

# How Do Dungeon Masters and Players Contribute to the Needs Satisfaction (or Frustration) in *Dungeons & Dragons* 5th Edition?

**Abstract:** Emerging research suggests tabletop role-playing games may support the basic psychological needs of players, contributing to well-being and flourishing. Yet, exactly how tabletop role-playing games promote needs satisfaction remains unclear and requires further research. This research focus is critical due to the rising interest in the therapeutic use of tabletop role-playing games. This study used an on-line qualitative survey ( $N = 1120$ ) and reflexive thematic analysis to investigate this area in *Dungeons & Dragons* (*D&D*) 5<sup>th</sup> Edition. Five key themes were developed: Compelling versus Uncompelling Game Worlds, Character Engagement versus Disengagement, Supporting versus Restricting Player Agency, Fair versus Unfair Adjudication, and Social Cohesion versus Conflict. Themes are discussed in relation to the satisfaction (or frustration) of players' basic psychological needs. This study found that the Dungeon Master, and to a lesser degree, other players, can satisfy all three basic psychological needs (autonomy, competence, and relatedness) by creating an autonomy-supportive environment in their *D&D* games. These findings have important implications for training, game design, and implementation of *D&D* in both casual and therapeutic settings.

**Keywords:** tabletop role-playing games, Dungeons & Dragons, basic psychological needs, needs satisfaction, game master, self-determination, intrinsic motivation, autonomy-support, well being

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## 1. INTRODUCTION

Tabletop role-playing games, such as *Dungeons & Dragons* (*D&D*), are currently being used therapeutically to support social connection and social skill development in children in neurodivergent populations (autism, ADHD), as well as to address anxiety and depression (Abbott et al. 2022, 17; Burns 2022; Gebhart 2019; Jenkins 2021, Katō 2019, 25; Varrette et al. 2023, 151-153). Nevertheless, the study of tabletop role-playing games in relation to well-being and mental health remains in its early stages. While initial research suggests tabletop role-playing games may support the basic psychological needs of players, contributing to player well-being and flourishing, this relationship is not well understood (Adams 2013, 82; Lehto 2021, 81; McLaren, Oades, and Deery 2024a, 11-12; McLaren, Deery, and Oades 2024b, 8-10; Poeller et al. 2023, 5-6; Walsh and Linehan 2024, 46-47). If tabletop role-playing games are to be used for therapeutic outcomes, understanding how these game types influence the well-being and mental health of players is vital. This research can then guide training, intervention design, development, and implementation.

### 1.1 *Dungeons & Dragons* and the Role of the Dungeon Master

*Dungeons & Dragons* (*D&D*) is a game where players take on the role of fictional characters to engage in a collaborative storytelling experience. Players typically create characters based on game mechanics and decide on

their abilities, strengths, weaknesses, and backgrounds. Players interact with each other and the game world through their created characters, making decisions and acting based on their character's background and abilities. The outcome of player decisions or actions is typically determined using dice rolls, which are interpreted within the game's rule framework. In *D&D*, game sessions are usually played by five people (although group size may vary), consisting of four players and one game facilitator, referred to as the Dungeon Master (DM). Traditionally, the role of the DM differs from other players in the game. While other players create characters to participate in the game world and collaborate to develop the game narrative, the role of the DM is much broader and more influential. The *D&D* 5th Edition *Player's Handbook* describes the role of the DM as the game's "lead storyteller and referee" (Wizards of the Coast 2014, 5). Thus, the DM is responsible for many crucial aspects of play, including rule decisions and managing game disputes, generating major elements of the game world, including scenarios and events, and developing and controlling non-player characters (NPCs) the players meet during the game. While *D&D* is collaborative, and players can also influence the game narrative and story progression, they typically have less influence than the DM. Accordingly, how the DM runs the game, including how they manage choices and conflicts, should strongly influence player experiences and satisfaction, both positively *and* negatively.

## 1.2 Needs Satisfaction (and Frustration) in *Dungeons & Dragons*

According to Self-Determination Theory (SDT), human motivation, psychological growth, and well-being rely on satisfying three basic psychological needs: autonomy, competence, and relatedness (Ryan and Deci 2017, 242). Autonomy reflects our need to feel we have control over our lives and behaviors; competence reflects a need to develop mastery over important tasks; and relatedness reflects our need to belong and feel connected with others. When these needs are met, we are more likely to experience positive outcomes, such as enjoyment, personal growth and well-being. Conversely, if these needs are thwarted or frustrated, they can have negative consequences.

There is growing research evidence that digital games may influence the basic psychological needs of players, contributing to enjoyment and well-being (Johannes et al. 2021, 3-4, 9-11; Rieger et al. 2014, 282-285; Ryan and Deci 2017, 508-531; Ryan et al. 2006, 360-361). Similarly, initial research demonstrates the potential for *D&D* to meet the basic psychological needs of players, which were related to well-being (McLaren, Deery, and Oades 2024b, 8-9). However, research exploring tabletop role-playing games, more broadly, and basic psychological needs in detail is still scarce. While initial findings for tabletop role-playing games, like *D&D*, have reflected findings in digital gaming research, it remains unclear how exactly needs are satisfied during play and what influence the DM or other players have on these processes.

Needs satisfaction in tabletop role-playing games is of particular interest as previous research suggests psychological needs satisfaction, particularly social and relatedness needs, may act as one of the primary contributors to positive game experiences, including player well-being and mental health outcomes (Adams 2013, 82, McLaren, Oades, and Deery 2024a, 10-12; McLaren, Deery, and Oades 2024b, 8-9; Walsh and Linehan 2024, 46-47). These relationships are particularly relevant if tabletop role-playing games are to be used therapeutically and with specific clinical groups. Given the influence of the DM in games like *D&D*, understanding how they may influence player experiences and needs, both positively and negatively, can assist in intervention development.

In therapeutically-focused tabletop role-playing games, a "therapist" (psychologist, doctor, social worker, teacher, support worker) will likely take on the DM role and use the game and its mechanics to accomplish therapeutic outcomes for participants. While similar, the role of the DM will differ between casual play and therapeutic games. In casual games, the typical focus is entertainment/enjoyment. In comparison, therapeutic games will have additional objectives beyond fun and enjoyment, including well-being or men-

tal health outcomes, depending on the nature of the intervention. Thus, understanding how the DM can contribute to players' basic psychological needs and well-being can affect both causal and therapeutic games. Hence, this study asks: "How do the dungeon masters and other players influence the basic psychological need satisfaction of players in *Dungeons & Dragons*?"

## 2. METHOD

### 2.1 Design

This study was approved and conducted in compliance with a University Human Ethics Committee (Approval No. 1853349). As *D&D* is currently in its 5th Edition (Wizards of the Coast 2014) and is typically considered the prototypical tabletop role-playing game, it was selected as the target game for this study. The study utilized survey methods and generated qualitative data from a large participant group of *D&D* players to explore *how* DMs and other players influence need satisfaction and/or frustration during their casual *D&D* games. Data was analyzed using reflexive thematic analysis (Braun and Clarke 2006, 86-93; 2019, 592-593; 2021, 333-343). Participants were recruited via online advertisement through *D&D* 5th Edition-related Facebook and Reddit groups. Following a link to a Qualtrics survey, participants were presented with the study's Plain Language Statement and Consent form before completing the anonymous study survey. For this study, basic demographic data was collected. Participants were then prompted to discuss both positive and negative experiences using two open-ended questions: "What, if anything, have DMs or other players done that impacted positively on your experience of the game?" and "What, if anything, have DMs or other players done that impacted negatively on your experience of the game?". Questions did not specify basic psychological needs (autonomy, competence, relatedness) to avoid leading participants; instead, items allowed participants to respond freely with any experiences. To explore basic psychological needs, themes that developed during analysis were discussed in relation to basic psychological needs satisfaction and frustration using Self-Determination Theory.

The participant group (shown in Table 1) was mostly adult males from the Americas and Europe who were university-educated and generally employed. Overall, participants had 2.84 years of experience playing *D&D* 5th Edition and 7.45 years of experience playing tabletop role-playing games in general. In comparison to recent demographic data for the *D&D* 5th Edition community (Corliss 2021), this participant group has fewer females (17.0% versus 40%), more participants who identified as non-binary (3.4% versus <1%), a higher ratio of participants in the 25 to 29 years group, with a lower ratio of younger and older age groups:

### 2.2. Analysis

Participant data were analyzed in NVivo using reflexive thematic analysis to identify and interpret meaningful patterns in participant responses. Specifically, the study utilized the 6-step approach described by Braun and Clarke (2006, 87; 2019, 333-344) with a phenomenological lens that focuses on subjective meaning-making. Within reflexive thematic analysis, the role of the researcher is seen as central to the analysis. Researchers are encouraged to embrace reflexivity, subjectivity, and creativity as assets in knowledge production, with analysis reflecting an intersection between the data set, theoretical assumptions, and the analytical skills of the researcher (Braun and Clarke 2019, 594). As a result, within reflexive thematic analysis, it would be expected that themes interpreted by one researcher may not be reproduced by another; thus, this approach discourages attempts to seek consensus amongst multiple coders or attempts at accurate or reliable coding, such as inter-rater reliability, triangulation, and member checking (Braun and Clarke 2019, 594; Byrne 2022, 1393).

Given the interpretive nature of reflexive thematic analysis, before discussing the analysis, a statement of the coders (author one) positionalities and reflexivity practice are warranted to aid qualitative validity, transparency, and trustworthiness. He is a White (Australian), heterosexual, neurotypical male, humanistic psychologist and pragmatic researcher who enjoys games (digital, board, card, and tabletop role-playing games). He is interested in the potential application of tabletop role-playing games for therapeutic purposes, but currently feels more research, theory, and development are required before the widespread adoption of tabletop role-playing game-based interventions, particularly for mental health. The coder identifies as an insider in the *D&D* and tabletop role-playing games community with extensive experience with *D&D* 5th Edition (and tabletop role-playing games more broadly), both as a player and DM, including knowledge of the game, its rules, terminology, mechanics, and game-related jargon. While his position as an insider granted him insights and allowed him to navigate and engage deeply with the data, he also acknowledged how his own experiences may influence the interpretations of participant narratives and thematic construction. To mitigate this, he engaged in continuous reflexivity through frequent peer debriefing with authors two and three. In contrast, authors two and three were considered outsiders, with limited or no experience with *D&D* or tabletop role-playing games more broadly; however, they had extensive theoretical and methodological knowledge. By continually questioning his assumptions, analytic processes, and theme development through critical discussions with authors two and three, author one remained transparent and accountable in the analytical process.

The first step in reflexive thematic analysis is familiarization, where the data is initially explored. Overall, the data set was rich with an average word count of 49 words per participant ( $SD = 96$ , range 2 to 2688 words), representing a few short words to small essays. During step one, positive (26806 words) and negative (28373 words) responses were reviewed separately and were relatively equal in terms of word count. Due to the quantity of data (over 50,000 words), this process was slow, as responses were read several times to ensure deep engagement and the exploration of subjective meaning and experiences, and was conducted over several weeks. During this time, the coder discussed and reflected on the process with authors two and three to aid reflexivity and minimize preconceptions. During this step, it was recognized that some participants did not specify which groups, DM or player, their comment was referencing, which was noted for the initial coding step. It was also noted during this stage that most participant responses focused on the role of the DM as opposed to other players; this was noted for further steps.

Following familiarization, initial coding (step 2) was conducted with data systematically open-coded using an inductive approach focused on latent codes and player experiences and emotions (Byrne 2022, 1396-1398; Braun and Clarke 2021, 331). In this step, when an unspecified comment was encountered, they were assigned to a group, if possible. The target group was often apparent to the coder based on context and their familiarity with the game's language and mechanics. For example, a comment such as "they said "no" to actions that were outlined as viable within the rules" is most likely associated with the DM, as players do not typically make rulings such as this. Where it was impossible to assign a target group, responses were coded as general. During the coding process, patterns emerged in the data and were developed using rough thematic maps.

During step 3, the search for theme codes was reviewed, collated, and developed into potential theme ideas. Peer briefing (with authors two and three) was used extensively during this stage to reflect on the meaning, context, and relationship between themes as they were being developed. During step 4, reviewing themes, themes were developed based on the initial codes and thematic maps, which were particularly helpful in exploring relationships between themes. Reviewing both positive and negative data sets, it became apparent that both groups fell into distinct dichotomies, so positive and negative themes were collapsed into the same theme as they reflected the same content but reversed. Further, as most content focused on the role of the DM themes were divided into two groups: DM characteristics and player characteristics.

**Table 1:** Characteristics of Participants

Characteristics	Participant Group ( $n = 1120$ )	
<i>Age, in years</i>		
Mean	27.78	( $SD = 7.08$ )
Range	18 to 78	
<i>Gender, n (%)</i>		
Male	892	(79.6%)
Female	190	(17.0%)
Non-Binary	38	(3.4%)
<i>Georegion, n (%)</i>		
Americas	623	(55.6%)
Europe	265	(23.7%)
Oceania	206	(18.4%)
Asia	19	(1.7%)
Africa	7	(0.6%)
<i>Education, n (%)</i>		
Secondary or less	274	(24.5%)
Pre-University or Vocational	233	(20.8%)
Bachelor	436	(38.9%)
Master	139	(12.4%)
PhD	31	(2.8%)
Other	7	(0.6%)
<i>Employment, n (%)</i>		
Employed	731	(65.3%)
Student	245	(21.9%)
Unemployed	109	(9.7%)
Other	35	(3.1%)
<i>D&amp;D 5th Edition Experience, in years</i>		
Mean ( $SD$ )	2.82	( $SD = 2.82$ )
Range	0.50 to 8.00	
<i>Tabletop Role-playing Game Experience, in years</i>		
Mean ( $SD$ )	7.30	( $SD = 8.27$ )
Range	0.50 to 44.00	

After grouping themes, they were defined (step 5) and named to reflect their meaning, content, and the dichotomy that emerged during theme development. During this stage, quotes that exemplified the theme content and meaning were also highlighted for reporting. Finally, the report was produced (step 6), and themes were mapped to visualize the findings and their relationships. Due to participant focus on DM characteristics, this group is the primary focus of the findings. Further, when reporting quotes, one participant (ID815) provided extensive responses, in total 2688 words, that very articulately and thoughtfully communicated many of the main concepts discussed by other participants and exemplified theme meaning. As this participant was representative of the participant group regarding age and gender, their quotes are featured several times.

### 3. FINDINGS AND INTEGRATION

Through the reflexive thematic analysis, five themes were developed, as the majority of participant data focused on the role of the DM; four themes were developed that focused on DM characteristics, and one theme was developed that focused on all players in the game, including the DM. The following section discusses each theme and its association with the satisfaction and/or frustration of basic psychological needs, using Self-Determination Theory as a guide.

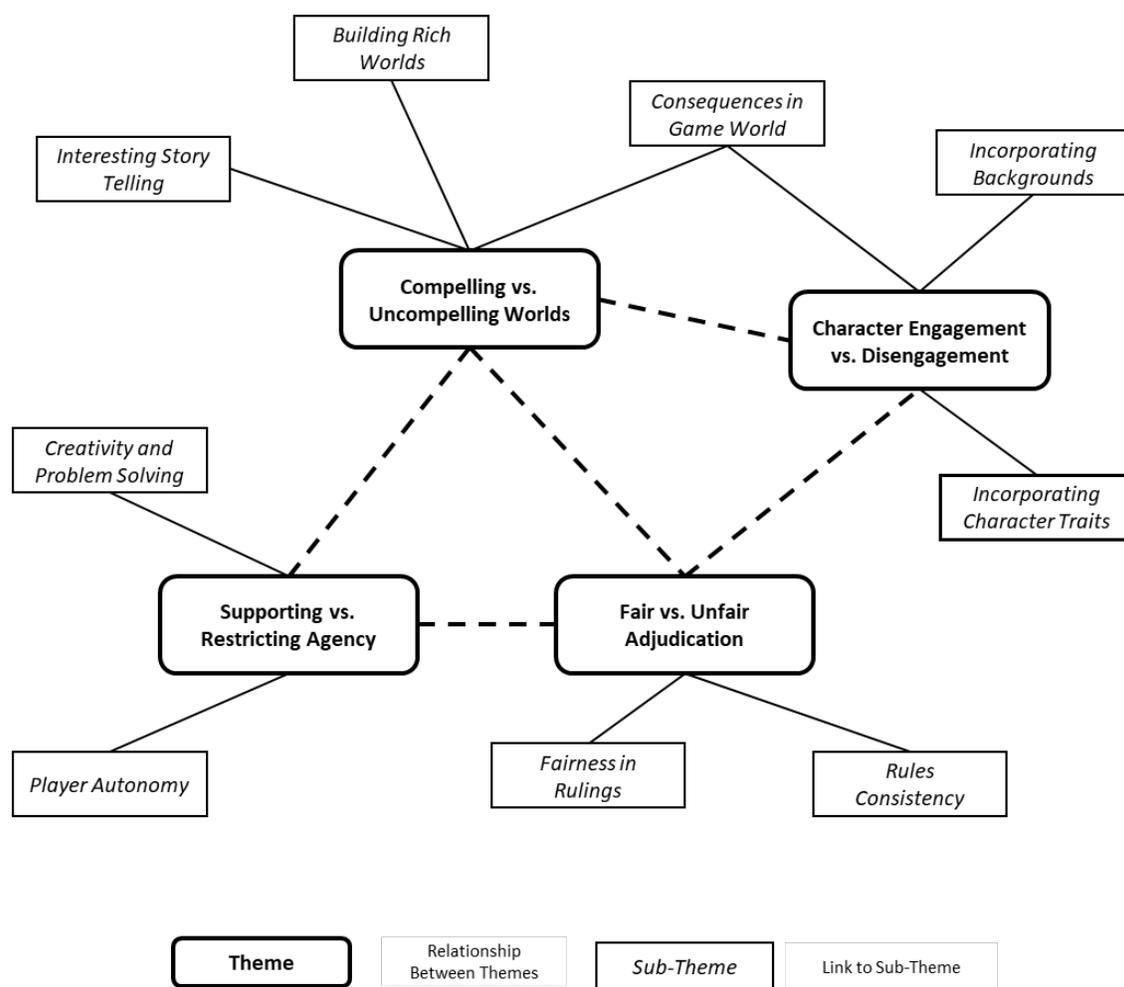
#### 3.1 Dungeon Master (DM) Characteristics

In *D&D* 5<sup>th</sup> Edition, the DM is typically the main storyteller and referee. They generally have more control over the narrative and direction of the game. They plan and guide encounters, create locations, develop characters for players to interact with, and determine how the game world responds to the player characters' actions. Due to this level of influence, it was not surprising that most of the experiences discussed by participants focused on the impacts of DM. Overall, the following themes were developed: (1) Compelling versus Uncompelling Game Worlds, (2) Character Engagement versus Disengagement, (3) Supporting versus Restricting Player Agency, and (4) Fair versus Unfair Adjudication. A thematic map of DM characteristics can be found in Figure 1:

##### 3.1.1 Theme 1: *Compelling versus Uncompelling Game Worlds*

This theme focuses on the DM creating interesting and engaging worlds with compelling stories and characters for the players to interact with. The game world and events are the focus of *D&D* play, not unlike the plot of a movie or novel. Without an interesting world or story, *D&D* can be dull or unenjoyable. Participants frequently reported how their DM crafted the game world. How individual DMs accomplished this varied considerably, which was best expressed by the following quote:

Each [DM] brings their own unique emphasis and flair to the games. Some make me appreciate the tiny wins by keeping the power and treasure balance low; others have woven intricate stories that rivalled Game of Thrones-level plot development. Some have helped to learn combat tactics with miniatures, others have added greatly to persona and character development. – ID78, *m*, 48.

**Figure 1:** Thematic Map of Game Master Characteristics

Participants also reported a range of storytelling aids used by their DMs, such as using voices, props, and music to help bring characters and scenes alive and increase immersion. Much like other forms of entertainment, such as books, movies, and TV series, the worlds created during play and the stories told within them can capture the imagination and engage players (or not). As such, there was a strong focus on the importance of interesting stories and characters, as one participant wrote:

His characters are realistic. They have goals, flaws, fears, ideals, and motivations. We can interact with them in various ways and see realistic outcomes of such interactions. These characters invoke emotions from us by their words and actions, and as such, we can develop attachments to them, as with real people. – *ID815, m, 25*.

Thus, the core of a compelling world seems to be that DMs provide players with enough interesting content to act upon or interact with. Dungeon masters accomplished this in several ways: creating interesting stories, scenarios, and characters; developing the player characters' story (links to Theme 2); and developing consequences for player characters' actions or inactions. But it can be difficult for DMs to achieve as preferences can vary considerably amongst players, even within the same group. Nevertheless, one element that did emerge was the amount of content DMs provide their players. One concern discussed by participants was a lack of

content, which prevented players from deciding on and taking action in the game world. Participants offered several reasons, but one of the most common was a lack of DM preparation, as one participant stated, "... the DM never prepped, which resulted in very little in the way of interesting characters or places, little story, poorly designed combat encounters." – *ID124, m, 24*.

However, un compelling worlds and experiences were not only attributed to a lack of content, with participants also discussing instances of too much unhelpful content. When DMs focus on the wrong thing or do not provide content that players can take action on, players may disengage from play. As one participant said:

Our [DM] forced lengthy, needless exposition on us, describing in painstaking detail every environment he made up, every non-player character's appearance, even in cases where these descriptions clearly didn't matter or provide any information to be role-played upon. It felt like the [DM] had created a world in their writing they enjoyed, by virtue of being the author, but did not put any effort into making it engaging for us. Such descriptions felt boring, and I quickly found myself disengaging, being distracted by doodling, playing with dice or any other activity. - *ID815, m, 25*.

Crafting a compelling world for players appears to be a delicate balance. Dungeon Masters should provide enough material for players to explore without too much unnecessary information that detracts from play and the developing story.

Taking the concept of story development further, participants also spoke about the importance of consequences or the impacts player characters had on the world and the story. Participants enjoyed scenarios where character decisions or actions impact the broader narrative meaningfully. Unlike movies or books, where the watcher or reader cannot influence the direction or outcome of the story, within *D&D*, a DM can provide players the opportunity to impact the game world and story, generating a sense of accomplishment. As one participant said:

I enjoy when a world feels impacted by our decisions, rather than being static or unchanging. The real world can feel like outside of my immediate circle of influence that my choices/impact is meaningless, *D&D* can give a very real sense of accomplishment, like my choices, and myself by extension, matter and are meaningful. - *ID1363, m, 33*.

In *D&D*, a compelling world helps immerse players in rich storytelling and provides opportunities for meaningful choices that shape the story's narrative, which fosters a sense of agency and accomplishment. However, balance appears to be the key for DMs. Too little content leaves players directionless, while too much of the wrong detail may cause disengagement. The most engaging worlds appear to provide actionable content that responds to player decisions, rewarding player experiences.

### 3.1.1.1 Theme 1: Integration

By creating compelling worlds for players to engage with, DMs have the potential to meet all three basic psychological needs. It has been argued that tabletop role-playing games, like *D&D*, create a rich, complex social environment that includes several layers of relationships, including player-to-player, player-to-character, and character-to-character, which all have the potential to meet relatedness needs (McLaren, Oades, and Deery 2024a, 10, 12). When DMs create realistic, relatable, and interesting characters, players can engage in character-to-character relationships, which has also been found to meet relatedness needs in digital games (Rigby

and Ryan 2011, 67). The same appears true in *D&D*, where participants reported strong attachments to other characters and non-player characters in the game. Thus, by creating interesting characters in the game world, the DM creates opportunities to satisfy player relatedness needs. One strength of tabletop role-playing games, like *D&D*, over digital games is specificity. Whereas characters in digital games are pre-set, a DM can easily change characters in real time to better meet the needs of players. However, these experiences are not limited to relatedness. The responsive nature of a DM means they can more easily shape most experiences to meet other needs of their players.

Many modern digital games have grown in complexity, with open-world style games providing players with a broad range of activities such as places to explore, non-player characters to meet and quests to complete. The freedom of choice afforded by open-world games offers substantial opportunities to meet player autonomy needs (Rigby and Ryan 2011, 45-46; Uysal and Yildirim 2016, 8). The same is apparent in *D&D*, as detailed in Theme 1. When a DM creates a more compelling world, it provides more opportunities for players to interact in meaningful ways. The choice of actions and the consequences of those actions all support the satisfaction of autonomy needs. While digital games can provide a lot of content to occupy players, everything in digital games has predetermined coded outcomes, which can limit choice and experiences. Whereas a DM in *D&D* can make real-time changes to scenarios, characters and the game world to accommodate player choices and, thus player autonomy needs.

The importance of compelling worlds discussed in this theme, specifically the role of consequences, also has the potential to meet the competence needs of players. Ryan and Deci (2017, 513-515) discuss a range of mechanisms built into digital games that provide players with positive feedback, such as points, rewards, status boosts, achievements, and badges—these indicators signify success, each capable of satisfying competence needs. Thus, when players accomplish tasks, they can develop a sense of mastery and achievement when this feedback is given. Feedback may underline the importance of consequences in tabletop role-playing games, like *D&D*. By allowing players' actions to shape the game world, the DM provides rich, player-specific, and action-specific feedback. While a digital game may give a reward for completing a pre-defined task, a DM can be more reactive to what the players find meaningful and provide specific reinforcement for those actions or outcomes. The DM can make these decisions in real-time based on the events and decisions made by a unique set of players during play. Thus, DMs have the opportunity to craft specific positive feedback to meet the competence needs of individual players.

In summary, by crafting compelling, dynamic worlds and realistic characters, DMs can support all three basic psychological needs of players. Realistic and relatable characters allow players to engage in meaningful interactions, fostering relatedness through character-to-character relationships. Autonomy needs can be supported by offering freedom of choice, with character decisions and consequences shaping the narrative and game world. Competence needs can be met when DM provides feedback based on unique player decisions and actions, offering personalized feedback or rewards that acknowledge player achievements, reinforcing a sense of mastery.

### *3.1.2 Theme 2: Character Engagement versus Disengagement*

Character engagement was a theme linked to the Compelling versus Uncompelling Game World's theme. This theme focused on the DM actively drawing the players into the game by incorporating player characters into the game world in meaningful ways. Dungeon masters typically accomplished this by drawing on the player characters' backgrounds and integrating them into the world and story. As one participant said, "The DM who I play with the most, asks in-depth questions about all the characters' backstories to intertwine important non-player characters and events with our characters, so our characters are always relevant to the events of the story." – *ID 1153, f, 18*.

With active character engagement, participants reported feeling more connected to the game world and felt their character was important and that their actions mattered. The opposite was also true. When the DM failed to incorporate player characters into the game, made the player character's background irrelevant, or forgot about the character's background, participants reported a strong sense of dissatisfaction. As one participant said:

I collaborated with the [DM] to figure out my character's backstory, contacts, and motivation. My character, belonging to an unorthodox race, wore a mask and an almost fully concealing heavy cloak, both out of identity crisis, and to avoid persecution. Over several real-life months, my character's race never once mattered, and after discussing my frustration with the DM in private, they admitted to having forgotten my character's race... being literally forgotten frustrated me to the point I left the group. - *ID815, m, 25*.

There are many types of characters in literature, film, and TV, such as protagonists, antagonists, confidants, and tertiary characters. When DMs draw player characters into the game and use their backgrounds or focus the story around the player character, they become the protagonists. However, when DMs fail to incorporate the player characters in the game world, many participants experience play as irrelevant or feel their characters are tertiary rather than the protagonists.

Like the compelling versus un compelling game worlds theme, the importance of consequence was also discussed; however, here, the act of drawing player characters into the world made actions and consequences in the game more compelling:

Our current DM has implanted character backstories into his narrative, and we can interact with NPCs and each other as much or as little we desire. Good role-playing and ideas are encouraged and rewarded. Our characters feel a part of his world and as a player I am more invested in my character, their actions, and consequences. - *ID14, m, 29*.

Another method discussed was DMs, who actively created scenarios or story elements, allowing participants to explore important details of their characters. Essentially, this provided opportunities for participants to engage with and explore their characters:

He helps us tell our stories by providing us with scenes that underline key traits our characters have. For example, if I wanted to tell a story of playing a dragonborn woman who found herself infertile I could count on the DM to provide me with a scene that would let me act out my character's feelings upon dealing with children or seeing other dragonborn children play with their parents.... - *ID815, m, 25*.

This theme focuses on how DMs integrate player characters into the story and game world in meaningful ways. The DM can engage players by crafting opportunities for them to explore and express their characters in the game world. It appears the Character Engagement versus Disengagement theme extends and enhances the effect of the Compelling versus Uncompelling Game World's theme. After creating an interesting world, the DM can draw the players into it by forging links between their player character backgrounds and the game world. These strategies place the player characters into the world with existing relationships that provide the players with meaning, motivation, and direction.

### 3.1.2.1 Theme 2: Integration

The impact of compelling characters on relatedness needs was discussed previously; however, it appears that drawing on player character backgrounds, DMs can further enable these character-to-character relationships as the player now has meaningful reasons to relate to various non-player characters in the game world. However, the impact of character engagement may also extend to the player-to-character relationship, which has been explored in tabletop role-playing games (Bowman and Shrier 2018, 395-407). It is assumed that when a player selects a specific trait for their character, they do so because it is meaningful to them. When a DM engages one or more of the traits assigned by a player, they enable the player to experience this trait vicariously through their character, which may be meaningful to the player. Within this theme, one participant discussed faith that his DM would draw on their character's background to create scenarios that would allow him to explore his character's experiences, which the participant found meaningful. This interaction between the player and their character may allow relatedness needs to be met vicariously through the player-character relationship, allowing them to explore and experience elements of the self.

Similar to the Compelling versus Uncompelling Game Worlds theme, the importance of consequences emerged in this theme. Here, the degree to which the DM engaged a player character influenced the level of investment in those characters, as well as their actions and consequences. Again, engaging characters appear to enhance the effects of the world, which may further influence the satisfaction of autonomy needs by generating more meaningful decisions and competence needs by creating more personalized, thus more meaningful, outcomes for those actions and choices.

While tied closely to compelling worlds, the way DMs integrate player characters into them can further magnify the potential to meet all three basic psychological needs, with players being more engaged and caring more about the game world, their choices, and the consequences of their character actions.

### 3.1.3 Theme 3: Supporting versus Restricting Player Agency

This theme focused on DMs actively supporting and encouraging player agency—the player's ability to impact the story through gameplay. Agency has been a key aspect of video game design and can be understood as “the satisfying power to take meaningful action and see the results of our decisions and choices” (Murray 1997, 126). After creating a world and embedding the player characters, the DM allows players to follow whatever path they choose and overcome obstacles in whatever way they wish, within the game's overall framework. While DMs can guide players, ultimately, the players decide where their characters go and what they do. This degree of freedom sets tabletop role-playing games, like *D&D*, apart from other games, like digital or board games. There are no predetermined outcomes or limited options. Players can use their creativity and problem-solving to guide their actions. As stated by one participant, “I like when the DM gives us the freedom to choose a course of action, I enjoy being presented with a problem or situation without being railroaded into a solution.” – *ID659, f, 24*. This freedom further highlights the importance of the Character Engagement versus Disengagement theme discussed previously. For many players, their choice of actions in the game world is typically based on their character's traits and background. *What would my character do?* is a question many tabletop role-playing game players pose in their decision-making. Thus, many participants highlighted freedom in character creation and development as important. As one participant said:

They've given me a lot of freedom in creating my character and giving my character the opportunity to do what they want. I have never felt restricted by a [DM], if there's something I wanted to do they've worked with me to help make it happen. – *ID1186, m, 25*.

In short, this theme focuses on the DM encouraging freedom in character creation and choice of actions in the game world. Unsurprisingly, the opposite, restricting agency, emerged as a negative characteristic of DMs, discussed mainly in the context of *railroading*, a term in the tabletop role-playing game community that refers to a lack of agency. Railroading occurs when a DM restricts or controls the actions of the player characters, does not allow them to deviate from a set pathway, and does not allow player character actions to impact the game world. Essentially, the player characters are passively riding a train that follows predetermined tracks or stories the DM creates. The following comment illustrates this:

[The DM] railroaded the players into prepared scenes. Such scenes usually did not allow the players to interact with them, and none of the actions the players did matter there. This made us feel powerless, like our actions didn't matter and weren't valuable...One example was when the DM had a scene where a vampire delivered his "villain monologue" and forced us to watch his wedding to a damsel-in-distress we'd been protecting for the entirety of the campaign. For us to not "ruin" the wedding, the DM thought up an impenetrable invisible wall of force that the villain had created that conveniently circumvented and disabled our abilities that were meant to work around such walls, so we couldn't approach him. This felt frustrating for many reasons. - *ID815, m, 25*

This theme focuses on DMs supporting player agency and allowing players to make meaningful decisions and shape the story. Players value the freedom to choose their paths and solve problems creatively. Character creation and development also contribute to this sense of freedom. In contrast, restricting agency, often through railroading, was seen negatively, with participants reporting feeling powerless and disengaged. Indeed, many participants felt railroading defeated the purpose of playing *D&D* entirely. Freedom and creativity were defining characteristics of *D&D* that separated it from other media, such as books and video games, a finding shared by previous research (McLaren, Oades, and Deery 2024a, 7).

### 3.1.3.1 Theme 3: Integration

Previous research has highlighted the potential for tabletop role-playing games, like *D&D*, to meet the autonomy needs of players (McLaren, Deery, and Oades 2024b, 8). Autonomy needs were the core feature of the Supporting versus Restricting Player Agency theme. This theme focused on DM behavior that either satisfied or thwarted the autonomy needs of players. Essentially, when the DM creates a world and story but allows the player to decide where to go and what to do, they support the autonomy of players, thus allowing them the freedom to solve problems and overcome game obstacles in their own way. Interestingly, it seems autonomy needs were most relevant to railroading, which appears to be the embodiment of a DM thwarting autonomy needs. Indeed, even in digital games, players can be frustrated when agency is impaired (Johnson 2015, 605-608), with players finding character behavior in digital games limited or improbable, making their play experiences less meaningful (Zhao et al. 2021, 464). When DMs create a world and story but give players the freedom to act on their own goals, it has great potential to meet autonomy needs.

### 3.1.4 Theme 4: Fair versus Unfair Adjudication

The last theme specific to DMs was fairness in game adjudication. Traditionally, one of the DM's primary roles is to act as the game referee and arbitrator of rules. This theme covers how DMs adjudicate rules and their impact on the player experience. Overall, participants discussed the importance of rules and following the rules so all the players could participate on equal footing. When DMs do not follow the agreed-upon rules

or frequently change them, players may experience the game as erratic and unenjoyable as they lack a frame of reference to relate to the game world. The following quote highlights many of the issues of unfair DM adjudication:

[The DM] misinterpreted the rules for their benefit, refusing to reason with players or references to rulebooks, Sage Advice<sup>1</sup> or Jeremy Crawford's<sup>2</sup> Twitter, broke the rules for their benefit, grossly disregarding the ruleset of the game and arbitrarily nerfing<sup>3</sup> the player's racial and class features because it was convenient. If they were pressured into a corner with evidence, they would declare the discrepancy to be a house rule, which was not discussed or approved by the players.<sup>4</sup> Players who felt robbed of their character's features and protested were ignored. - *ID815, m, 25.*

While rules were necessary, participants often varied in what they felt was fair adjudication. Some participants preferred stricter adherence to the rules, while others preferred flexibility. As an example, the topic of "fudging rolls" was commonly discussed. When characters act in *D&D*, there is often a randomization process, like a dice roll, to determine the outcome. Fudging rolls occurs when the DM arbitrarily changes the result of the dice roll. Some participants preferred it when the DM fudged dice rolls. One participant said, "I like when DMs are willing to fudge the rolls occasionally in favor of a more enjoyable experience." *ID468, m, 26.* While some DMs may fudge the dice rolls in favor of the players to prevent a character's death, improve the game narrative, or adjust the difficulty, problems occur when the opposite is true. Some participants discussed DMs who change the outcome of dice rolls against the players, forcing characters to fail when the rules indicate they succeed. This process is linked to Supporting versus Restricting Player Agency themes, where participants felt they lost their character's agency. These experiences lead some participants to prefer DMs who honor the dice roll regardless of the outcome. This contrast is present in the *D&D* community and is often a point of contention and conflict (see Flutes 2022; Pilon 2022). Nevertheless, most "ruling" issues can be managed by setting play expectations before the game begins, often called session zero.<sup>5</sup> A concept discussed explicitly by participants:

I have enjoyed games where the DM is clear about their style of play, sets player expectations for the game, including system, tone, story, and world, and when they consciously attempt to maximize player engagement by considering their players' needs, clearly communicating their expectations, and compromising as needed. - *ID886, m, 29.*

Overall, the game rules are a shared framework that allows players to engage with their character and the game world consistently. If rules become inconsistent or uncertain, this can compromise a player's ability to engage with the game world meaningfully. While preferences differ, many players and DMs have developed strategies to manage expectations, such as conducting a session zero, highlighting that collaboration between players in *D&D* can start before the game begins.

<sup>1</sup> An online resource where the game designers answer questions or clarify rules.

<sup>2</sup> Jeremy Crawford is a game designer and lead rules designer for Wizards of the Coast, the creators of *D&D* 5th Edition. He is considered by many to be the final word on rules' interpretations.

<sup>3</sup> Reducing the power of a character or skill causing it to be weaker or less effective

<sup>4</sup> Players often agree on sets of rules or changes to the rules before the game begins so everyone knows in advance.

<sup>5</sup> Session zero is a tabletop role-playing game concept where players gather not to play the game but to discuss the type of game they want to play, set expectations about content, set boundaries, select rules such as source books and character creation restrictions. This is done to ensure all players are on the same page when the game starts and typically improves the overall gaming experience for all players.

### 3.1.4.1 Theme 4: Integration

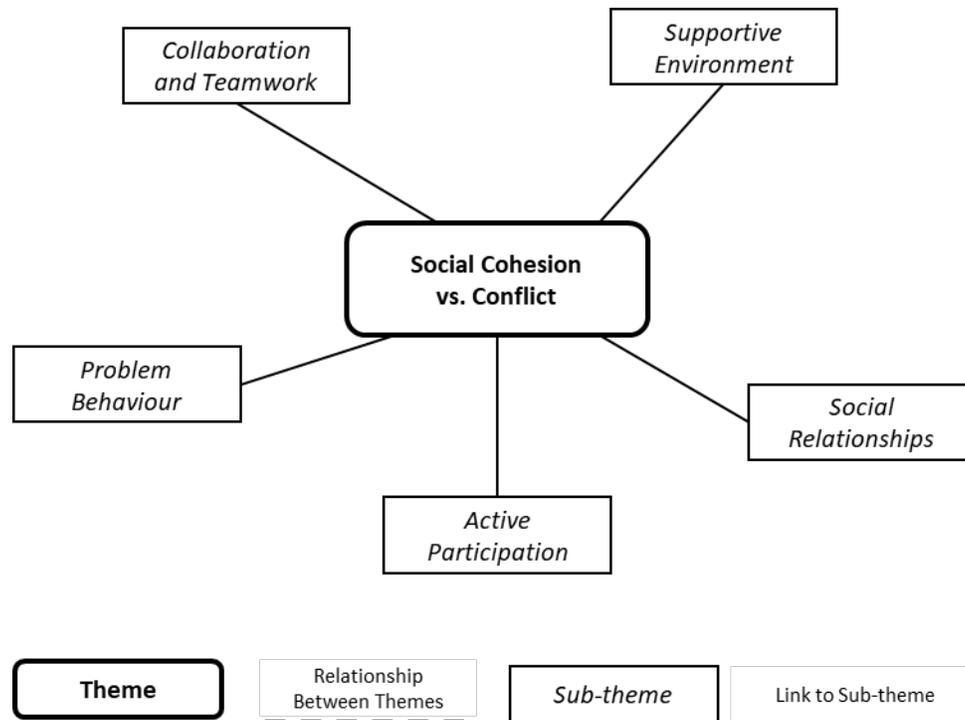
Previous research has highlighted the role of competence needs in enjoyment and well-being in digital game-play (Przybylski et al. 2009, 244; Ryan et al. 2006, 359-362; Tamborini et al. 2010, 768-769). Emerging research has demonstrated similar relationships between tabletop role-playing games, like *D&D*, and the satisfaction of competence needs (McLaren, Oades, and Deery 2024a, 11; McLaren, Deery, and Oades 2024b, 8). These competence needs are reflected in the Fair versus Unfair Adjudication theme. Having and following a common set of rules allows players to achieve mastery, first by understanding the rules and then using the rules to navigate the game in meaningful ways. This process may explain why players object so strongly to arbitrary changes in the rules, as changes diminish their capacity to learn and develop mastery. If a player cannot master the rules, then it becomes more challenging to navigate the game world successfully or in a way they find meaningful, potentially thwarting autonomy and relatedness needs. Further, when players feel that a DM acts unfairly, then player competence needs can also be thwarted. However, when DMs act fairly, they create a space that allows competence needs to be satisfied, which can improve engagement and player experiences.

Competence needs may also be at the core of the conflict over fudging dice rolls. Rigby and Ryan (2011, 19-20) argue that games can satisfy competence needs by maintaining a skill-challenge balance, which allows players to be optimally challenged. Competence needs can be thwarted when challenges are too easy or too hard. When scenarios are too easy, players may feel bored, lose interest, or become frustrated. Conversely, games that are too difficult may make players feel helpless or like giving up. Some *D&D* players may experience fudging dice rolls as unfairly adjusting the game's difficulty level. Fudging rolls in favor of the players may make the game too easy or diminish threats, making consequences less meaningful. Thus, for some players, the sense of overcoming game challenges may be reduced if they believe the DM adjusts the difficulty to allow them to succeed. Conversely, if the DM fudges rolls against the players, the game may become too difficult, making players feel their efforts are meaningless. However, suppose a DM fudges dice rolls to better maintain the skill-challenge balance, to increase the difficulty of a scenario that is proving too easy, or to adjust encounters that are proving too difficult. In that case, they may be better positioned to meet the player's competence needs. Indeed, research has suggested that balancing difficulty is associated with high levels of competence and enjoyment in digital games (Schmierbach et al. 2014, 109). Dynamic difficulty adjustment has been explored in digital games, with players reporting higher levels of needs satisfaction across all three basic psychological needs if they were unaware the difficulty had been adjusted to meet their skill level (Baldwin et al. 2014, 1493). However, if players were aware the difficulty level had been altered, they experienced an increase in competence needs but a reduction in autonomy and relatedness. This pattern may also be true for *D&D* players.

Overall, it appears the DM can satisfy competence needs by creating scenarios with a balanced difficulty. While the topic of difficulty-balancing, particularly in the form of fudging dice rolls, is controversial, if a DM utilizes this strategy, it should be done with the needs of the players in mind, first and foremost.

## 3.2 Player Characteristics

While most themes developed in this study related more specifically to DM characteristics, one theme was associated with all players in the game and related to (5) Social Cohesion versus Conflict, depicted in Figure 2.

**Figure 2:** Thematic Map of Player Characteristics

### 3.2.1 Theme 5: Social Cohesion versus Conflict

As tabletop role-playing games, like *D&D*, are inherently social games, it was not surprising that the social environment played a significant role in participants' experiences of *D&D* play. *Dungeons & Dragons* is considered a collaborative and cooperative experience, with the DM and players working together to create an enjoyable experience for everyone. Participants discussed creating a safe, supportive environment, collaboration, active participation, teamwork, and social relationships.

Participants discussed the importance of inclusive, supportive, respectful and encouraging spaces as they generated a safe space for players to enjoy the game. As one participant said:

In the group, there is a heavy focus on the well-being and fun of the group. We encourage all individuals to have as much fun as they can, as long as it doesn't impact negatively on the fun of another player or the group. – *ID958, m, 23*.

This supportive environment creates a space where players can open up and express themselves and, by extension, their characters. This safe place also facilitated better collaboration as players were more willing to get involved and participate. Indeed, participants also discussed the importance of collaboration and teamwork. Collaboration was focused on players and characters actively working together as a team towards goals and objectives, as well as storytelling and character development. Essentially, when players work together to make the game satisfying for everyone playing. As one participant wrote:

I think when everyone is along for the ride and gives themselves over to participating in whatever is going to happen, be it silly or serious. When people are collaborating together with you and your character to see where the story takes you, it creates some great storytelling. Some of the most fun I've ever had was just being my character in this imaginary world playing out their char-

acter development in completely unexpected ways because I had other players and a DM who I trust and who trust me - we were all on the same page willing to give ourselves over to where the story and characters would take us. – *ID437, f, 28.*

Unsurprisingly, the opposite also emerged, with participants reporting behavior that led to conflict and a breakdown of social cohesion in their play groups. These behaviors included player disengagement or lack of cooperation, combativeness, and problematic social or behavioral problems. Many participants felt that when players sat down to play *D&D* together, they made an unspoken agreement to participate. When players are disengaged, disinterested, or distracted, it can be disruptive for players who want to engage. While participants expressed frustration, annoyance, and anger at disengaged or combative players, they reported other more damaging behaviors. This inappropriate behavior covered a broader range of issues; however, it typically focused on factors such as sexism, bigotry, homophobia, unwanted sexual content, as well as anti-social or abusive behavior. As one participant wrote, “being unnecessarily cruel to fellow players, both in and out of character, will always ruin a game. This could be extremes such as sexism/homophobia/racism, or even things as simple as unwanted player versus player.” – *ID470, f, 22.*

It should be noted that *D&D* does not typically encourage these negative social behaviors; however, some players may use the freedom of tabletop role-playing games to explore dark fantasy at the expense of other players. Some participants felt the social nature of tabletop role-playing games may also draw out or highlight some players’ problematic social or behavioral problems. These issues directly oppose the social cohesion that participants reported as positive experiences. Not only can problematic social or behavioral problems lead to conflict that disrupts the social environment, but they can also directly harm players. Most references to problem players in this study ended in the group removing the players, the players leaving the group, or the group breaking down.

### 3.2.1.1 Theme 5: Integration

As discussed in the Compelling versus Uncompelling Game World’s theme, *D&D* games can create a rich, complex social environment with several layers of relationships, such as player-to-player, player-to-character, and character-to-character, which all have the potential to meet relatedness needs. As a social game played with a group of people, the most obvious avenue for relatedness needs is the player-to-player relationship, which is strongly reflected in the Social Cohesion and Conflict theme. As a construct, group cohesion consists of five components: social, task, collective, emotional, and structural cohesion (see Forsyth 2018, 128-136). Social, collective, and emotional cohesion align strongly with social connectedness and relatedness (Ryan and Deci 2017, 296-302). In this study, all players, including the DM, supported social relations by welcoming other players, being respectful, inclusive, encouraging, and trusting other players to reciprocate, a topic that has been discussed previously (Walsh and Linehan 2024, 47-49). Overall, this created a safe space for players to participate. Under these conditions, the resulting play generates positive emotions and experiences, further reinforcing social relationships and support.

However, group cohesion extends beyond social connectedness and relatedness and includes task and structural cohesion. These aspects of group cohesion focus more on the willingness to work together to accomplish goals than the interpersonal relationships between group members (Forsyth 2018, 130-131, 134-136). This component was also a significant element of the player experience, with players actively working together and collaborating. Collaboration functioned on the character-to-character level by working together as a team towards game-related goals and objectives, and on the player-to-player level by collaborating on storytelling and character development. This kind of overlap and transition from one social level to another was observed by Fine (1983, 196-200) in early research on *D&D*. This kind of cooperation and collaboration

amongst players and characters helps build group cohesion, which meets relatedness needs. The opposite was also discussed heavily: when players are disengaged, uncooperative, combative or display problematic social behavior, this damages group cohesion and thwarts the satisfaction of relatedness needs. This negative behaviour was exhibited both on the player-to-player level as well as on the character-to-character level. Thus, the onus is on all players in a *D&D* group to foster relatedness needs by creating a respectful, inclusive, encouraging, and trusting space with a perspective towards teamwork and collaboration. While the responsibility should not be placed solely on the DM, as the game's main storyteller and referee, DMs should be mindful of behavior that could damage social cohesion and relatedness and consider managing it as part of their rules' arbitration.

#### 4. FINAL CONSIDERATIONS

There is growing evidence supporting the notion that TTRPGs, like *D&D*, can meet the basic psychological needs of players and have the potential to contribute to well-being and positive mental health outcomes (Adams 2013, 82; Lehto 2021, 81; McLaren, Oades, and Deery 2024a 11-12; McLaren, Deery, and Oades 2024b, 8-10; Poeller et al. 2023, 5-6; Walsh and Linehan 2024, 46-47). The satisfaction of basic psychological needs and their impact on well-being and positive mental health is an important area of consideration, given the rising interest in the therapeutic potential of these games. One area of particular interest is the role of the DM, who traditionally plays a significant role in any *D&D* gaming session. This role will likely form the cornerstone of therapeutically applied tabletop role-playing game-based interventions, with a therapist/practitioner acting as a DM or game facilitator using the game and its mechanics to achieve therapeutic outcomes.

This study used a reflexive thematic analysis, providing novel insight into the satisfaction and frustration of basic psychological needs in *D&D* 5th Edition players, and found that all players can influence relatedness needs by creating an inclusive, supportive, respectful, and encouraging environment. The DM's role appeared most central to overall needs satisfaction in *D&D*. Beyond merely enforcing rules, the DM acts as a world-builder, storyteller, and facilitator, shaping the game experience in ways that directly impact player engagement and need fulfillment.

By crafting a compelling world, embedding player characters, and providing meaningful choices, DMs can create an environment where players feel a sense of agency over their journey. Offering multiple pathways and challenges while allowing players to determine their strategies to overcome obstacles reinforces autonomy. At the same time, fair and consistent adjudication of rules ensures that players feel competent in their actions, with success perceived as a result of their skill and decision-making rather than DM interference. Additionally, fostering an environment of mutual respect, recognition, and encouragement helps strengthen relatedness, reinforcing the social bonds that make *D&D* uniquely engaging.

This behavior exemplifies autonomy-support, which involves assisting others in identifying and pursuing their goals based on their values, interests, and preferences, and forms a critical aspect of a need-supportive environment (Ryan and Deci 2017, 247, 320). Autonomy support has been found to enhance all basic psychological needs, which, in turn, contributes to engagement, enjoyment, and well-being (Ryan and Deci 2017, 246-247). However, effectively balancing autonomy-support with structured storytelling poses some challenges. A DM needs to navigate a space between player agency and narrative coherence of their game while ensuring player choices have meaningful consequences without overly restricting the creative freedoms of players. Additionally, differing group dynamics, preferences, and expectations may require DMs to be adaptable, with some players seeking deeper role-play experiences while others in the same group may prioritize more tactical gameplay. While challenging, a DM can create an immersive and fulfilling experience for their players by skillfully managing these elements. This approach will likely hold true for both casual play and more therapeutically-focused tabletop role-playing games, which autonomy-support literature and approaches can guide.

While the role of the DM was highlighted in this study, the players' role should not be discounted. According to Relationships Motivation Theory (Knee and Browne 2023, 164-168), a sub-theory in Self-Determination Theory, when people feel securely connected to others, they can become more expressive, are more likely to show their true selves, and feel more confident in exploring personal goals and developing their skills. Taken together all act to reinforce relationships, which also encourages more authentic and meaningful connections. Thus, together, the DM and players can work to create an autonomy-supportive environment that has the potential to not only meet basic psychological needs but also support the development of higher-quality relationships and well-being in players.

The main implication of this study was furthering theoretical links between tabletop role-playing games, like *D&D*, Self-Determination Theory, need satisfaction, and autonomy-supportive literature. Self-Determination Theory and autonomy-supportive literature is well-developed and can be used to further our understanding of the relationship between tabletop role-playing games, well-being, and mental health. This study identified several characteristics that may contribute to developing and maintaining an autonomy-supportive game environment that enhances all basic psychological needs and contributes to engagement, enjoyment, and well-being (Ryan and Deci 2017, 246-247).

#### 4.1. Limitations and Future Directions

While this study has important implications, some limitations warrant consideration. First, this study utilized reflexive thematic analysis, and the researcher's interpretations and positionality shaped the findings. While reflexivity was actively engaged throughout the research process through peer debriefing and continuous critical reflection, the themes generated remain subjective constructions rather than objective realities. Researchers with different backgrounds and epistemological standpoints might have identified alternative themes or emphasized different aspects of the data. Nevertheless, this study takes important steps to link theory that can benefit this field.

This study focused solely on *D&D* 5th Edition, which limited the scope of claims that can be made. While a common game, *D&D* is not reflective of all tabletop role-playing games, which vary greatly in genre, structure, and mechanics. Further research could consider how different tabletop role-playing games influence need satisfaction in players. This approach may help identify games and mechanics with greater capacity to support basic psychological need satisfaction and well-being, aiding therapeutic intervention development and implementation.

Participant data was collected from casual *D&D* players rather than players participating in therapeutically focused *D&D* games; thus, it is more reflective of casual play experiences. While findings provide insights applicable to therapeutically-focused tabletop role-playing game-based interventions, the fundamental difference in focus (therapy versus fun/entertainment) may change player experiences of need satisfaction. While the concept of autonomy-support may prove helpful in therapeutic gaming, research specifically exploring experiences in these environments would also be beneficial to understand potential therapeutic processes.

The research questions used in this study may have inadvertently influenced the participants' responses in two ways. (1) Several relationships were discussed in the study. While the player-to-player and character-to-character relationships emerged in more depth throughout themes and were associated with relatedness needs, the player-to-character relationship was less apparent. This outcome may have resulted from the phrasing of the open-ended questions, which encouraged participants to reflect on the influence of the DM and other players on their play experiences. By specifying the DM and players, the question may have inadvertently restricted more introspective and personal reflections associated with the player-to-character relationship. Future research could explore these relationships more specifically to determine their association with needs satisfaction. For example, how does the player-to-character relationship impact the relatedness needs of

players? (2) Most of the content participants discussed focused on the DM. The ordering of DM first in the research question may have also inadvertently influenced participant responses in this regard. Future research could explore DM and player roles individually to allow for a rich investigation of both roles. In addition, the perspectives of DMs could also be explored, such as how DMs navigate the challenges of establishing and maintaining autonomy-supportive environments, including player behaviors that may support these processes.

Finally, participants in this study were not entirely reflective of the *D&D* 5th Edition community, according to recent demographics data (Corliss 2021), and represent primarily Western countries, under-represent female players and younger and older players, while over-representing non-binary players, and players in the 25 to 29 age range. These factors should be taken into consideration when interpreting the study's findings.

## 5. CONCLUSION

This research demonstrates a relationship between *D&D* play and the satisfaction of basic psychological needs (autonomy, competence, and relatedness). According to the Self-Determination Theory, meeting these needs contributes to engagement, personal growth, and well-being (Ryan and Deci 2017, 239-246). This study found that all players can influence relatedness needs by creating an inclusive, supportive, respectful, and encouraging environment. The role of the DM emerged as most central to overall needs satisfaction in *D&D*. However, the DM and players can work to create an autonomy-supportive environment that can benefit all players. While findings such as this can help support casual play, they can also inform therapeutically-focused tabletop role-playing games intended to support well-being or mental health by informing training, game design, and implementation.

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