a decline in community cohesion, which is significantly related to individuals' FoC levels within the community (Doran & Burgess, 2011). However, similar to other FoC studies, research on community factors also faces paradoxes. Villarreal and Silva (2006) applied American research expertise to Brazil, examining the relationship between community factors and FoC there. Surprisingly, their findings contra-

dicted previous studies, revealing that even in the face of severe community disorder, social cohesion does not necessarily decline. In fact, it may actually increase due to disorder (Villarreal & Silva, 2006: pp. 1725-1753). Addressing this contradiction, Brunton-Smith, Jackson, and Sutherland (2014) analyzed the relationship between community strategies and fear of violent crime. They emphasized the need to consider the mediating role of community cohesion between disorder and individual FoC (Brunton-Smith, Jackson, & Sutherland, 2014: pp. 503-526). Research in this direction and its outcomes provide valuable insights and empirical evidence for the development of new communities, influencing suburban community planning to shift from low-density to more convenient and commercially viable walk-able communities.

Certainly, another pivotal aspect in exploring the correlation between community variables and FoC is the “disorder model.” This model, in conjunction with the broken windows theory, sheds light on the reasons behind FoC. The disorder model postulates that individuals residing in environments characterized by physical or social disorder exhibit elevated levels of fear towards criminal activities. Some scholars posit that FoC is a direct consequence of the surrounding environment, encompassing various forms of physical or social disorder present in daily life or the community setting (Skogan, 1990). Considerable research has been conducted by scholars in the United States and beyond, particularly focusing on communities in the context of FoC. This emphasis can be attributed to the earlier emergence of the modern community concept in these regions. Additionally, the community, as a significant aspect of individuals’ daily lives, encompasses diverse elements that can significantly impact individuals. Box, Hale, and Andrews (1988) observed that when an individual’s surroundings are laden with criminal indicators or factors prone to victimization, there is a heightened likelihood for that individual to experience an increased FoC (Box, Hale, & Andrews, 1988: pp. 340-356).

Researchers generally believe that “disorder” is a physical or social obstacle, which mainly refers to disorderly environmental factors, such as abandoned cars or vehicles, piled garbage, broken public finances, graffiti covered with walls, uninhabited or dilapidated houses, etc. In addition to these physical aspects, there are also social aspects, such as unhealthy teenagers gathered at street corners, drunkards who collapsed to the side of the road, and too many others. Sex workers and bad gangs (LaGrange, Ferraro, & Supancic, 1992: pp. 311-334). This paper will discuss the concept and connotation of “disorder model” in the following chapters.

1.4. Gender and Fear of Crime

Since researchers began exploring FoC, various factors have been incorporated into their investigations, some of which yield contrasting results. Nonetheless, one of the most consistent and compelling findings in the field of FoC research appears to have gained widespread acceptance among scholars. This finding indicates that despite women facing a lower actual risk of victimization compared

to men, they exhibit a higher degree of fear towards criminal activities. Upon reviewing research literature on gender and FoC, it becomes evident that several theoretical frameworks are commonly used to elucidate this consistent relationship between gender and FoC. One such framework is the concept of “fragility.” Skogan and Maxfield (1981) introduced an explanatory model in their study on individual FoC. They postulate that women consistently demonstrate a heightened FoC compared to men due to their inherent vulnerabilities. These vulnerabilities, manifesting in various cognitive weaknesses, elevate women’s perception of victimization risk, thereby resulting in a pronounced sense of fear towards criminal activities (Skogan & Maxfield, 1981).

In the aftermath of sexual offenses, particularly rape, Warr (1984) introduced the concept of the “rape shadow” in his examination of fear related to crimes targeting women and the elderly. He postulated that sexual crimes, predominantly rape during that era, instilled profound fear in women, often leading them to fret that any criminal infringement might escalate into sexual assault (Warr, 1984: pp. 681-702). Consequently, women’s FoC tends to surpass that of men, undergoing a process of generalization and intensification. The cornerstone of this notion is that rape was once viewed as an exclusively criminal act directed at women, causing significant harm. Based on the assessment of victimization risk associated with this targeted offense, women uniquely experience this fear, leading them to unconsciously amplify the dread inspired by rape, overshadowing the fear stemming from all other criminal offenses. This manifests as a heightened FoC compared to men, regardless of the context. This paper deems this perspective worthy of consideration, given that rape remains a severe criminal offense, no longer confined to women alone. However, further extended research is warranted to explore whether the “rape shadow” perception among women evolves without this gender specificity.

Thirdly, from the perspective of patriarchy, the explanation angle of patriarchy was paid attention to and mentioned by researchers in the early stage of the study of FoC. Stanko (1985) mentioned in his groundbreaking article on the violence between men and women in intimate relationships that under the patriarchal social system, women are inevitably in an unequal state. This unequal life experience between men and women leads women to be very afraid of being victimized by crimes, and also to be victims of actual crimes (Stanko, 1985). The explanation of the relationship between gender and FoC from the perspective of patriarchy is rooted in women’s perception of victimization, but it is similar to the shadow of rape. Although the development of society is still paternalistic, the demand for equal rights has been increasing day by day, even in some European countries, women’s rights are supreme. So whether the theoretical method of explaining the relationship between gender and FoC from the perspective of patriarchy has changed or not is worthy of researchers’ attention.

In recent years, with the advancement of research on FoC, scholars have shifted their focus towards the concept of “socialization” to elucidate why women tend to experience a heightened FoC compared to men. Hollander (2001) ex-

explored this phenomenon in his study on vulnerability and violence within precarious relationships, offering a definition for socialization in this context. According to Hollander, mainstream culture and subculture have a profound impact on women, making them more susceptible to socialization than men. This, in turn, reinforces the perception among women that they are inherently weaker and less capable of resisting criminal attacks (Hollander, 2001: pp. 83-109). Socialization has emerged as a significant factor explaining why women generally exhibit a greater FoC than men. Since individuals are inherently entwined with social and cultural influences, the effects of socialization are both frequent and persistent (Lane, 2013: pp. 57-67).

Early studies have been conducted within the framework of these explanatory theories. Lagrange and Ferraro (1989) conducted telephone interviews with 320 randomly selected residents in metropolitan areas of the southeastern United States. Utilizing a national crime survey, they measured the level of FoC and compared the relationship between age, gender, and FoC. Their research indicated that women and the elderly express a notably elevated FoC. Regardless of the measurement tool employed to assess an individual's FoC, women consistently perceive a higher risk and FoC compared to men. The findings regarding age, particularly the FoC among the elderly, were paradoxical (Lagrange & Ferraro, 1989: pp. 697-720). Alternatively, Sutton & Farrall (2005) introduced a fresh perspective on the longstanding hypothesis that women generally exhibit a higher FoC than men. They postulated that gender is influenced by societal pressures, resulting in men appearing to have a lower FoC than women on the surface. In the absence of gender-based social pressure, men's FoC might not necessarily be lower than women's (Sutton & Farrall, 2005: pp. 212-224). Smith, Torstensson, and Johansson (2001) highlighted substantial empirical evidence suggesting that women's FoC surpasses that of men. They speculated that the root cause of this significant disparity could be women's "hidden" attitude towards injuries, such as their reluctance to disclose incidents during interviews or even report injuries to the police. If more institutions and researchers encouraged women to report attacks and injuries, this notable gender difference in the study of FoC could potentially be better understood (Smith, Torstensson, & Johansson, 2001: pp. 159-181).

Furthermore, it is imperative for researchers to recognize the existence of the "FoC paradox" in exploring the relationship between gender and FoC. This paradoxical finding has consistently influenced research in this domain since its emergence. Kury and Ferdinand (1998) observed in their investigation of the correlation between victimization experiences and FoC that individuals who are more susceptible to being victims of actual crimes paradoxically exhibit less fear (Kury & Ferdinand, 1998: pp. 93-104). This paradox does not refute the general consensus that women tend to have a higher FoC compared to men; rather, it highlights the contrast between risk perception disparities and FoC in gender-based studies on FoC. In simpler terms, although men are more prone to be victims of actual crimes than women, women nevertheless exhibit a greater de-

gree of fear towards crime.

1.5. Age and Fear of Crime

In the examination of FoC in industrialized nations such as the United States, age emerges as a crucial variable. [Nalla, Joseph, and Smith \(2011\)](#) highlighted that the elevated levels of FoC among individuals aged 65 and older, as well as its underlying reasons, have garnered increasing attention from scholars investigating FoC in recent years ([Nalla, Joseph, & Smith, 2011: pp. 141-159](#)). Furthermore, exploring the consequences of FoC on older adults has become a significant focus of recent scholarly inquiries. Researchers have emphasized that heightened FoC can adversely affect the quality of life and overall happiness of the elderly ([Donder, Verte, & Messelis, 2005: pp. 363-376](#)). Furthermore, studies have indicated that the impact of FoC on the happiness of older adults is long-lasting, typically spanning a period of three years.

[Frank and Michael \(1976\)](#) conducted a comparative study on the FoC among the elderly and individuals belonging to other age groups. The findings revealed that elderly respondents residing in urban areas exhibited a notably high level of FoC. However, the research also emphasized that the FoC among the elderly is not uniform. Specifically, there exist three distinct levels of FoC within this demographic. While certain elderly subpopulations demonstrated exceptionally high FoC, others exhibited minimal or no fear ([Frank & Michael, 1976: pp. 207-210](#)). This study's outcome was revolutionary and serves as a crucial theoretical pillar for understanding the paradox between age and FoC. Although prior studies had hypothesized this paradox, they lacked empirical exploration and validation. [Tulloch \(2000\)](#) posited that age plays a significant role in predicting FoC, offering substantial advantages in this regard. They constructed models to delve deeper into the varying degrees of FoC across different age groups. The research outcomes indicated that FoC follows a regular curve distribution. As age increases, FoC decreases, hitting its lowest point during middle age, and subsequently rises with advancing age ([Tulloch, 2000: pp. 451-467](#)). These findings align seamlessly with the explanations offered by the vulnerability model of FoC. In essence, children, youth, and the elderly, being more vulnerable, tend to exhibit heightened FoC in the same environmental context due to their acute awareness of their comparatively weaker position.

1.6. Victimization Experience and Fear of Crime

The victimization experience stands as the earliest hypothesis to elucidate individual FoC in the domain of FoC research. [Block \(1971\)](#) initially introduced the notion of FoC in his groundbreaking work, which delved into the nexus between police support, fear, victimization experience, and FoC. In his exposition on FoC, he postulated a potential correlation between victimization experience and FoC. Individuals who have been victims of criminal offenses tend to exhibit heightened FoC ([Block, 1971: pp. 91-101](#)). While this hypothesis wasn't conclu-

sively validated in his study, it sparked a wave of exploration among researchers into the connection between victimization experience and FoC. Subsequently, numerous studies centered on personal and criminal experiences, segmenting victimization into two distinct categories: personal experience and vicarious victimization. Arnold (1991) observed that vicarious victimization, often termed “indirect victimization” by FoC scholars, pertains to the emotional response triggered by frequently acquiring crime-related information through interpersonal communication or other avenues, without actually being a victim (Arnold, 1991). Conversely, personal victimization refers to being directly impacted by criminal behavior. Researchers emphasize the importance of studying both types of victimization separately, as direct and indirect experiences of crime appear to differently influence the degree of FoC (Lewis & Salem, 1981: pp. 405-421). A comprehensive and ongoing examination of the relationship between these two forms of victimization and individual FoC is both crucial and insightful (Skogan & Maxfield, 1981).

In his landmark review article, Hale (1996) provided a comprehensive overview of the correlation between victimization and FoC, emphasizing a significant relationship between past victimization experiences and an individual’s FoC (Hale, 1996: p. 79). Echoing this finding, numerous scholars have substantiated through research the impact of victimization experiences on an individual’s level of fear towards crime (Kury & Ferdinand, 1998: pp. 93-104). Some studies even designate a heightened FoC among individuals as a hallmark or indicator of crime victimization (Stephen, Emily, & Jonathan, 2007). This is because the frequency of being victimized by crime directly correlates with a proportional increase in an individual’s fear level towards crime (Gray, Jackson, & Farrall, 2008: pp. 363-380).

The relationship between personal victimization, compensatory victimization, and the level of FoC has undergone extensive examination in FoC research. Consequently, scholars studying FoC have progressed beyond the notion that only direct victimization shapes an individual’s FoC, shifting focus to the impact of indirect communication on FoC levels. Certain researchers have emphasized the significant role of the media in disseminating crime-related information and influencing individuals’ FoC.

Heath and Gilbert (1996) highlighted that the media exert a measurable influence on society members’ FoC, with various factors contributing to its mechanism of action. Prominent among these factors are the types of crimes exposed by the media, particularly reports on severe violent and property crimes, as well as the media’s self-orientation, such as whether it caters to ethnic minorities or white-collar workers (Heath, & Kevin, 1996: pp. 25-34). Research also indicates that the mass media possesses the unique characteristic of inducing FoC even without actual criminal behavior. As a result, scholars began documenting and analyzing the relationship between media and FoC as early as the 1960s. With the evolution of the media landscape, the rising popularity of crime pro-

grams and subsequent reports on criminal acts following the release of criminal data have increasingly influenced individuals' FoC.

Schlesinger and Tumber (1994) conducted an extensive analysis on the various methods of explaining and presenting criminal news through interviews with journalists and editors, as well as case studies. They postulated that the media's coverage of certain criminal acts has the potential to evoke criminal fear among specific individuals, particularly those who are attentive to such news reports, even if they have not undergone similar experiences. The level of detail in these reports is directly proportional to the magnitude of fear they may induce (Schlesinger & Tumber, 1994: pp. 221-229).

Heath (1984) posits that media reports on severe criminal cases lead to an escalation of criminal fear within a certain scope. These reports, which often emerge in quick succession and evolve from initial outline coverage to detailed accounts, result in heightened FoC as the reporting progresses and becomes more specific. This, in turn, significantly impacts people's daily behavior (Heath, 1984: pp. 263-276). A study, conducted via telephone interviews, surveyed the opinions of 335 readers across 36 newspapers. The findings revealed that 80% of the respondents paid keen attention to the news reports on serious criminal cases. These respondents indicated that such reports induced feelings of anxiety and fear, leading them to restrict their activities in similar settings until the cases reached a clear resolution.

This somewhat corroborates a hypothesis proposed by Gerbner and Gross (1976) when explaining individual FoC, namely that individuals' FoC is cultivated by the media (Gerbner & Gross, 1976: pp. 173-199). While this hypothesis may seem somewhat absolute, in reality, most people indeed lack direct contact with the criminal justice system, and their understanding of crime largely relies on media reports about crime (Surette, 1992). However, the issue of excessive exaggeration and inaccurate reporting of criminal information by the media has always existed. In current reporting practices in our country, in pursuit of news effectiveness and attention, the media tends to incorporate some deductive and unconfirmed information into their reports on crime-related information, which can cause individuals to develop cognitive biases when paying attention to crime-related reports. Gerbner, Gross, Eleey et al. (1977), in a study on television reports of violent information, pointed out that people who pay high attention to crime-related information reports may hold distorted views on crime and criminal justice, and this perception is highly similar to the descriptions in media reports (Gerbner, Gross, Eleey, Jackson-Beeck, Jeffries-Fox, & Signorielli, 1977: pp. 171-180). O'Keefe and Reid Nash (1987), in their study on the impact of crime-related news reports and realities on the FoC, pointed out that consistent empirical research results show that individuals' FoC is highly correlated with their attention to crime news and crime-related information (O'Keefe & Reid-Nash, 1987: pp.147-163). Individuals' attention to crime-related information reports can change their perception of victimization risk, thus making indi-

viduals exhibit a high level of FoC that does not match the actual situation (Rountree & Land, 1996: pp. 1353-1376). In addition, Weaver and Wakshlag (1986) mentioned in their study that viewers without criminal experience are more likely to be influenced by crime reports when it comes to their level of FoC (Weaver & Wakshlag, 1986: pp. 141-158), and for those who believe they are more susceptible to crime, media reports on crime can also significantly increase their FoC (Skogan & Maxfield, 1981).

With the development of the times and technology, an increasing number of traditional media users are shifting towards online media. Consequently, researchers are adapting their focus on the relationship between media compensation and FoC to align with this evolving reality. In recent years, a few studies have investigated the impact of online news on individuals' FoC. However, as of now, there is little evidence to suggest that an individual's attention to crime-related reports in online media significantly affects their level of FoC (Roche, Pickett, & Gertz, 2016: pp. 215-236).

Regardless of how research develops, as Quann and Hung (2002) mentioned in their comparative study of victimization experience and FoC, victimization and FoC are statistically significantly correlated in many studies, despite researchers presenting various results on the strength of this relationship (Quann & Hung, 2002: pp. 301-316). Research on the relationship between personal experience, vicarious victimization, and FoC should continue.

1.7. Environmental Planning and Fear of Crime

Some researchers believe that FoC is related to the physical environment (Cozens et al., 2005: pp. 328-356), and criminal justice research also suggests that environmental factors are one of the considerations for criminals when deciding whether to commit a crime (Anastasia & John, 2007: pp. 380-389). Based on such thinking, criminologist proposed the concept of Crime Prevention Through Environmental Design (CPTED), which is often focused on crime hotspots and uses different environmental design theories and methods to improve the environment of these areas, thereby influencing criminal behavior from the physical environment level (Taylor, 1996: p. 11). One year after the introduction of this concept, Newman (1972) further expanded on it, introducing the influence of environmental physical structures on criminal behavior through an extended study, and proposing the hypothesis that environmental design, when influencing criminal behavior, can also bring about changes in FoC (Newman, 1972). Subsequently, more and more researchers on FoC have turned their attention to this research direction.

Previous research has shown that elements of the Crime Prevention Through Environmental Design (CPTED) theory have a significant impact on both FoC and criminal behavior itself (Brown & Bentley, 1993: pp. 51-61). The study by Blobaum and Hunecke (2005) clarified the significant relationship between factors included in the CPTED theory and FoC, such as the number and angle of

surveillance cameras and the duration of illumination (Blobsaum & Hunecke, 2005: pp. 465-486). This seems to be part of the disorder explanation model, which aims to reduce physical and social disorder in an individual's environment through professional environmental design techniques. Numerous studies support the effectiveness of CPTED elements in influencing the level of FoC (Perkins, Weeks, & Taylor, 1992: pp. 21-34). Schneider and Kitchen (2007) demonstrated in their study on the relationship between CPTED elements and FoC that certain elements of the theory can effectively reduce the level of FoC among individuals in the environment (Schneider & Kitchen, 2007). For example, providing adequate nighttime lighting can reduce blind spots, lower criminal cues, and thereby decrease individuals' FoC. Adequate and widespread nighttime lighting directly enhances the clarity of the environment around individuals at night, improving their defense, response, and processing speed when facing danger, thus more effectively countering behaviors that may be included in their cognitive judgments of victimization (Blobsaum & Hunecke, 2005: pp. 465-486). However, there is a paradox in the CPTED theory. Some researchers believe that measures such as changing the intensity and scope of lighting can lead individuals to incorporate more and clearer potential criminal cues and risk factors into their FoC system based on their own cognition and judgment, resulting in higher levels of FoC. This paper argues that the reason for this paradox is similar to the previous one: the environment is not a uniform and homogenous factor but changes with the actual situation. If the surrounding environment does not have too many criminal cue areas due to insufficient lighting, increasing lighting may increase the individual's defense and judgment reaction time and clarity, thereby reducing FoC. Conversely, if there are many criminal cue areas in the environment, whether adequate lighting can fundamentally change the nature of these areas or make individuals more aware of their existence, leading to a higher level of FoC, remains to be seen.

In addition, based on traditional environmental design theory, some researchers have shifted their focus to more specialized theoretical factors of environmental design. Researchers, in a study, investigated the relationship between mural paintings in environmental design and FoC. In the study, it was pointed out that as a public art, the presence of mural paintings in the environment can effectively enhance the sense of connection and emotional flow among individuals in the environment, and significantly reduce individuals' FoC. It should be noted that graffiti, which is a factor of concern in the disorder model that negatively affects FoC, is fundamentally different from mural paintings. Kanan and Pruitt (2002) pointed out that graffiti is cognitively more closely associated with criminal activities, and people tend to associate graffiti with insecurity, juvenile gangs, violent crimes, and criminal subcultures in reality (Kanan & Pruitt, 2002: pp. 527-548). These factors, in turn, directly increase residents' FoC, although the degree may vary (Austin, 2007: pp. 292-316).

The study of environmental design theory is continuously deepening, and the

demand for environmental design in modern cities and the need to control FoC are stronger than ever before. For researchers, the physical environment is undoubtedly an influential factor that cannot be ignored when it comes to the FoC. Therefore, it is particularly important to apply fixed physical factors through physical planning and design (Nasar & Fisher, 1993: pp. 187-206). As Cozens, Hillier, and Prescott (2001) stated in their study, the best means of controlling FoC is to create a positive image in the environment that stimulates individuals' sense of belonging and connection within it (Cozens, Hillier, & Prescott, 2001: pp. 222-248).

1.8. Physical and Mental Diseases and Mental Disorders

Research literature on the relationship between psychosomatic diseases and individual FoC is scarce (Stiles, Halim, & Kaplan, 2003: pp. 232-253). Compared to research on other factors, the influence of the vulnerability model of "psychological disadvantage" has not been as highly valued by researchers in previous studies. Among them, research on the relationship between physical health and individual FoC has received earlier attention from researchers than the relationship between mental health and FoC. Looking at the timeline of research on the relationship between physical and mental health and FoC, it is not difficult to find that almost all research on physical and mental health began around 2000. However, the impact of physical and mental health on an individual's FoC is not weaker than other factors. Whitley and Prince (2005) clearly stated in their study on the relationship between mental health and FoC in the core area of London that an individual's FoC is related to health (Whitley & Prince, 2005: pp. 1678-1688). Researchers believe that self-evaluated health status and other health indicators that can evaluate an individual's health status may affect an individual's FoC level. It is an important predictor and should be taken seriously (McKee & Milner, 2000: pp. 473-486). Research and debate on physical and mental health are divided into two levels: physical and psychological.

In the study of the relationship between physical health and FoC, there is debate among researchers regarding the use of self-rated health versus objective health indicators. Researchers hold differing views on which metric to use in exploring the relationship between physical health and FoC (Stiles et al., 2003: pp. 232-253). Some researchers argue that self-rated health, which reflects individuals' perceptions of their own physical health, is the most important factor. According to Cossman and Rader's (2011) study on the relationship between personal vulnerability and FoC, individuals who rate their health poorly on self-assessment scales tend to have higher levels of FoC. Those who self-report as unhealthy may develop a perception of being unable to effectively protect themselves, thereby increasing their level of FoC (Cossman & Rader, 2011: pp. 141-162). This finding suggests that individuals' negative perceptions of their own health status may have a more significant impact on their FoC than their actual health condition (Beaulieu, Dube, Bergeron, & Cousineau, 2007: pp.

336-346).

To dialectical investigate the relationship between self-rated health, actual health, and FoC, some researchers have conducted studies on the relationship between FoC and individuals' actual health status. [McKee and Milner \(2000\)](#) focused on the relationship between individuals' actual health and FoC in their study. They used health status and activity limitations as measures of objective health and explored the relationship between actual health and FoC based on these metrics. The study demonstrated significant results, indicating that objective health indicators can also have a notable impact on individuals' FoC ([McKee & Milner, 2000: pp. 473-486](#)).

In their study on the relationship between physical and mental health and FoC among college students, [Rader, Rogers, and Cossman \(2019\)](#) pointed out that the importance of mental health in predicting individuals' FoC levels has been overlooked. However, mental health is crucial as it reveals the connection between anxiety and individuals' FoC ([Rader, Rogers, & Cossman, 2019: pp. 1-21](#)). Although research on the relationship between mental health and FoC is limited, it generally falls into two directions. Firstly, the impact of FoC on individuals' mental health status. [Kruger, Hutchison, Monroe, Reischl, and Morrel-Samuels \(2007\)](#) stated in their comprehensive study on FoC that an individual's FoC undoubtedly leads to a deterioration in their mental health status, resulting in a decline in their quality of life and a loss of happiness ([Kruger, Hutchison, Monroe, Reischl, & Morrel-Samuels, 2007: pp. 483-498](#)). Another study provides more specific data on the relationship between FoC and mental health. In a European study, data analysis showed that individuals with a high level of FoC are 1.93 times more likely to suffer from depression compared to those with lower levels of FoC, and their mental health scores are lower. Additionally, in their targeted study on the relationship between physical and mental health and FoC, [Stafford, Chandola and Marmot \(2007\)](#) found that the higher the level of FoC exhibited by an individual, the greater the likelihood of deterioration in mental health status, almost twice that of normal individuals. This has a significant negative impact on individuals' happiness and quality of life ([Stafford, Chandola, & Marmot, 2007: pp. 2076-2081](#)).

Researchers in the other direction haven't stopped their exploration either. [Whitley and Prince \(2005\)](#) studied the relationship between FoC and mental health, finding that women with mental health issues are more likely to exhibit higher levels of FoC compared to men ([Whitley & Prince, 2005: pp. 1678-1688](#)). Subsequently, [Stafford, Chandola, and Marmot \(2007\)](#) investigated the inverse relationship between physical and mental health and FoC, as well as its potential as a limiting factor for physical and social activities. After conducting a longitudinal study on the health data of over 10,000 civil servants aged 35 to 55 in London from 2002 to 2004, the researchers concluded that both mental health issues and objective or subjective physical health problems can influence an individual's FoC. This heightened FoC, in turn, can make individuals feel unhappy

(Stafford, Chandola, & Marmot, 2007: pp. 235-249).

In addition, some researchers believe that gender differences in FoC and mental health are crucial, yet few researchers have specifically studied this niche area. Currently, most researchers studying the relationship between physical and mental health and FoC agree that women are more prone to self-report internal mental health disorders such as anxiety and depression compared to men (Rosenfield & Mouzon, 2013). The reason for this general conclusion, drawn by researchers without specific studies, may be that women are more willing to discuss mental health-related topics with others and seek professional mental health services, such as confiding in friends or professionals (Mackenzie, Gekoski, & Knox, 2005: pp. 574-582). Some researchers have pointed out that women show lower resistance to mental health-related issues, which is also observed in the field of FoC research (Sutton & Farrall, 2005: pp. 212-224). Women are more likely than men to express their FoC to others (Goodey, 1997: pp. 401-418). Women's lower resistance has prompted some researchers to consider the issues of psychology, gender, and FoC from another perspective. Researchers suggest that men may experience the same FoC as women but do not express it because it does not conform to societal expectations for men and may be seen as undesirable or unacceptable (Gilchrist, Bannister, Ditton, & Farrall, 1998: pp. 283-298). The following **Figure 2** illustrates a feedback model of FoC, individual physical and mental health, and behavior.

The proportion of research exploring the relationship between physical and mental health and FoC remains relatively small, and debates on the topic persist even today. However, previous studies clearly indicate a correlation between an individual's FoC and their physical and mental health (Cossman & Rader, 2011: pp. 141-162). Examining physical and mental health as predictors of FoC is particularly important, as previous research has shown that individuals can exhibit high levels of FoC even in relatively safe environments. This finding cannot be

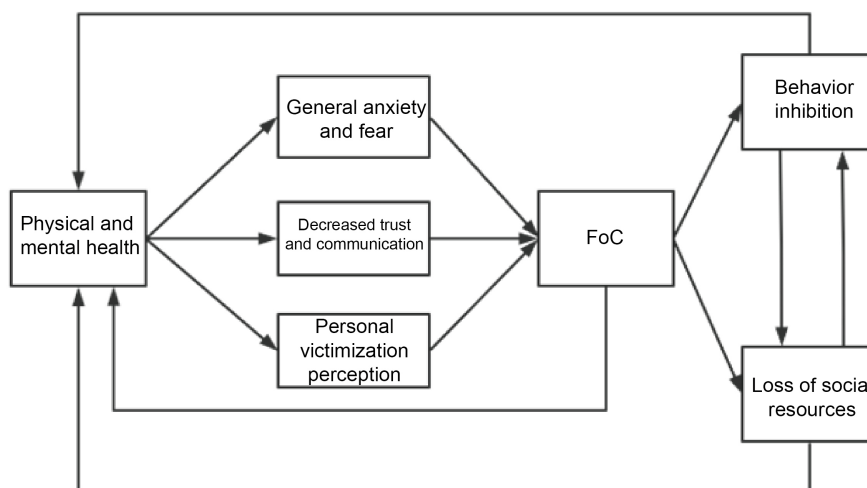


Figure 2. Feedback model of FoC and individual physical and mental health and behavior (Jackson & Stafford, 2009: pp. 832-847).

fully explained by the disorder model and requires a greater consideration of the explanatory role played by the vulnerability model. Additionally, the negative impact of high levels of FoC on individual behavior, health, and overall well-being cannot be overlooked (Chandola, 2001: pp. 105-116). Based on this understanding, after reviewing previous research, this article argues that both physical and mental health and FoC can significantly affect an individual's happiness. The relationship between these two factors should not be ignored by researchers, and more attention should be paid to this research direction in the future. There is a need for more in-depth and detailed studies on the relationship between mental health and FoC to meet the growing demand for mental health support in our country.

1.9. Population Density and Fear of Crime

Among the many factors studied in the relationship between environment and FoC, population density in public areas is one of the predictors of FoC that researchers are paying close attention to. Daily life cannot be separated from entering high-density scenes. Previous disorder studies have focused on areas with lower population densities. After reviewing the literature of previous studies, it is not difficult to find that researchers studying the relationship between the environment and FoC generally believe that dark and deserted areas or areas with a small population can cause individuals to exhibit higher levels of FoC, while there is a negative relationship between human traffic and the level of FoC exhibited by individuals.

Research on the relationship between population density and FoC began relatively early. In early research on spatial safety, this topic had already become a focus of researchers' attention. In his groundbreaking study, Jacobs (1961) pointed out that whether a space is safe does not primarily depend on the presence of police in that space. An individual's sense of security in a space is supported, to some extent, by the potentially complex population network within it. Therefore, the existence of a certain number of people and effective attention to individuals is very necessary (Jacobs, 1961: p. 448). This article believes that the understanding and reflection on this viewpoint raise two questions about the relationship between population density and FoC. Firstly, whether the presence of other people and effective attention in the space can reduce an individual's FoC; secondly, whether an individual's level of FoC will continue to decrease as the number of people in the space increases.

For the former question, researchers have given an affirmative answer. Galle, Gove, and McPherson (1972) discovered a positive correlation between population density and crime levels in their study on the negative effects of population density, and pointed out that there may be a negative impact between population density and FoC (Galle, Gove, & McPherson, 1972: pp. 23-30). Hedayati, Razak, Aldrin, and Tilaki (2012) mentioned in their research on FoC presented by crime victims and environmental prevention that population density in a unit

space has a significant impact on reducing individual FoC (Hedayati, Razak, Aldrin, & Tilaki, 2012: pp. 79-88). Malleson and Andresen (2016) investigated the relationship between population density, crime hotspots, and FoC in London. The results showed that if there are factors in the environment that are not conducive to population concentration, crime implications will increase, and individual FoC will rise (Malleson & Andresen, 2016: pp. 52-63). In 2010, supported by the US Department of Justice, Monk, Heinonen, and Eck published a book on general robbery based on their research. In the book, they pointed out that the density of pedestrians in the area would have a significant impact on the time, location, intensity of robbery, and individual fear of robbery (Monk, Heinonen, & Eck, 2010: p. 96).

The study of population density as a factor influencing crime and FoC has attracted increasing attention from researchers (Christens & Speer, 2005: pp. 113-127). Meanwhile, with the development of research, some researchers have discovered a paradox in the relationship between population density and FoC. Kvalseth (1977) first identified a negative relationship between these two factors in his study on the correlation between population density and FoC (Kvalseth, 1977: pp. 105-110). With technological advancements in recent years, researchers have begun to distinguish between permanent and floating populations within population density studies. Andresen and Jenion (2010) investigated the impact of these two factors on FoC and risk. Their findings indicate that an increase in the density of the floating population leads to a rise in the level of FoC, whereas the density of the permanent population does not significantly affect the level of FoC (Andresen & Jenion, 2010: pp. 114-133).

Lee, Kim, and Kim (2019) were the first to replicate this conclusion in South Korea using this method, studying the relationship between individual crime hotspots, FoC, and population density in Korean cities. Others have also adopted similar methodologies to investigate the correlation between urban crime and population mobility in South Korea. By comparing the permanent resident population, population density, and the level of FoC, researchers have found that the density of the mobile population within a specific time and space significantly impacts individuals' FoC. In contrast, under the same controlled conditions, there is no correlation between the permanent resident population and the level of FoC. Simply put, a high population density in a specific time and space can greatly influence the level of individuals' FoC (Lee, Kim, & Kim, 2019: pp. 376-387). Subsequently, Tchinda and Kim (2020) conducted a dedicated study on the relationship between population density and FoC at a crossroad in the city center of Cameroon. After analysis, they believed that the relationship between population density and FoC seems to follow a convex curve with a minimum value. This suggests that the concept of population density reducing FoC becomes invalid when the population density exceeds a certain threshold (Tchinda & Kim, 2020: p. 13). Regardless of whether the research findings on population density and FoC are contradictory, studies in this direction can assist

relevant departments and urban planners in better considering the impact of population density on individuals in specific areas when formulating policies and urban planning.

1.10. Social Identity and Fear of Crime

Social identity is also a research direction in the study of FoC. After reviewing and analyzing previous studies, it is not difficult to find that the current research on FoC in the field of social identity is mainly focused on college students. This paper believes that there are several reasons why research on FoC in this area is so concentrated. Firstly, the college student population is more concentrated than other groups, making sample collection and empirical research less resistant. Secondly, they have distinct social identity characteristics, being adults in the transition period between school and society. Finally, the research output can generate more effective feedback on campus.

There are many studies on FoC on campus in developed countries such as the United States, among which [McConnell's \(1997\)](#) groundbreaking research on the relationship between college students and FoC conducted at a university in the southern United States is particularly representative. This study explored the relationship between location characteristics and student characteristics (as independent variables) and FoC (as a multidimensional dependent variable). The results showed that location characteristics significantly affect students' FoC, with most students indicating that activities in specific areas on campus induce FoC. Additionally, demographic characteristics of students significantly influence their FoC ([McConnell, 1997: pp. 22-46](#)).

In addition, [del Carmen, Polk, Segal and Bing III \(2000\)](#) also conducted a social survey on FoC among student populations, introducing the event variable of before and after the occurrence of criminal phenomena to compare whether there are differences in the factors affecting students' FoC. By surveying 186 students before the violent crime occurred and 374 students after the crime, the research results supported previous findings to some extent. Similar to the aforementioned research conclusions, location characteristics significantly affect students' FoC, and student behavior and professional backgrounds also show a negative correlation with individual FoC. Furthermore, the study also pointed out significant differences in students' FoC before and after campus crimes occur. The campus environment amplifies students' perceptions, causing a sharp increase in their FoC ([del Carmen, Polk, Segal, & Bing III, 2000: pp. 21-36](#)).

Based on previous research findings, [Sloan et al. \(2000\)](#) further extended the impact of FoC on behavior and provided a series of guidance and suggestions for campus safety and policing practices ([Sloan, John, Mark, & Deborah, 2000: pp. 37-46](#)). These include: strict precautions against violence committed by students against other students; a focus on property crimes, which are more frequent than other types of crimes on campus; improved control over students' alcohol use; and strengthened crime prevention and control in "hotspots" and "peak times"

of criminal activity on campus. In addition to policing aspects, Fisher and Bonnie (1995) proposed that risk and fear factors also affect university administrators' responses to crime, and further summarized safety measures for campus administration (Fisher & Bonnie, 1995: pp. 85-100). For example, many universities have installed or updated emergency phones or alarms that can be used by students in open and closed areas of the campus, and established police stations around the campus.

In addition, another group of researchers has focused their attention on international students. Sundeen (1984) conducted a study on the FoC among international students studying in the United States, aiming to identify the factors that influence the level of FoC among this group. The results showed a positive correlation between the degree of social integration, participation in local cultural activities, and the level of FoC. However, the length of stay in the United States was negatively correlated with the level of FoC among international students (Sundeen, 1984: pp. 7-13). Although this study did not garner much attention due to the global situation and the focus of FoC research at that time, an increasing number of researchers are now exploring this subfield as globalization and cross-border learning become more prevalent. Sawir, Marginson, Deumert, Nyland, and Ramia (2007) studied the FoC among international students. Their findings revealed that due to factors such as a narrow social circle, inadequate social support, unstable social relationships, and language barriers, international students experience significantly higher levels of FoC compared to local students under the same controlled conditions. Conducted in Australia, the study indicated that international students there exhibited a higher FoC than their local counterparts (Sawir, Marginson, Deumert, Nyland, & Ramia, 2007: pp. 148-180). Other researchers have also expressed their views on the differences in FoC between international and local students. Coston (2004), in a study on FoC among international students studying in the United States, pointed out that international students may develop cognitive biases, believing that they are in an unfamiliar environment with many unstable factors. As a result, they may perceive a higher level of risk in reality, leading to a heightened FoC (Coston, 2004: pp. 161-176). Subsequently, Xiong, Nyland, Fisher, and Smyrnios (2017) conducted another study on the FoC among international students in Australia. Collecting data from six different institutions in Melbourne between 2009 and 2010, their analysis of 610 international students showed that social participation, opportunities, and the stability of the local society are positively correlated with the level of FoC among international students (Xiong, Nyland, Fisher, & Smyrnios, 2017: pp. 77-99).

Both for domestic students and international students, there are few similar research surveys conducted in China. However, researchers have paid attention to the FoC among Chinese students studying abroad. According to a survey by Zhang, Messner, Liu, and Zhuo (2009), social capital is a crucial component and influencing factor of Chinese citizens' sense of security (Zhang, Messner, Liu, &

Zhuo, 2009: pp. 472-490). Therefore, international students from China are very likely to experience anxiety and insecurity due to the lack of social capital or social relationships in their new environment, resulting in a higher level of FoC (Shi, Altbach, Attar, Guerra, Tolan, Beckett, & Zhuo, 2021: p. 5).

Although college campuses may be relatively safe without too many serious crimes, students still fear becoming victims of crime (Fisher & Bonnie, 1995: pp. 85-100). Research on college students' FoC is essential, as understanding the influencing factors of this fear can assist universities in formulating more appropriate policies, strengthening safety measures, and ultimately enhancing students' sense of happiness and motivation to learn on campus.

1.11. Race and Fear of Crime

Researchers studying FoC have been focusing on the relationship between race and FoC since the early stages of FoC research, possibly due to the racial situation in the United States. Garofalo (1977) pointed out that race is an important predictor of increased FoC (Garofalo, 1977). In a racial survey conducted among African American families in the United States, psychologists studied the impact of racial socialization on people's attitudes and behaviors. One of their viewpoints is that some people, after socialization, may distrust people of other races/ethnicities and become more vigilant towards those around them, resulting in a higher FoC (Hughes & Chen, 1997: pp. 200-214). Lane and Meeker (2003) believe that the conclusions of this study may be an important explanatory factor in the study of the relationship between subculture and FoC (Lane & Meeker, 2003: pp. 425-456).

Although racial issues have not completely changed in the United States with social development, the study of the relationship between race and FoC has gained increasing attention from researchers over time. Researcher pointed out in a study on social issues and FoC that many studies on the relationship between race and FoC have shown that non-whites exhibit higher levels of FoC than whites. Based on this, some researchers, such as Lane, Rader, Fisher and May (2014), conducted further investigations into the reasons for the high FoC among ethnic minorities. The results showed that regional and racial factors do make ethnic minorities and individuals with close social ties around them more vulnerable in society, exhibiting higher levels of FoC. This is consistent with previous research findings (Lane, Rader, Fisher, & May, 2014).

Another group of researchers believes that a more in-depth study should be conducted on the significant relationship between race and FoC to find more explanatory theoretical perspectives. Merry (1981) proposed the viewpoint of sub-cultural difference influence in his study on the impact of strangers on FoC. This viewpoint suggests that linguistic and cultural differences exhibited by individuals can lead to higher levels of FoC among those who come into contact with them but are not familiar with these cultural differences, and this effect is mutual (Merry, 1981). If an individual has recently arrived in a country and the

differences are still relatively apparent, they may feel unable to effectively navigate the surrounding social environment, leading to anxiety and an increase in the level of FoC (Lee & Ulmer, 2000: pp. 1173-1206). For non-ethnic minority residents, they may also hold suspicions towards these newcomers or residents of different races, resulting in a higher level of FoC (Lane, 2002: pp. 437-471).

With the development of research on the relationship between race and FoC, some researchers have proposed another possible explanatory theory in recent years, considering the importance of racial socialization in explaining differences in FoC among individuals of different races. Lane and Fox's (2012) study is a groundbreaking one, and the results indicate that, similar to how parents educate their children from a young age to be cautious around strangers, minority groups may also be guided and educated to stay with people of the same race to reduce the risk of victimization (Lane & Fox, 2012: pp. 491-523). The core viewpoint of this explanation for FoC is that individuals are socialized during their growth to believe that they should fear people of different races, ethnicity, or cultures. Research on race or ethnicity continues, and frictions between different ethnic groups exist in certain regions of China. However, there has been no applicability study conducted by Chinese researchers on the relationship between different ethnic groups and FoC.

2. Discussion Significance of the Degree of Fear of Crime

Hinkle & Weisburd (2008) argue that FoC exists on a spectrum. Excessive FoC can restrict one's daily activities, affect physical and mental well-being, and reduce the quality of life. Conversely, too little FoC can lead individuals to indulge in risky behaviors, frequenting high-crime areas and times, thereby increasing exposure to criminal cues and becoming vulnerable targets for criminal acts, putting them at a high risk of victimization. Therefore, maintaining a moderate and stable level of FoC is conducive to a healthy personal life and enhances overall happiness (Hinkle, & Weisburd, 2008: pp. 503-512). To better understand the implications of the FoC spectrum, this section briefly analyzes the impact of FoC on individual behavior, summarizes previous research, and distinguishes between abnormal and normal levels of FoC. The aim is to provide a more comprehensive understanding of the significance of FoC levels, making it a more effective tool for enhancing people's happiness.

FoC, as a negative emotional state, undoubtedly influences individual behavior. Given the complex precursors that affect FoC, its impact on individual behavior is also multifaceted, varying with changes in the fear itself. This impact exhibits a significant correlation with social conditions and the nature of the crime (Jackson, 2004: pp. 946-966). This increase in FoC brought about by social dynamics can create a strong sense of insecurity among individuals (Rasidah, Bahaluddin, & Hassan, 2016: pp. 407-415).

Although a sense of insecurity is a significant manifestation of fear, it is not sufficient to summarize the implications of the level of FoC. Excessively high or

low levels of abnormal FoC can have multifaceted consequences for the public (Shi, Altbach, Attar, Guerra, Tolan, Beckett, & Zhuo, 2021: p. 6). These consequences not only lead to physical and mental health issues for individuals (Klama & Egan, 2011: pp. 613-617), but also carry a high economic cost while impacting individual behavior (Dolan & Peasgood, 2007: pp. 121-132). In summary, the focus on the significance of abnormal FoC levels for individuals should primarily center on behavioral, psychological, and physiological aspects.

Firstly, on the psychological level, it is widely recognized by numerous researchers that FoC has a negative impact on individuals' mental health (Jackson & Stafford, 2009: pp. 832-847). Early researchers on FoC proposed as early as 1975 that high FoC can lead to suspicion, which can stifle the desire for human interaction and cause a loss of interpersonal closeness (Conklin & John, 1975). However, mere suspicion cannot stop researchers from exploring the psychological impact of FoC on individuals. In subsequent studies, researchers have found that the psychological effects of FoC on individuals also include depressive states or depression, and possible mental disorders caused by extremely high levels of FoC. Participants who reported higher levels of FoC in the study were approximately 1.5 times more likely to suffer from common mental disorders and about twice as likely to suffer from depression (Stafford, Chandola, & Marmot, 2007: pp. 2076-2081). In addition, Researcher conducted an experimental exploration of FoC in the laboratory using threatening images, which showed that individuals in an abnormal state of FoC tend to experience significant emotional fluctuations and misestimate the aggression that others may exhibit when faced with opinions from others (Noon, Beaudry, & Knowles, 2019). Furthermore, Ferraro (1995) observed that FoC, as an emotional response, is largely composed of anxiety. Considering its impact from this perspective, individuals who are chronically exposed to abnormal levels of FoC are also more likely to suffer from anxiety or anxiety disorders, and are more prone to exhibit paranoia, tension, and social isolation (Ferraro, 1995). Additionally, there is an extended secondary impact of abnormal FoC levels on the psychological level, which means that the psychological effects of abnormal FoC levels may further trigger behavioral issues in individuals, including addiction or the abuse of psychotropic drugs (Kilpatrick, Acierno, Saunders, Resnick, Best, & Schnurr, 2000: pp. 19-30). In a study conducted by Attar, Guerra, and Tolan (1994) on neighborhoods, negative life events, and schoolchildren, it was found that individuals with high levels of FoC exhibited aggressive peer relationships (Attar, Guerra, & Tolan, 1994: pp. 391-400).

Secondly, the impact on behavior transcends mere considerations of drug abuse and aggression. Scholars studying FoC have postulated that the degree of an individual's FoC can be quantified by measuring their behavior, given its profound influence on their actions (Saroo & Nak, 2001: pp. 305-323). However, empirical research supporting this methodology remains limited. Stafford, Chandola, and Marmot (2007) assert that behavioral inhibition resulting from

FoC is an inevitable consequence (Stafford, Chandola, & Marmot, 2007: pp. 2076-2081). When FoC escalates, individuals are more likely to adopt excessively cautious protective measures, such as avoiding public places or social gatherings, compared to those with average levels of fear (Melde, Berg, & Esbensen, 2016: pp. 481-509). This heightened fear can also lead to disproportionate defensive behaviors. For instance, studies on campus safety in the US reveal that students with elevated FoC exhibit a notably increased proclivity to carry weapons, ostensibly for self-defense, but this also elevates the risk of unexpected security incidents (Goldstein, Young, & Boyd, 2008, pp. 641-654). Given the prevalence of gun-related crimes in the US, Hauser and Kleck (2013) explored the correlation between fear and gun ownership, finding that individuals with heightened fear demonstrate a stronger desire to acquire firearms (Hauser & Kleck, 2013: pp. 271-291). American researchers place significant emphasis on studying FoC among student populations, particularly its influence on their behavior from an educational standpoint. Bowen and Bowen (1999) highlight that FoC can adversely affect adolescents' academic performance, leading to decreased focus and poorer grades (Bowen & Bowen, 1999: pp. 319-342). Notably, fear related to violence directly impacts students' reading abilities, potentially harming their intellectual development (Delaney-Black et al., 2002: pp. 280-285). From an economic perspective, elevated FoC is a notable deterrent to international student mobility, potentially discouraging them from pursuing education abroad, thereby impacting the educational sector of host countries (Marginson et al., 2010).

Looking back at the earliest stages of FoC research, one finds contradictions between FoC and the impact on individual behavior, as well as debates in the research about the impact of high FoC on individual behavior. In his study on FoC, DuBow (1977) mentioned that when people exhibit high FoC, several behaviors usually emerge. For example, they may choose to move directly to avoid the continuous influence of fear or victimization; build higher walls; or purchase life and property insurance for themselves despite having no physiological diseases (DuBow, 1977). Then, in order to seek a reduction in the FoC, they may share information and news related to crime, as well as the anxiety and feelings brought about by the FoC, with people around them (Garafalo, 1981: pp. 839-857). However, on the other hand, Furstenberg Jr. (1972) empirical research in the United States found that two-thirds of the respondents had not taken any measures to improve their residential safety environment in the past five years, while public concern about crime was on the rise during the same period (Furstenberg Jr., 1972). Additionally, Garafolo and James's (1976) survey in Europe showed that despite rising crime rates, respondents did not feel that their daily behavior had changed as a result (Garafolo & James, 1976). As researchers reflect on this contradiction, the reasons for the lack of a consistent and equivalent relationship between FoC and behavior in research can be summarized into two aspects. Firstly, FoC is treated as a whole, ignoring the different degrees of influence of specific types of crimes on individuals' specific fears. Secondly, there

is a lack of conceptual clarity in FoC research (Furstenberg Jr., 1972).

Finally, on the physiological level, individuals with high FoC may experience a decline in physical function due to its impact (Jackson & Stafford, 2009: pp. 832-847). Research on the physiological effects of high FoC is not as extensive as that on psychological and behavioral aspects. In particular, there is a scarcity of evidence to support views on the impact of FoC on physical health. This may be due to two reasons: on the one hand, physiology is understood as an inevitable outcome of psychological influences; on the other hand, FoC itself is interpreted as a social issue. Nonetheless, some researchers have found that high FoC can directly affect an individual's physical health, leading to adverse health outcomes (Grinshteyn, Muennig, & Pabayo, 2019). For instance, individuals are more likely to experience stomach discomfort, somatic issues (Jackson & Stafford, 2009: pp. 832-847), and severe cases can even affect an individual's mortality rate (Stafford, Chandola, & Marmot, 2007: pp. 2076-2081). A study in the UK, after repeated analysis of national crime survey data, also found that individuals with high FoC have a higher probability of self-reported physical health issues (Allen, 2004). Additionally, some researchers believe that the inhibitory and influential mechanisms of FoC on behavior are bidirectional. This means that individuals exhibiting high levels of FoC may adopt more preventive behaviors, and these preventive behaviors can further influence an individual's FoC (Henson & Reyns, 2015: pp. 91-103). Rader and Haynes (2014) tested this hypothesis, and the results partially supported previous views. The findings showed that individuals who adopt avoidance behaviors such as steering clear of certain areas or restricting their daily activities exhibit higher levels of FoC, whereas those who adopt defensive behaviors like carrying firearms or weapons do not show significant differences in their FoC levels (Rader & Haynes, 2014: pp. 197-213).

3. Conclusion

In summary, viewing the significance of the degree of FoC from both physical and psychological perspectives, as well as behavioral angles, echoes the viewpoint proposed by Ferraro and Grange in 1987, which states that FoC is commonly understood as a series of bodily reactions presented by individuals to crimes or crime-related information (Ferraro & Grange, 1987: pp. 70-97). Drawing on previous research findings on the relationship between FoC and individual behavior, this paper argues that if an individual's FoC can be kept within a reasonable range, it can positively impact their physical and mental health, as well as their behavior. In simpler terms, understanding the concept and connotations of FoC can make it a healthy and beneficial emotion (Warr, 2000: pp. 451-489).

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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