International Journal of Creative Multimedia

Conscientiousness and Gaming: A Scoping Review

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Abstract

Conscientiousness, a personality trait marked by organisation, meticulousness, discipline, and reliability, significantly influences various life outcomes and behaviours. This scoping review aims to explore the relationship between conscientiousness and gaming behaviour, drawing from empirical studies, theoretical frameworks, and qualitative analyses. Following Arksey and O'Malley's scoping review methodological framework, the review systematically identifies and analyses relevant studies in personality psychology, gaming studies, and the psychological impact of gaming. The focus is on how conscientiousness affects game genre preferences, in-game behaviours, and gaming motivations. The findings reveal that conscientious individuals prefer strategy and simulation games that require meticulous planning and long-term progression. They integrate gaming into their routines in a disciplined manner, ensuring it does not interfere with other responsibilities. High conscientiousness is associated with structured gameplay, goal-oriented decisions, and fewer signs of gaming addiction. In contrast, low conscientiousness is linked to increased gaming time, lower self-control, and a higher risk of gaming addiction. Understanding the influence of conscientiousness on gaming can help create positive gaming environments and inform guidelines for healthy gaming practices. This review contributes to the broader discourse on the psychological underpinnings of digital gaming, highlighting the nuanced ways in which personality traits shape gaming experiences.

Introduction

Conscientiousness is a personality trait marked by an inclination towards being organised, meticulous, disciplined, decisive, and reliable, influencing a wide range of life outcomes and behaviours (Sari et al., 2020). It is one of the Big Five personality traits associated with positive health behaviours and outcomes, often increasing as individuals age (Judge et al., 2024). The structure of conscientiousness can be broken down into several factors, including Deliberation, Order, Industriousness, Self-Discipline, and Dependability, with an additional factor of Traditionalism emerging when broader measures are considered (Phillips et al., 2024). Overall, conscientiousness is a complex and influential trait that affects a wide range of behaviours and outcomes, making it a critical area of study in personality psychology.

Despite the extensive research on conscientiousness and its impact on various life outcomes, there is a gap in understanding how this personality trait influences gaming behaviour and preferences. The intersection of personality traits and gaming has become a significant area of inquiry within psychology and game studies, as evidenced by various research findings. Research has demonstrated that personality traits, especially those identified in the Big Five model, are pivotal in shaping gaming behaviour and motivations. However, the specific ways in which conscientiousness shapes gaming experiences remain underexplored.

The objective of this systematic scoping review is to map the existing literature on conscientiousness and gaming, drawing from empirical studies, theoretical frameworks, and qualitative analyses. By examining the interplay between conscientiousness and game preferences, gaming behaviour, and motivations, this review seeks to provide a comprehensive understanding of how this personality trait influences the gaming experience. Such insights are not only academically enriching but also practically relevant, offering guidance for game designers, mental health professionals, and educators in fostering positive gaming environments. Ultimately, this exploration contributes to the broader discourse on the psychological underpinnings of digital gaming, highlighting the nuanced ways in which individual differences shape our interactions with virtual worlds.

Background

Conscientious individuals, who typically exhibit high levels of self-discipline and goal orientation, may gravitate towards games that align with these traits (Toh et al., 2024). For instance, they might prefer strategy games that require meticulous planning and thoughtful decision-making, or simulation games that emphasise structure and long-term progression. Understanding these preferences can offer valuable insights for game developers aiming to design experiences that resonate with different personality types.

Gaming behaviour, including the frequency, duration, and context of play, is another critical aspect influenced by conscientiousness. Conscientious gamers are likely to approach gaming with a sense of purpose and discipline, integrating it into their daily routines in a balanced manner (Yang et al., 2008). They might allocate specific times for gaming, ensuring it does not interfere with other responsibilities and commitments (AlMarshedi et al., 2017). By examining these behavioural patterns, researchers can identify potential risks and benefits associated with gaming for different personality profiles, thereby informing interventions and guidelines for healthy gaming practices.

Motivations for gaming provide further insight into the role of conscientiousness in shaping gaming experiences. Conscientious individuals may be driven by intrinsic motivations such as achievement and mastery, seeking to accomplish in-game goals and challenges (Hu et al., 2024). They might also be motivated by extrinsic factors like rewards and recognition, viewing gaming as an opportunity to demonstrate competence and earn accolades. Additionally, their gaming motivations might reflect broader life goals, such as personal development and social connection, using games as a platform to enhance skills or bond with others (Wang, 2021). Exploring these motivations clarifies why conscientious individuals engage in gaming and how it aligns with their broader life objectives.

Methods

This scoping review will follow the methodological framework outlined by Arksey and O'Malley (2005) and further refined by Levac, Colquhoun, and O'Brien (2010). The research will also comply with the PRISMA extension guidelines for scoping review reporting. This approach involves five key phases: identifying the research question, identifying relevant studies, study selection, charting the data, and collating, summarizing, and reporting the results.

Research Questions

The initial step in this framework is to establish clear and precise research questions. These questions are fundamental as they guide the entire review process, including the development of search strategies and the selection of relevant studies. By defining these questions early on, we ensure that the review remains focused and systematic. This review seeks to address the following key research questions:

1. How does conscientiousness influence individuals' preferences for game genres and their level of engagement with these games?
2. What are the patterns of gaming behaviour among conscientious individuals, including their approach to time management and gaming frequency?
3. How do the motivations for gaming among conscientious individuals reflect their personality traits and broader life goals?

Search Strategy

This review covers research in personality psychology, gaming studies, and the psychological impact of gaming, with a particular emphasis on conscientiousness, game genre preferences, in-game behaviours, and gaming motivations. The search stages employed keywords such as "personality", "game preference", "game genre", "in-game behaviour", "gameplay", "gaming motivation" and "gaming motive" to ensure a comprehensive search. A comprehensive search was conducted across multiple electronic databases, such as Scopus, ScienceDirect and IEEE Xplore. To ensure thoroughness, additional studies were located through manual searches on Google Scholar and web pages. This search phase was meticulously organised, with carefully chosen keywords tailored to match the specific attributes, algorithms, and indexing systems of each database. This strategic approach maximised the retrieval of pertinent studies and ensured a robust collection of relevant literature.

The selection criteria for the articles included the exclusion of articles published before 2019, duplicates, technical-focused articles, and those written in languages other than English and Malay. Excluding articles published before 2019 ensures relevance, as recent research reflects the latest findings, methodologies, and trends, providing a more accurate and up-to-date understanding of the topic.

Study Selection

The search results from each database were imported into reference management software (Mendeley) to automatically screen for duplicate records. Researchers then manually screened the records' titles, swiftly discarding those that were clearly irrelevant to the research. For the remaining articles, abstracts were screened to determine their relevance to the scope of this review paper.

After completing the abstract screening, the next step is to obtain and review the full texts of the studies that were deemed relevant. Researchers begin by accessing the full texts through academic databases, institutional subscriptions, and by directly contacting the authors. These documents are then systematically organised in Mendeley, ensuring efficient management and easy access during the review process. The initial full-texts screening involves a thorough review to confirm the relevance of each study to the research questions. This step requires a detailed reading to ensure that the study's objectives, methods, results, and conclusions align with the focus of the review. Predefined inclusion and exclusion criteria are applied once again, and studies that do not meet these criteria are excluded. These include not addressing the main research questions, misalignment with the review's focus, and language limitations due to inclusion of only English and Malay studies.

The screening of titles, abstracts and full text were done manually by the researchers. This is to ensure accuracy and precision, as human judgment can capture nuances and context that automated tools might miss. This allows researchers to interpret the relevance of studies more accurately. Manual screening also provides higher quality control, enabling researchers to assess the methodological quality of each study in detail. This includes evaluating study design, sample size, data collection methods, and analysis techniques. Moreover, having two researchers involved in the manual screening process helps minimise human error. By cross-checking each other's work, they can identify and resolve discrepancies, ensuring a more accurate and reliable evaluation of each record.

Additionally, manual screening offers flexibility in handling ambiguities and adjusting criteria dynamically based on findings during the screening process. This adaptability is essential for maintaining the integrity of the review. Figure 1 illustrates the process of screening records for inclusion in the study, following the guidelines of the PRISMA flow diagram.
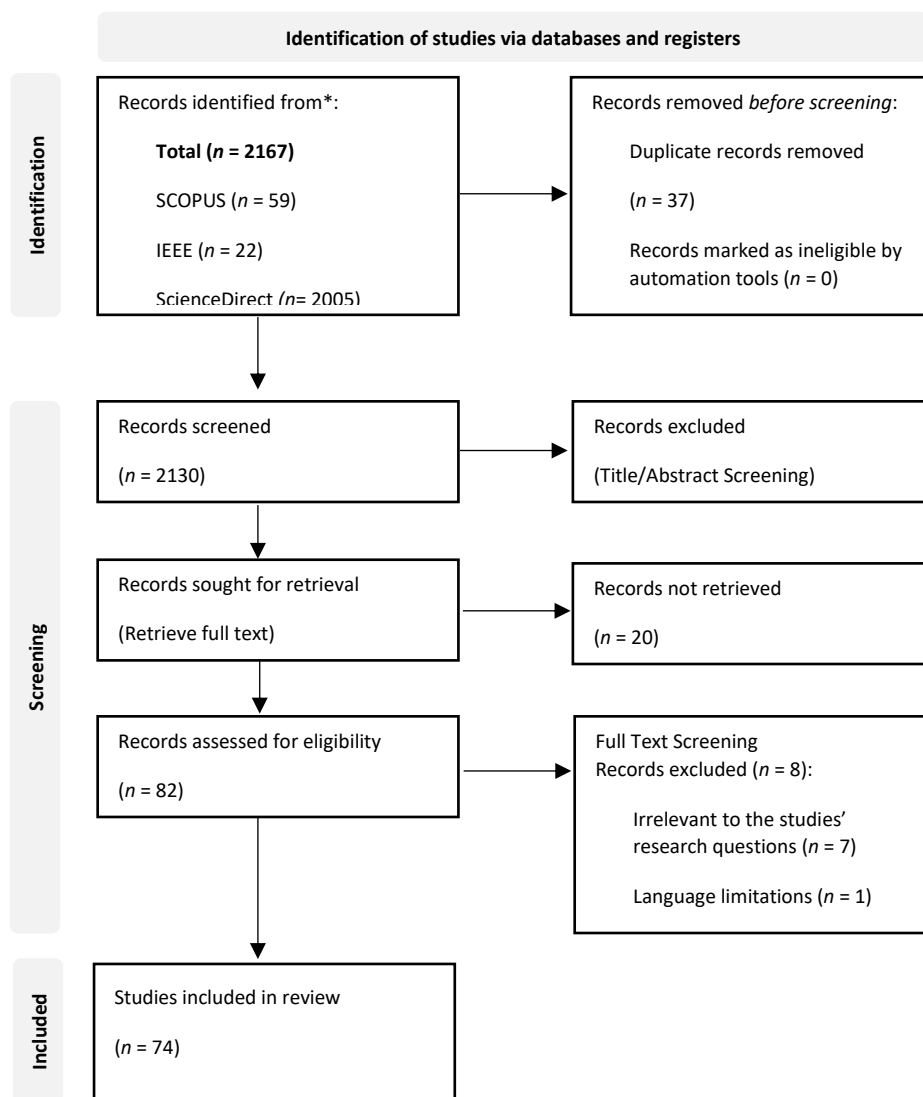

Figure 1. Articles Selection Process Based on PRISMA Diagram

Data Extraction, Collation and Report

After the records were selected, data were extracted and charted into a data form using Microsoft Excel. This systematic charting process streamlined the analysis, enhanced the organisation of data, and maintained clarity in the extracted information. The structured approach allowed for easy sorting, filtering, and comprehensive analysis of the information. The extracted information from the records includes title, authors, publication year, country of study, study design and main findings.

The findings were then systematically compiled and summarised, using narrative synthesis approach to group the charted data into thematic categories, facilitating the comparison and analysis of different studies. The results were then reported using written and numerical summaries. This stage is crucial as it provides a comprehensive synthesis of the available evidence, contributing significantly to the overall objectives of the scoping review.

Results

The initial search of the electronic database uncovered 2,167 records. After eliminating 37 duplicates, 2,130 records remained for title and abstract screening. This process narrowed down the selection to 102 records for full-text retrieval. 20 of these records were inaccessible due to issues such as unresponsive authors, subscription restrictions, and download difficulties. As a result, 82 records were reviewed in full text to determine their relevance, and 74 were included in the study. The detailed process is shown in Figure 1.

Articles' Characteristics

The articles included in this study were published between the years 2019 and 2025. The distribution of publications is as follows: 2019 (n=13, 18%), 2020 (n=11, 15%), 2021 (n=14, 19%), 2022 (n=10, 13%), 2023 (n=14, 19%), 2024 (n=10, 13%), and 2025 (n=2, 3%). The distribution of publications from 2019 to 2024 is quite even, indicating a steady interest in the research topic over the years. The studies were sourced from various countries, including Germany (n=12, 16%), China (n=10, 14%), the United States (n=8, 11%), India (n=6, 8%), and Spain (n=5, 7%). Figure 2 illustrates the overall distribution of these study locations. The selected records represent a global collection, with contributions spanning multiple continents. From Asia, countries such as India, China, Japan, and South Korea are included. Europe is well-represented with studies from Germany, the United Kingdom, France, and many others. The Americas also contribute significantly, with records from the United States, Brazil, and Canada. This diverse geographical distribution underscores the wide-reaching scope of the research.
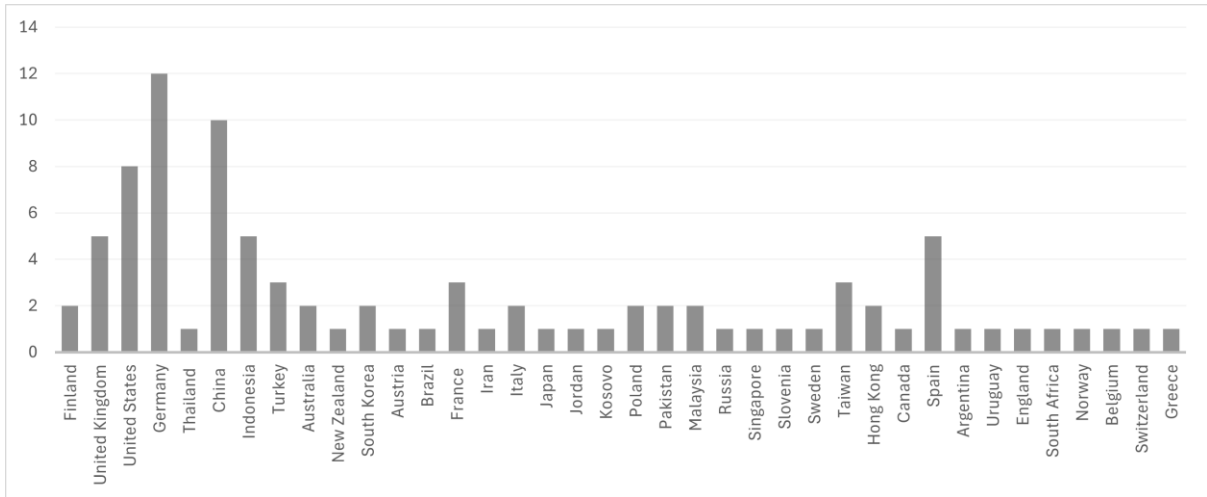
Figure 2. Countries of the Studies

Most of the studies in this review are classified as explanatory (*n*=28, 39%), exploratory (*n*=26, 35%), and descriptive (*n*=19, 26%). This distribution highlights a strong focus on understanding and explaining the relationships between personality traits and various aspects of gaming, including game genre preferences, gameplay, in-game behaviour, and gaming motives. Explanatory studies aim to explain causal links and underlying mechanisms, which are crucial for developing interventions and informing policy decisions. Exploratory studies investigate new areas or phenomena, generating hypotheses and identifying patterns, while descriptive studies provide comprehensive overviews of characteristics and behaviours within specific populations. Figure 3 depicts the distribution of the study aim classifications for the selected records.
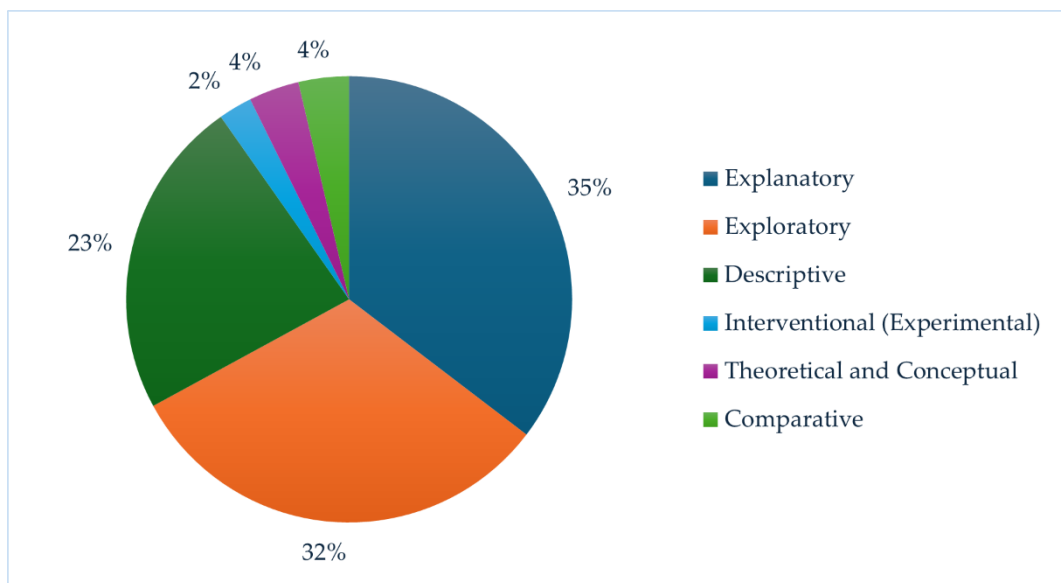

Figure 1. Studies' Aims Classification

The study designs of the selected records are predominantly quantitative (n=30, 42%). Only a few studies mentioned qualitative approaches, such as observations and interviews (n=2, 3%). Some studies specifically indicated cross-sectional data collection (n=18, 25%), while the rest did not specify their data collection strategy. Surveys and questionnaires are widely used in the selected records' studies because they allow for efficient data collection from large, diverse samples, often across multiple countries (Murphy, 2023). These tools provide standardised and consistent data, which is crucial for quantitative analysis (Dalati & Marx Gómez, 2018) and the assessment of personality traits, gaming behaviours, and psychological outcomes. Additionally, online surveys enable remote data collection, ensuring anonymity and encouraging honest responses (Taherdoost, 2022), which is particularly beneficial for sensitive topics like gaming addiction and mental health. The predominant use of quantitative approaches may indicate a potential gap in the depth of understanding that qualitative methods could offer.

The total number of participants across all the selected records is 18,725. Six records have small sample sizes (fewer than 100 participants), 23 records have medium sample sizes (100 to 999 participants), and two records have large sample sizes (1,000 participants or more). 24 studies involved children and adolescents as their research participants, six studies specifically identified adults as their participants, and 42 studies included mixed or unspecified participants. Overall, this highlights the extensive data collection efforts and the diverse focus of the research studies, providing valuable insights into various aspects of gaming and their psychological correlates across different age groups and sample sizes.

Characteristics of Conscientiousness

Conscientiousness refers to a personality trait marked by carefulness and a strong inclination to complete tasks effectively (Wang et al., 2019). This trait is associated with self-motivated behaviour, highlighting individuals who are highly organised, efficient, and exhibit strong self-control (di Fini et al., 2023; Wernicke & Montag, 2022). Individuals with high levels of conscientiousness typically display attributes such as competence, a sense of duty, self-discipline, orderliness, drive for achievement and careful deliberation (Higdon et al., 2021). A conscientious person is also meticulous and hyper-focused (Wang, 2021). On the other hand, low conscientiousness is characterised by a lack of these traits, resulting in individuals being less organised, less diligent, and having lower self-discipline (Higdon et al., 2021). According to Liao et al. (2021), conscientiousness has a hierarchical structure comprising six facets, all presented in Table 1 below.

Table 1. The facets of conscientiousness

Facet	Description
Industriousness / Competence	This facet emphasises the ability to perform tasks effectively and meet one's high expectations. Individuals with a high level of competence typically possess extensive skills and knowledge, along with the capability to execute duties efficiently and effectively.
Orderliness	This facet pertains to the tendency to maintain order and organisation in one's life. Individuals who score highly on the orderliness trait are typically neat and enjoy keeping their belongings organised and in their proper places. They are also adept at scheduling their activities and prioritising their time efficiently.
Self-discipline / self-control	This trait reflects the capacity to manage impulsive tendencies and to postpone immediate rewards in favour of long-term goals. Self-disciplined individuals can resist temptation and remain focused on their long-term goals. They are also proficient at managing their time and resources efficiently.
Achievement striving	This aspect pertains to the drive to succeed and achieve goals. High achievers are typically ambitious, goal-oriented, and willing to make significant effort to reach their objectives. They are also skilled at setting high standards for themselves and dedicating the necessary effort to meet them.
Deliberation	This trait highlights a person's inclination to carefully consider their actions before proceeding. Those with high scores in deliberation excel at evaluating all possible options thoroughly. They also excel in planning and preparation.
Dutifulness	This trait reflects the ability to assume and fulfil responsibilities. Individuals who score high in dutifulness are reliable friends and colleagues who consistently keep their promises. They also excel in planning for the future and executing those plans.

People with high conscientiousness are more likely to satisfy their fundamental psychological needs, such as relatedness, competence and autonomy. This often results in improved time management, skill development, and more positive social interactions (Liesera et al., 2019). Self-discipline, a central aspect of conscientiousness, affects how well an individual manages their emotions and actions during stressful or challenging situations. This trait is crucial in daily life, significantly influencing one's ability to handle stress and overcome difficulties effectively (Behnke et al., 2023; Semenova et al., 2020). Conscientiousness influences various aspects of daily life, such as work performance, time management, goal achievement, and overall success in personal and professional endeavours (Basha, 2021; Liao et al., 2021; Wartberg et al., 2023; Yi et al., 2020; Ying, 2023). It plays a role in academic and occupational success, as it is associated with higher achievement levels and better job performance due to traits like diligence and perseverance (Alvi et al., 2023).

This trait plays a role in reducing conflicts with others, as individuals with higher conscientiousness are less likely to engage in behaviours that may lead to disagreements or negative interactions (Gao et al., 2023). The influence of conscientiousness can be observed in adherence to rules and routines, contributing to a structured and disciplined approach to daily activities (Zalewski, 2021). High conscientiousness may result in individuals being less spontaneous and more focused on staying on task, which can impact their ability to engage in social interactions and immersive activities (Wang, 2021). People with low conscientiousness may struggle with completing tasks, lack reliability, and show a tendency to procrastinate (Chew & Wong, 2022).

Conscientious person likes to maintain stable relationships, as they are more likely to be reliable, trustworthy, and committed to their partners and family members (Ajith et al., 2024; Anirudha & Aarsha, 2024). Conscientiousness can also impact decision-making processes, as individuals with this trait are more likely to consider long-term consequences, be cautious in making any plans, follow through on commitments, and maintain a structured approach to tasks and responsibilities (Abbasi et al., 2021; Wernicke & Montag, 2022). In contrast, low conscientiousness is linked to poorer psychological functioning, such as lower self-esteem, life satisfaction, and self-efficacy (Von Der Heiden et al., 2019).

Conscientiousness Influence Towards Game Genre Preferences

Various game genres attract different types of players, and even within a single game, different elements may appeal to diverse player preferences (Akbari et al., 2022; Yi et al., 2020). According to Zalewski (2021) and Dieris-Hirche et al. (2020), conscientiousness has a significant influence on game genre preferences, and conscientious individuals may have distinct preferences for game genres based on their personality traits (Şalvarlı & Griffiths, 2021). The influence of conscientiousness on game genre preferences is evident in the characteristics of different types of video game addiction, where conscientiousness levels differ among gamers based on the genre they play, such as Racing, Role-Playing Game (RPG), and Real-Time Strategy (RTS) games (Guan & Chen, 2023). Conscientiousness showed a negative correlation with time spent on strategy, role-playing and action-adventure games. This suggests that individuals with lower conscientiousness are more spontaneous and less disciplined, often spending less time on games that demand long-term planning and strategy (Potard et al., 2020).

Players with high conscientiousness tend to gravitate toward inventive and cognitive games like puzzles (Yi et al., 2020). These players often enjoy mental challenges and experimenting with new strategies. support this, noting that conscientious individuals prefer "positive" and "responsible" games, such as those that train cognitive and psychomotor abilities, with high conscientiousness scores linked to these preferences. Wang (2021) also found a positive correlation between conscientiousness and preferences for board games, sports games, and racing games. This trait appeals to those who appreciate well-structured rules in games like chess, which requires meticulous planning and strategic thinking. Moreover, games such as sports, flight simulators, and other goal-oriented activities have been found to be associated with higher levels of conscientiousness (Akbari et al., 2022).

RPG genre preferences are shaped by conscientiousness, with players scoring higher in this trait tending to favour games with imaginative scenarios and rich narratives, key features of RPGs (Rathakrishnan et al., 2023). However, López-Fernández et al. (2021), found that conscientious

individuals are less likely to prefer fighting and RPG genres, which often involve extensive gaming time and have been associated with a higher risk of Internet Gaming Disorder (IGD).

Gamers who prefer arcade and shooting games tend to have significantly lower levels of conscientiousness (Guan & Chen, 2023). However, research by Zalewski (2021) discovered an intriguing connection between conscientiousness and 'first-person shooter' (FPS) video games. The preference for FPS games tends to increase with a player's level of diligence. This relationship may stem from the fact that many FPS games require skill, expertise, and practice to achieve a satisfying level of play, particularly in multiplayer modes where success hinges on strong map awareness and hand-eye coordination. Mastery demands significant time and consistent practice, but diligent individuals are more inclined to invest the necessary effort.

Table 2 highlights the genres preferred by players with high conscientiousness, as derived from the analysed records.

Table 2. Game genre preferences of conscientious players

Preferred Game Genre	Frequencies (n)	Studies	Examples of Games
RPG	3	Dewanto & Tiatri (2021), Rathakrishnan et al. (2023), Zalewski (2021)	The Witcher 3: Wild Hunt, Final Fantasy XV
Action and Adventure	2	Li et al. (2024), Potard et al. (2019)	Tomb Raider, Uncharted 4: A Thief's End
FPS	3	Lesmana et al. (2021), Zalewski (2021), Guan & Chen (2023), Quwaider et al. (2019)	Call of Duty: Modern Warfare, Overwatch
Racing	1	Kim et al. (2022)	Forza Horizon 4, Gran Turismo Sport
Simulation	1	Dewanto & Tiatri (2021)	The Sims 4, SimCity
Strategy	3	Dewanto & Tiatri (2021), Potard et al. (2019), Guan & Chen (2023), Lindahl et al. (2024)	Civilization VI, StarCraft II
Casual	1	Li et al. (2024)	Candy Crush Saga, Animal Crossing: New Horizons
Puzzle or board game	4	Anirudha & Aarsha (2024), Ajith et al. (2024), Haizel et al. (2021), Guan & Chen (2023)	Chess, Sudoku

Conscientiousness Impact on Gameplay and In-Game Behaviours

Investigating the impact of personality on in-game behaviour is essential for understanding how different traits affect players' interactions with games. This research provides game developers with the insights needed to tailor game design and features to better align with player preferences and behaviours (Liao et al., 2021). Additionally, exploring the link between personality and in-game behaviour reveals how players' consistent behavioural traits can affect their choices of game characters and their actions within the game.

Furthermore, this insight is crucial for understanding how individual traits relate to gaming habits, which can help in the identification and prevention of problematic gaming behaviours (Bäcklund

et al., 2024; Carlisle et al., 2019; López-Fernández et al., 2021; Mohamed Imran et al., 2024; Monacis et al., 2022). It also contributes to understanding the psychological aspects of online gaming, particularly in identifying how different personality traits affect the engagement levels of adolescents and the potential for addictive behaviours (di Fini et al., 2023; Liesera et al., 2019). Understanding these insights can enable game developers to deduce players' personality traits from their behaviours to carry out targeted promotions, enhancing player engagement and satisfaction (Gao et al., 2023). By exploring how personality influences in-game choices and behaviours, researchers can enhance the predictive power of games in determining an individual's personality, offering a more engaging and enjoyable game (Haizel et al., 2021). Studying the relationships also helps in understanding how different personality traits can impact the way individuals engage with video games and the potential effects on their mental health and overall well-being (Looi et al., 2023).

Positive Gameplay and In-Game Behaviours

Personality traits and emotionality are closely linked to in-game behaviours in video games (Gao et al., 2023; Vera Cruz et al., 2023). Conscientiousness can influence gameplay and in-game behaviour by affecting the individual's psychological functioning, coping strategies, and self-esteem, which are all factors that can impact how a person engages with video games (Wang et al., 2021). Conscientious individuals are more likely to achieve accomplishments in video games, leading to increased self-efficacy and prolonged engagement due to the medium offering challenging tasks, teamwork, and a sense of accomplishment (Abbasi et al., 2021; Guo et al., 2020). Gamers with high conscientiousness are often more goal-driven and committed to completing tasks efficiently, which influences their decision-making and strategies during gameplay (Chatziavgeri & Maya, 2023; Tasnim & Eishita, 2021). Conscientiousness can play a role in determining the level of engagement, persistence, and goal-directed behaviour in gameplay, similar to its impact on academic and work performance (Roberts & Yoon, 2022).

Another study found that gamers with higher levels of conscientiousness often exhibit more structured and disciplined gameplay styles, concentrating on achieving objectives efficiently and effectively within the game environment (Lesmana et al., 2021). These individuals are also more likely to control impulses and maintain attention to detail during gameplay, leading to more deliberate actions and thoughtful strategies (Haizel et al., 2021; Kim et al., 2022). High levels of conscientiousness can result in more responsible and disciplined gameplay, potentially affecting decision-making, strategic planning, and adherence to rules within the game (González-Bueso et al., 2020). These strategic and goal-oriented decisions are characteristic of highly conscientious players, who are motivated to achieve goals, persistent, hardworking, organised, and competent (Dewanto & Tiatri, 2021). In team-based games, gamers with high levels of conscientiousness may exhibit behaviours such as actively fulfilling

their in-role obligations within the gaming team. This can include engaging in defensive roles to protect the team from rival attacks. These players may naturally gravitate toward team functions that align with their personality traits, ultimately enhancing their loyalty to online games (Liao et al., 2021).

People with conscientious personalities typically show fewer signs of gaming addiction, while those with somatic and dissociative symptoms are more prone to frequent, problematic online gaming behaviours (di Fini et al., 2023). Additionally, conscientiousness is inversely related to in-game deaths, indicating that players with higher conscientiousness levels tend to experience fewer deaths during gameplay. This trait influences in-game behaviour by promoting more cautious and strategic gameplay, which can lead to better survival rates (Gao et al., 2023). A highly conscientious person also tends to have low intentions to cheat in games (Menzel et al., 2023). Several studies also indicate that conscientiousness is negatively associated with gaming disorder symptoms, suggesting that individuals with high levels of conscientiousness are more likely to maintain functional gameplay and avoid impairments related to gaming behaviour (Bäcklund et al., 2024; Wai Yen et al., 2020).

Table 3 compiles the gameplay patterns and behaviours exhibited by players with high levels of conscientiousness, as identified from all selected records.

Table 3. Gameplay or in-game behaviours of high conscientious players

Gameplay or in-game behaviours	Frequencies (n)	Studies
Higher performance and effort	7	Hoffmann et al. (2019), Tasnim & Eishita (2021), Abbasi et al. (2021), Haizel et al. (2021), Roberts & Yoon (2022), Ulutas & Sezgin (2025), Manju Usha Sree et al. (2024)
Positive affect and reduced negative affect	2	Tasnim & Eishita (2021), Roberts & Yoon (2022)
Higher motivations and perfectionist	3	Yi et al. (2020), Kordyaka et al. (2019), Habibi et al. (2023)
Careful and controlled play styles	4	Wang et al. (2019), Gao et al. (2023), Lesmana et al. (2021), Kim et al. (2022)
Better player experiences in multiplayer games	2	Liu et al. (2020), Chatziavgeri & Maya (2023)
Higher engagement in team functions	4	Liao et al. (2021), Dewanto & Tiatri (2021), Wai Yen et al. (2020), Vera Cruz et al. (2023)
Lower likelihood of aggressive actions	3	Shih et al. (2022), González-Bueso et al. (2020), Haizel et al. (2021)
Higher win rates	2	Wang et al. (2019), Bäcklund et al. (2024)
Strategic and goal-oriented decisions	4	Dewanto & Tiatri (2021), Liao et al. (2021), González-Bueso et al. (2020), Halim et al. (2019)
Fewer signs of gaming addiction / Negative association with gaming disorder symptoms	6	di Fini et al. (2023), Wai Yen et al. (2020), González-Bueso et al. (2020), Bäcklund et al. (2024), Menzel et al. (2023), Hao et al. (2025), Zhou et al. (2023)
Inversely related to in-game deaths	1	Gao et al. (2023)
Fewer randomness and predictable	1	Lindahl et al. (2024)
Make in-game decisions that reflect their avatar's characteristics	1	Yampray & Srisuchat (2023)

Negative Gameplay and In-Game Behaviours

A study by Alvi et al. (2023) discovered a positive link between conscientiousness and aggression in PUBG players, suggesting that those with higher conscientiousness might display increased aggressive

behaviours while gaming. Conversely, lower levels of conscientiousness are strongly associated with digital game addiction and disordered gaming (Burleigh et al., 2022; Kesici, 2020; López-Fernández et al., 2021). Montag et al. (2021) emphasised that low conscientiousness is robustly linked to disordered gaming, indicating that this personality trait plays a crucial role in predicting gaming disorders. Supporting this, a study by de Hesselle et al. (2021), found that individuals with lower conscientiousness are likely to spend more time gaming. Similarly, González-Bueso et al. (2020) noted that this personality trait affects how players manage their gaming time, prioritise gaming over other activities, and deal with the negative consequences of excessive gameplay, underscoring the influence of personality on gaming behaviour.

Low conscientiousness scores are linked to lower self-control, making individuals more prone to engaging in disordered gaming behaviours. The lack of self-control in heavy gamers has been associated with impulsivity, which can influence how conscientiousness affects gameplay and in-game behaviours (Liesera et al., 2019; Macur & Pontes, 2021). This trait indicates a player's commitment to personal goals, organisational skills, and ability to follow schedules, making the digital environment more attractive for individuals with low conscientiousness. It can result in challenges with managing time and money spent on gaming, as players with low conscientiousness often find it hard to regulate their gaming activities (Liao et al., 2020).

Table 4 compiles the gameplay patterns and behaviours exhibited by players with high levels of conscientiousness, as identified from all selected records.

Table 4. Gameplay or in-game behaviours of low conscientious players

Gameplay or in-game behaviours	Frequencies (n)	Studies
Increased aggressive behaviours	2	Alvi et al. (2023), Derhami et al. (2021)
Strong association with digital game addiction and disordered gaming	5	Burleigh et al. (2022), Kesici (2020), López-Fernández et al. (2021), Sharma & Vandana (2020),Wai Yen et al. (2020)
Robust link to disordered gaming	1	Montag et al. (2021)
Likely to spend more time gaming	1	de Hesselle et al. (2021)
Affects management of gaming time and prioritisation	1	González-Bueso et al. (2020)
Linked to lower self-control and impulsivity	2	Liesera et al. (2019), Macur & Pontes (2021)
Challenges with managing time and money spent on gaming	1	Liao et al. (2020)
Lack of rule compliance and project blame onto others	1	Esteve et al. (2022)

Conscientiousness Association with Gaming Motives

Research on gaming motivations has been conducted in at least 42 studies, identifying seven common motivations: competition, fantasy, recreation, coping, skill development, social interaction and escape (Carlisle et al., 2019; Wang, 2021). Players driven by fantasy immerse themselves in the game world to experience scenarios beyond their real-life possibilities, whereas those motivated by skill development engage in games to improve their gaming abilities. The escape motive involves playing games to distract

from daily hassles, while the coping motive is about re-energizing oneself in the face of stress. The competition motive is linked to gaining a sense of achievement by defeating other players, and the social motive is about playing for the company of others and social interaction (Wang, 2021).

Understanding the gaming motives of individuals can provide insights into how they may use gaming as a coping mechanism, escapism, or specific reasons such as skill development, competition, or recreation, which can impact their overall gaming behaviour and habits. (Ajith et al., 2024). Conscientious individuals often engage in games to satisfy their fundamental psychological needs, including enjoyment, autonomy, competence, relatedness and intrinsic motivation (Johannes et al., 2021; Liesera et al., 2019). They tend to engage in gaming for reasons related to their desire for achievement, self-improvement, mastery and learning new things as they are driven by goals and the pursuit of success in various aspects of their lives (Liao et al., 2020; Monacis et al., 2022; Roberts & Yoon, 2022; Vera Cruz et al., 2023; L. Wang, 2021). Conscientious people like to engage in games that offer challenges, strategic thinking, and opportunities for planning and decision-making (Anirudha & Aarsha, 2024; Chew & Wong, 2022; Jain et al., 2022; Vera Cruz et al., 2023; Wernicke & Montag, 2022).

Additionally, conscientious individuals may play games as a form of problem-focused coping, actively engaging in solutions to reduce life stressors. They might also play games to manage unwanted negative emotions caused by stressors, known as emotion-focused coping. Dysfunctional coping, such as avoiding or disengaging from stressors, could be another motivation for conscientious individuals to play games (Burleigh et al., 2022). According to di Fini et al. (2023), these gamers may play games for relaxation or fun rather than as a form of escape from reality. They prioritise gaming as a leisure activity that aligns with their organised and responsible nature.

Some research also suggests that conscientious individuals might use gaming as a means of escaping daily life challenges. For these individuals, gaming can provide a respite from their responsibilities and routines, offering a way to relax and unwind after fulfilling their duties. It allows them to step away from daily stressors and recharge (Jain et al., 2022; Mohamed Imran et al., 2024; Monacis et al., 2022). Coping motives were identified as mediators in the relationship between personality traits and gaming disorder, while recreation and social interaction motivations were associated with the duration of gaming. According to the study by López-Fernández et al. (2024), coping motives notably mediated the connections between lower emotional stability, conscientiousness, extraversion and agreeableness, and higher openness, with disordered gaming.

Table 5 presents the various motivations for gaming among players, categorised by their level of conscientiousness, as derived from the selected records.

Table 5. Gaming motivations of players categorised by their level of conscientiousness

Gaming motives	Conscientious level	Frequencies (n)	Studies
Achievement	High	6	Abbasi et al. (2021), Guo et al. (2020), Liao et al. (2020), Monacis et al. (2022), Roberts & Yoon (2022), Vera Cruz et al. (2023)
Social Interaction	Low	2	Wang (2021), Ajith et al. (2024)
Escapism	Low	4	Liesera et al. (2019), Macur & Pontes (2021), Jain et al. (2022), Mohamed Imran et al. (2024)
Coping	High	6	Burleigh et al. (2022), di Fini et al. (2023), López-Fernández et al. (2024), Wang (2021), Ajith et al. (2024), Larrieu et al. (2023)
Competition	High	4	de Hesselle et al. (2021), Wang (2021), Larrieu et al. (2023), Marzano et al. (2022)
Fantasy	Low	2	Wang (2021), Ajith et al. (2024)
Recreation	Low	3	di Fini et al. (2023), Ajith et al. (2024), Larrieu et al. (2023)
Skill Development	High	2	Anirudha & Aarsha (2024), Chew & Wong (2022)

Discussion

The selected records for this review span from 2019 to 2025, reflecting a steady interest in the intersection of conscientiousness and gaming over the years. The studies were sourced from various countries, including Germany, China, the United States, India, and Spain, indicating a global interest in this research area. Most studies were explanatory, exploratory, or descriptive, with a strong focus on understanding the relationships between personality traits and gaming behaviours. Quantitative methods predominated, with surveys and questionnaires being the most common data collection tools, highlighting the emphasis on collecting standardised and consistent data from large, diverse samples.

The review reveals that conscientious individuals prefer game genres that align with their traits of organisation, discipline, and goal orientation. They are drawn to strategy games that require meticulous planning and thoughtful decision-making, as well as simulation games that emphasise structure and long-term progression. This preference is consistent with the characteristics of conscientious individuals who value order and industriousness. Conversely, there is a negative correlation between conscientiousness and the preference for action-adventure and arcade games, suggesting that individuals with lower conscientiousness are more spontaneous and less disciplined, often spending less time on games that demand long-term planning and strategy.

Conscientious individuals exhibit distinct gaming behaviours that reflect their personality traits. They approach gaming with a sense of purpose and discipline, integrating it into their daily routines in a balanced manner. This disciplined approach is evident in their ability to allocate specific times for gaming, ensuring it does not interfere with other responsibilities and commitments. Such behaviour aligns with the broader characteristics of conscientiousness, including self-discipline and dependability.

Moreover, conscientious gamers are often driven by intrinsic motivations such as achievement and mastery. They seek to accomplish in-game goals and challenges, viewing gaming as an opportunity to demonstrate competence and earn accolades. This motivation for achievement is consistent with the trait of achievement striving, a key facet of conscientiousness. Additionally, their gaming motivations might reflect broader life goals, such as personal development and social connection, using games as a platform to enhance skills or bond with others.

Taken together, the findings across genre preference, in-game behaviour and gaming motivation suggest a coherent personality expression model: conscientious individuals consistently engage with games in ways that reflect order, goal-orientation and strategic thinking. Rather than viewing the findings in isolation, they can be understood as reinforcing a larger behavioural pattern rooted in self-regulation theory, whereby conscientiousness functions as a trait that regulates not only the game genre individuals prefer, but also how they play and why they play.

Interestingly, while some studies suggest conscientious individuals avoid time-intensive genres like RPGs or action-adventure games due to concerns over self-regulation, others report moderate engagement with these genres when they offer structured narratives or skill-based progression. This contradiction points to the possibility that it is not the genre per se, but the structure and cognitive demands within the game that attract or deter conscientious players. Such nuances warrant further exploration, particularly in mixed-methods research that captures lived gaming experiences.

From a motivational standpoint, conscientious gamers' preferences for achievement, competition and skill development motivations further aligns with their in-game behaviours, such as higher engagement in team roles, goal-driven actions and lower impulsivity. These consistent patterns suggest conscientiousness not only influences player preferences but also moderates potential risks like gaming addiction through self-discipline and time management strategies.

High conscientiousness is linked to structured and disciplined gameplay, goal-oriented decisions, and fewer signs of gaming addiction. Conscientious gamers are more likely to control impulses and maintain attention to detail during gameplay, leading to more deliberate actions and thoughtful strategies. These behaviours contribute to higher performance and effort in gaming, as well as better player experiences in multiplayer games.

Conversely, low conscientiousness is associated with increased gaming time, lower self-control, and a higher risk of gaming addiction. Individuals with low conscientiousness may struggle with completing tasks, lack reliability, and show a tendency to procrastinate. This lack of self-control

can lead to problematic gaming behaviours, such as prioritising gaming over other activities and experiencing negative consequences from excessive gameplay.

Understanding the influence of conscientiousness on gaming behaviour and preferences has important implications for game developers, educators and mental health practitioners. Developers can design games with customisable difficulty levels, structured challenges and time-managed sessions to appeal to conscientious users. Mental health professionals can use personality-informed strategies to identify individuals at higher risk of problematic gaming, such as those with low conscientiousness, and develop interventions that build self-regulatory skills. For educators, acknowledging that some students integrate gaming into their productivity routines suggests that not all gaming is problematic and that constructive gaming habits can be encouraged through goal-oriented educational games.

Conclusion

In conclusion, this review highlights the complex and influential role of conscientiousness in shaping gaming behaviour and preferences. Conscientious individuals are drawn to games that align with their traits of organisation, discipline, and goal orientation, and they exhibit distinct gaming behaviours that reflect their personality. Understanding these dynamics can inform the design of engaging and healthy gaming experiences, contributing to the broader discourse on the psychological underpinnings of digital gaming.

Limitations and Recommendations for Future Research

This scoping review has several limitations that should be acknowledged, as they may influence the interpretation and generalisability of the findings. Firstly, the review included only studies published in English and Malay. This language restriction may have led to the exclusion of relevant research published in other languages, potentially introducing language bias and limiting the global applicability of the conclusions. Future research should consider incorporating multilingual sources to broaden the scope of understanding.

Secondly, the review focused on studies published from 2019 onwards. While this decision was made to capture recent developments, it may have resulted in the omission of earlier studies that could offer foundational research. Future reviews could expand the publication window to capture longitudinal insights on the relationship between conscientiousness and gaming behaviour.

In terms of methodology, most of the included studies employed quantitative methods, particularly surveys and questionnaires. While such approaches allow for broad data collection, they may fail to capture the complexity and depth of individual gaming experiences. The reliance on self-

reported data also introduces potential biases such as social desirability and recall bias. To address this, future studies should consider incorporating qualitative methods (interviews or ethnographies) and behavioural data (in-game analytics) to provide more nuanced and objective insights.

Additionally, a significant number of studies originated from a limited number of countries, raising concerns about cultural bias and the representativeness of findings. Research conducted in more diverse geographical and cultural context is needed to assess the universality or context-specific nature of the observed patterns.

Many of the studies also used cross-sectional designs, which limit the ability to draw causal inferences. Longitudinal and experimental research designs are recommended to better understand how conscientiousness may influence gaming behaviour over time, and vice versa.

Finally, the variation in measurement instruments across studies presents challenges in comparing findings and synthesising results. Future research would benefit from the use of standardised and validated tools for assessing both personality traits and gaming behaviours, ensuring consistency and enhancing comparability across studies.

Overall, these limitations highlight the need for more inclusive, methodological diverse and contextually sensitive research. The findings of the research must be interpreted in light of the study's limitations, as the potential biases and methodological constraints could have impacted the conclusions. Addressing these gaps will contribute to a more comprehensive and balanced understanding of how conscientiousness interacts with gaming behaviour across different populations and settings.

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Acknowledgment

Funding Information

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