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Digital Hikikomori and Escapism into Digital Environments as a Factor of Liminal Experience

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Abstract

This study addresses the phenomenon of the hikikomori syndrome and escapism into digital environments. We examined the associations between digital escapism and identified supportive factors contributing to the liminal state between the real and digital worlds among digital hikikomori individuals. The case study captures, through in-depth interviews, the life situations of five hikikomori individuals aged 27–33 from selected countries: France, Russia, North America, Malaysia and Japan. The study covers the period from June 2025 to January 2026. Escapism into the digital environment is associated with the consumption of narrative digital content and digital games. Characters and avatars play a significant role in escapism. By identifying with characters and avatars, digital hikikomori reflect on their own life stories, exercise emotional self-regulation, and control their digital experience in a safe environment. Stressful life situations are the driving force behind the creation of a virtual identity. Through characters and avatars, digital hikikomori not only engage in self-reflection but also present their own identities, abilities, character traits, and personalities absent in the real world. They likewise substitute psychological and relational needs. Escapism into the digital environment, time investment in consuming narrative digital content, building a virtual identity, and progress in the digital environment that saturates self-assertion in the real environment are, in relation to the real environment, prerequisites for stagnation, procrastination, and liminal experience.

Keywords: digital hikikomori; escapism; digital environment; virtual identity; liminality

1. Theoretical Framework of the Addressed Phenomenon

The term hikikomori, from the Japanese "pull out" (hiku) and "seclude" (komoru), refers to a severe form of social withdrawal. The phenomenon was observed in Japan in the 1970s. For the first time, hikikomori were described as individuals who become recluses in their homes during the latter half of their twenties. The condition requires that the primary symptom of withdrawal cannot be explained by another psychiatric disorder [1]. It has also been defined as "abnormal avoidance of social contact, usually by adolescent males" [2]. Hikikomori syndrome is a form of pathological social withdrawal or social isolation, whose main characteristic is physical isolation at home [3].

Cases of hikikomori have been reported worldwide, for example, in Australia, Bangladesh, India, Iran, Japan, Korea, Taiwan, Thailand, the USA [4], Portugal [5], Italy [6–8], France [9], Spain [10], and others. The original understanding—linking the syndrome to Japanese culture—has been expanded to "a syndrome linked to modern society" [11].

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The term "shakaiteki hikikomori" represents the formal version of the term hikikomori [1,12], primarily pointing to a social reason for withdrawal. In Europe, in Spain, the term hikikomori is known as (niño caracol)—"snail", (la puerta cerrada)—"closed door" [10]. In South Korea, we find a similar condition to hikikomori known as (Oiettolie) [13]. A hikikomori evaluation system was created—a diagnostic set consisting of mandatory and non-mandatory criteria, for example, four stages of hikikomori according to the intensity of isolation were introduced here [3] (p. 217). The evaluation system represents the basic framework for assessing the state of hikikomori. The classification was expanded based on additional aspects: Based on the duration of isolation, milder forms were distinguished from hikikomori (cases of continuous social isolation for at least 6 months), known as pre-hikikomori [3], junhikikomori [14], and semi-hikikomori [15]. In these cases, it involves continuous social withdrawal for at least 3, but not 6 months. The average duration of isolation for a hikikomori individual is 4 years, ranging from a few months to 9–10 years [16]. There is also the opinion that it is not a phase of life, and that a person may remain in the hikikomori state for a lifetime [17].

For example, a classification of hikikomori from a behavioural perspective has also been presented, with four categories [18]. Individual mandatory and optional specifiers of hikikomori were gradually elaborated in numerous scientific studies. Among the mandatory specifiers, the following were addressed: physical withdrawal—social isolation at home [3,19,20], withdrawal from social participation, insufficient social participation [21], withdrawal from social relationships and interactions outside the home [19]; and significant functional impairment or distress associated with social isolation [3,19,20]. Furthermore, the mandatory specifiers investigated included voluntariness [19]; absence of a psychotic disorder [3,20]; and two basic types of hikikomori based on the presence or absence of a mental disorder [22].

Optional specifiers were also examined: Hikikomori may be conditioned by cultural background, as a result of socio-cultural particularities [23]. From studies focused on age [3,10,17,24], we find that the hikikomori lifestyle is not age-limited. From a gender perspective, the phenomenon is four times more common in men than in women [25].

Causal factors of hikikomori have personality and socio-socialisation backgrounds. Considering the study's focus, we mention the following socio-socialisation causes: socialisation problems, inability to establish contact, negative social experiences such as school refusal (futoko) [3], social exclusion from societal activities, rejection by peers, and bullying [16], and academic stress [26].

The withdrawal of hikikomori is related to the family institution [3,16,17,26]. Triggers may include negative childhood experiences [16,26] or disappointments in love.

Self-isolation can be prompted by changes in societal development—on one hand, for example, the collapse of long-established societal systems [3], unemployment [3,26], on the other hand, an inappropriately structured government social security system providing young people with a type of financial social support [27].

Similarly, the character of society can be a trigger for self-isolation, specifically an "internet society," within which it is possible, thanks to IT, to study and work without leaving home [28], or being overwhelmed by society, where hikikomori represents a reaction to a constantly connected society that lacks a boundary between private and public spaces. Hikikomori withdraw in order to reclaim mental space, where they can safely be alone with themselves.

Individual attributes of hikikomori may also be indirectly reinforced; for example, the lack of socialisation [10] occurred as a result of the specific societal situation of the COVID-19 pandemic.

Changes in work and study habits since the COVID-19 pandemic have introduced the concept of "non-pathological hikikomori" to describe individuals who are isolated at home but do not experience functional impairment or distress [29].

Considering society as a factor, we note that it can influence the development and direction of generations. For example, the setup of society can create a "lost generation of its own" [30], or a "decline in the gravity of society"; it can create "youth without prospects," notes Melman [22]. Society can influence the development and direction of generations in subtle ways. From a sociological perspective, the first analogies with hikikomori are found in the study known as the "behavior sink" by John B. Calhoun (1947) [31]. From the experimental phase C (days 315–560), we learn, "Among the males, numerous behavioral disorders were observed... pathological shyness... Some individuals moved around the enclosure only when the other animals were asleep. Only at that time did they go to eat and drink. The new generation of mice tried to integrate into society, but was drastically expelled. The social roles in the group were already established..." [32].

Conversely, involuntary hikikomori lifestyles impose a psychological burden on family members and social systems [26].

Another major determinant is digital engagement, which constitutes a fundamental component of the hikikomori phenomenon. The internet is not merely a source of entertainment or an avenue for escape; it actively shapes their everyday lives and interpersonal relationships. The digital world has become an integral part of the hikikomori lifestyle.

Originally, hikikomori was characterised by insufficient social interaction [19]; however, reconsidering the criterion and including virtual interactions as social interactions [3] has been proposed, since hikikomori engage in this two-way indirect communication [33], participating in a new indirect form of sociability through digital technologies [34]. Despite physical isolation, most hikikomori maintain online relationships and communicate online. The digital environment functions both as a "refuge" and a "bridge"—allowing them to remain in contact with others while retaining a protective distance.

There is a global network with countless servers and chat groups using the hashtag #hikikomori, which transcends geographical boundaries, so in addition to Japan, they are also located in America or Europe [35].

In connection with this lifestyle trend of hikikomori, a new term, "digital hikikomori" has emerged, as stated by [36]. It refers to a specific digital way of functioning in which a person is not completely offline, but their life mostly takes place online. An analogy of a person's way of life and interaction with the digital world is presented by [37], who defines it as "onlife." It is a way of being in the onlife era, where the understanding of reality, human identity, values, and behaviour changes. Essentially, this way significantly affects and shapes the experiences of daily interactions and lifestyle through digital technologies. Such a lifestyle is also pursued by individuals with hikikomori.

The private time rhythms of hikikomori differ from the collective, social rhythms of the general population. The connection between the private rhythm and the collective pace may be absent [38]. Individuals want to 'freeze time,' employing strategies such as changes in sleep and wake rhythms [39].

Changes occur in a person's life, marking a transition from an old way of life to a new one. According to [40] (p. 11), "The schema of rites of passage theoretically includes pre-liminal rites (rites of separation), liminal rites (rites of transition), and post-liminal rites (rites of incorporation)." An analogy can be found in the lives of hikikomori individuals, with the issue from the perspective of rituals being the subject of the research. Hikikomori is characterised by several features of liminal experience: withdrawal from society for more than 6 months, indicating a liminal state between social engagement and isolation; and abandoning traditional social roles (e.g., *tatemae*, *omote*, *giri*), thereby suspending usual

social expectations. Likewise, school pressure and fear of failure contribute to the transition from student life to adult life. Remaining in a hikikomori state represents a long-term matter; a person is, so to speak, stuck, procrastinating in multiple areas of life.

1.1. Digital Environment

The digital environment is understood as an environment created or mediated by digital technologies. This includes websites, social media platforms, software applications, mobile applications, and online games. There are several levels depending on the possibility of interaction with the digital environment. We outline selected levels mentioned in the work.

Narrative digital content refers to standard forms of digital media that incorporate a storyline (narration). This category includes digital fairy tales (PDF, e books), interactive online comics, story-based videos, and animated narratives. It represents a digital story experienced on a screen, yet not spatial or virtual in nature. This category also encompasses visual novels and animated video formats such as anime.

A virtual environment is a specific type of digital environment that simulates a real or fictional world.

Virtual content constitutes a specialised form of digital media—elements that exist within a 3D digital environment, where users can move, interact, or experience events within a space that simulates reality. This includes virtual worlds, objects (characters, items, skins, currencies, VR elements), VR simulations (e.g., virtual city tours), and virtual avatars. A typical example is Minecraft, which offers a three-dimensional, interactive environment.

Narrative virtual content is the most specific and narrow category. It represents the combination of narration and a virtual environment, with emphasis placed on interactive storytelling within a virtual space, narrative pathways, and role play components. The story can be experienced in a 3D environment, enabling user movement and deeper narrative immersion. This category includes VR stories, virtual reality environments that allow interaction with characters, and augmented reality (AR) narratives or games in which characters appear in real physical space. A typical example is Pokémon Go, which blends narrative and virtual interaction through AR.

For the purposes of this study, we add that MMORPG (Massively Multiplayer Online Role-Playing Games) represent digital content that simultaneously functions as virtual content. In cases where these games possess a strong narrative component, they may also be classified as narrative virtual content.

The Association Between Hikikomori and the Digital Environment

Before we focus on the connections between hikikomori and the use of digital environments, it is necessary to briefly discuss human needs in general. A well-known model is Maslow's hierarchy of needs [41]. The first level represents primary physiological needs and underpins survival—for example, the need for sleep. The second level represents the need for safety, including physical and psychological security, such as certainty, family, health, stability and reliability, structure, rules, boundaries, and a predictable, non-threatening environment—free of fear, anxiety, and chaos. The third level represents socialisation—interpersonal relationships, friendship and communication, love, acceptance, and belonging. The purpose is to build social groups and communities. The fourth level is the need for recognition, reflecting self-esteem and forming self-worth, as well as respect and social status. At the highest level of needs, self-actualisation occurs; a person focuses on personal growth, achieves personal goals, engages in self-development, makes the most of their own abilities, seeks to become who they can be, clarifies inner values, and finds

happiness. Basic human needs can only be substituted in a real physical environment. Higher needs can already be substituted in a digital environment.

There are documented connections between hikikomori and the use of digital technologies, for example, the complex relationship between social media use and social withdrawal [29]. Pathological hikikomori use significantly more social media platforms than non-pathological hikikomori. In communication at all stages, pathological hikikomori consistently connect with others through the social network TikTok and the YouTube platform significantly more than non-pathological hikikomori. Through social networks, pathological hikikomori send more messages. Digital technologies affect the mental and social life of children and adolescents—especially in relation to internet addiction, video games, and the hikikomori phenomenon [42]. Online communication can worsen social withdrawal and similarly hinders the development of social skills acquired through interpersonal interaction [43].

Individuals suffering from hikikomori excessively use the internet and exhibit traits of internet addiction [44]. Subjects with a high risk of hikikomori on the HQ-25 had longer internet usage time and higher scores on the Internet Addiction Test (IAT) [45]. Technological addiction, depression, and risk factors for hikikomori positively correlate with tendencies toward hikikomori even in young adults, with addiction to digital technologies being mediated (as a moderating variable) by depression. Technological addiction may contribute to increased depression in young adults, which in turn leads to risky behaviour related to hikikomori, such as avoiding school or work, and ultimately leads to the development of hikikomori [46].

Playing digital games is among the activities of individuals with hikikomori. In hikikomori, there is excessive use of digital technologies, especially video games and social networks [10]. Some are "Otaku," meaning enthusiasts of popular culture, including anime, games, and technology [47]. Extreme social isolation (hikikomori) and gaming addiction are connected, as investigated through the IGDS-SF9 questionnaire for measuring gaming addiction. It was found that the relationship is stronger in those who spend a lot of time playing MMO games daily [48]. Pathological gaming (that is, excessive, compulsive gaming) was significantly associated with a higher risk of hikikomori [49]. Based on research on Italian teenagers aged 15 and older, it was found that hikikomori behaviour was associated with risky internet behaviour and gaming [50].

The use of digital devices and engagement in a virtual environment are more complex processes for hikikomori. Escapism into virtual reality has a psychological dimension. Technologies and social media can play a key role in worsening the condition of hikikomori, as individuals with a tendency toward social isolation may find comfort in virtual spaces that provide an escape from the pressures of the real world [51]. Online environments can also reinforce isolation and prevent the individual from engaging in social interactions in the real world [26].

Regarding psychological defence mechanisms in crisis situations and conflicts in general, it was found that hikikomori individuals more frequently used unhealthy (maladaptive) defence mechanisms such as fantasising, passive aggression, projection, and splitting [52]. Healthy mechanisms, such as humour or a sense of omnipotence, are used less often. We note that fantasising, projection, and even personality splitting can be applied in a digital environment. It has been proven [53] that information technologies influence the development of hikikomori by representing three forms of escapism—relational, emotional, and spiritual escapes, for example, mediating fantasy identities and digital 'self-splitting.' The notion that the rite of passage and the emergence of liminal experiences in relation to the real environment might be related to the preference for a digital environment is suggested by the idea of 'creating a cyclical circle of isolation' [54]. It is stated that re-

duced activity in the physical environment, the creation of a sedentary lifestyle, and the preference for alternative self-realisation in a digital environment during leisure time can lead to decreased energy and physical fitness, resulting in stagnation in life. From the perspective of low energy cost, it is more worthwhile for hikikomori individuals to live and self-actualise with the involvement of digital devices than to invest in self-actualisation in the physical environment.

1.2. Virtual Identity and Self-Reflection in Digital Environments

Higher values serve as the basis for a person's identity. The development of identity is therefore possible only if a stable environment is created. Stable contexts, such as family, relationships, and the social environment, support healthy identity development [55]. The social environment (family, peers, culture) is one of the main factors that support or hinder the development of a healthy identity [56]. It has been found that an unstable environment disrupts identity formation [57].

In digital environments, individuals reflect on their own identity and can construct a virtual identity. From a technological and informational standpoint, a person possesses a virtual identity when they have an avatar, a character, or a virtual representation. In a narrower sense, this may refer to one's likeness or role within a virtual setting.

A virtual identity can also be understood as the psychological projection of oneself into a digital role or character. It can be a form of self-expression through an avatar, a projection of traits, desires, or ideals, experimenting with identity, 'immersion' into a character, as well as the perception of the digital self as an alter ego. The psychological aspects of virtual identity were examined in [58,59], which conducted research on avatars and self-perception/self-understanding. It was also found [36] that the digital environment is a refuge and a space for compensation for hikikomori, a place where they create alternative identities and coded forms of sociality.

Information technologies, for example, mediate fantasy identities and digital 'self-splitting' [53]. The digital environment provides a 'refuge and bridge', that is, a safe space for escape as well as for the creation of alternative identities. Hikikomori use digital identities here, retreat to alternative 'selves', and live in online spaces where projection and the fantasy self are socially accepted [36]. We further emphasise that virtual identity is fluid and dynamic, unlike the relatively stable digital identity.

Given the digital environment and self-identification, it is necessary to add that besides Hikikomori impegnati, i.e., engaged hikikomori, Vero Hikikomori, true hikikomori, and Hikikomori complesso, complex hikikomori, there is also communication on the social platform Reddit with Fake Hikikomori (false hikikomori) [60]. This is a numerically unknown group. Individuals who claim to be hikikomori do not live in social isolation; they live almost normal lives. They do not have the long-term, serious limitations typical of hikikomori; it is an episodic period of apathy and laziness, not a real withdrawal from society. False hikikomori adopt the "hikikomori identity" for image, attention, or community belonging.

1.3. Digital Games as a Tool for Diagnosis and Prevention

Regarding the diagnosis of hikikomori, there are tools for diagnosing and early identification of its attributes, such as the HQ25 [61] and HQ25M [62] tools. In addition, an online game has been employed as a diagnostic tool. Based on player behaviour within the game, it is possible to detect social anxiety disorder (SAD). Digital behavioural data can function as "digital biomarkers", offering early indicators of psychological difficulties. Individuals with SAD tend to have fewer in-game friends, visit fewer other players' virtual homes, and display less diverse and more predictable gaming behaviours (low entropy) [63].

An interesting application of digital games is their use as a universal prevention tool to counter negative stereotypes about individuals with hikikomori. The game Persona 5 was developed, among other purposes, to challenge and deconstruct stereotypes associated with otaku and hikikomori lifestyles. Through the character Sakura Futaba, the game highlights deep psychological and societal factors underlying the hikikomori syndrome [47], contributing to a preventive and destigmatising approach.

Hikikomori individuals also receive professional support. One strategy aimed at fostering socialisation involves using the augmented reality game Pokémon Go, which integrates virtual and physical movement, enabling players to interact with virtual characters [64]. It is parallel and non-intrusive to the behaviour of hikikomori who play games on digital devices. It represents a behavioural intervention, utilising the principle of functional analogy (the theory of behavioural substitution within behavioural psychology and cognitive-behavioural therapy (CBT)). The principle of re-education is that the stimulus (game) remains the same, but the function of behaviour changes—from isolation to socialisation.

For providers of help and support to individuals who are hikikomori, a tool was created—a questionnaire for assessing the abilities of hikikomori support providers in their capacity for consultation and support, called the Hikikomori Supporter's Skills Checklist (HSSC) [65].

The theoretical framework of the concepts of hikikomori, the real and digital environments, escapism into the digital environment, narrative digital content (digital games), virtual identity, higher needs substituted in a digital environment and the liminal state, as mentioned in the subchapters (1.1–1.3), informed the interpretation of empirical data and served as sensitising concepts guiding the analytical process.

2. Materials and Methods

It was emphasised that there is a need for further research on the hikikomori phenomenon, particularly regarding the role of technology in exacerbating social isolation [26].

Research (exploratory) problem: In an effort to clarify the worsening isolation among hikikomori, several perspectives emerge. There are frameworks pointing to the reasons for risky behaviour in the use of digital technologies (focused on internet addiction, problematic internet use, and gaming disorders). However, these tend to favour behavioural or clinical dimensions and may not capture the subjective quality of experience in the digital environment. On the other hand, there are models that express hikikomori through the causes of loneliness, social anxiety, or the substitution of avoiding physical contact and can effectively describe the factors of self-isolation. At the same time, a framework points to the inevitable reliance on the digital environment, linked to escapism and emotional regulation. There is no model that clearly explains the creation of relatively stable forms of life in the digital environment.

The research, therefore, addresses the issue of hikikomori syndrome from the perspective of the substitution of higher human needs in the real and digital environments in digital hikikomori.

We established partial objectives: Partial objective no. 1—To identify and analyse the factors of escapism into the digital environment among digital hikikomori. Partial objective no. 2—To identify and clarify the mechanism of substitution of human needs (supporting factors and impact) with respect to the real and digital environment among digital hikikomori. With regard to partial objective no. 1, we set RQ1: What are the associations of escapism into the digital environment among digital hikikomori? With regard to partial objective no. 2, we set RQ2: What is the mechanism (supporting factors and

impact) of the substitution of human needs with respect to the real and digital environment among digital hikikomori?

The case study captures the life situations of individuals with hikikomori through in-depth interviews. The research design represents qualitative research. The number of respondents is determined by a survey sample.

The procedure for conducting the in-depth interview and the method of recording meanings and statements:

Contact with respondents was established on Discord and Reddit. On these platforms, hikikomori communicate through groups, for example, on Reddit, it is the hikikomori/NEET group. The first contact, the so-called 'ice-breaking' stage, lasted 2 weeks and consisted of casual conversations on topics that potential research participants chose themselves. These were narratives such as: how the day was spent, hobbies—favourite music, movies, anime, digital games, board games, pets, interesting facts from around the world, politics, and others. There was also an exchange of content—visual (text, images, memes), visual-auditory (videos, GIF images). This type of information sharing was indicative. After the 'ice-breaking' stage, the researcher informed them about the research activity and its objectives. Participants were approached regarding the possibility of taking part in the research through an in-depth interview. Respondents voluntarily chose to participate in the in-depth interview.

Due to the distance, communication was conducted online via text messages. We are aware that physical contact is indispensable even in scientific research. We also justify our choice of method by noting that we accounted for respondents' individual characteristics. Shyness, inhibitions, and fears that occur in hikikomori during physical contact and represent a barrier to communication can be significantly reduced by the disinhibition effect in online communication through digital devices connected to the internet. Benign disinhibition, in fact, facilitates easier self-expression [66] and makes sharing easier. A person can share their deepest concerns, showing vulnerability [67]. It also helps increase emotions. Interaction in anonymity is accompanied by increased emotional expression, as in natural face-to-face interaction [68]. Furthermore, it supports fearlessness in behaviour, such as a feeling of courage, less fear and concern about judgement and perception by others, and motivation to take risks. People do in the online environment what they would not normally do in the offline world [67,69]. We were also inspired by the online format—internet cognitive therapy for hikikomori [70]—and their proposed modules included support via text messages. It turned out that the format has the potential to improve behaviour in social interactions. The online method can facilitate client engagement.

Communication with respondents took place in English (levels A1–C2). For the translation of specific word combinations and phrases, a language programme translator was used.

The interview had the character of a semi-structured conversation. The primary scope (main structure of the interview) consisted of 44 questions. To expand the information base, clarify statements, and supplement information related to them, we asked numerous follow-up questions. In cases involving specific terms, questions were asked about the term's connotation (the contexts influenced by personal experiences associated with the term). We add that, due to the study's capacity, only questions relevant to the partial objective are presented in the text. We present them in the findings and discussion section.

The meanings obtained from in-depth interviews were recorded (copied) in full as a literal transcript into a record sheet. The record sheet contained identification details for each person: Respondent number, preferred form of address, preferred form of contact based on the agreement (platform, social network [Discord, Reddit, WhatsApp]), time zone, and time of contact. Demographic indicators included origin (country of residence), gender,

and age. The meanings obtained from text communication were recorded (copied) in full into the record sheet.

The in-depth interview consisted of questions focused on areas through which it was possible to select hikikomori respondents, identify specifics regarding the hikikomori condition, and create a comprehensive picture of the lifestyle of a hikikomori individual:

1. Employment, last job position (including part-time work, retraining course);
2. Communication preferences (face-to-face, online video call);
3. Duration of staying at home (number of years);
4. Identification of hikikomori (knowledge of hikikomori and NEET, voluntary concept of hermitage taijin kyofusho, netholic, kodoku-shi. Life circumstances leading to the hikikomori condition);
5. Exclusion of pathology (knowledge and experience with the HQ25 measurement tool, other self-report instruments);
6. Physical health (eating habits, reasons for leaving the residence);
7. Living conditions (life culture, living space, and mobility options);
8. Socialisation—family situation and friends;
9. Daily routine, daily schedule;
10. Leisure time and digital devices;
11. Playing games on a digital device;
12. Virtual identity;
13. Regression, liminality, progression;
14. Plans and visions for the future, support options.

For educational purposes, professional materials were also provided to respondents: existing scientific research on hikikomori syndrome. The materials on hikikomori were well received by the respondents.

The targeted in-depth interview lasted 8 months. The interviews were conducted according to a schedule that accounted for time zones: France (UTC+1), Saint Petersburg (UTC+3), Minnesota (UTC−6), Malaysia (UTC+8), and Japan (UTC+9). The study covers the period from June 2025 to January 2026.

Based on the assumption that hikikomori engage in meaningful personal social interactions (conversations) with people outside the home either occasionally (2–3 days a week) or rarely (1 day a week or less) [3], we set the intensity of contact. A higher frequency of contact initiated by the respondents was welcome.

The length of the interview varied depending on the respondents' availability to communicate. The duration of the interviews ranged from 1 to 6 h, with breaks taken for activities such as playing online games, eating (lunch break), and personal hygiene.

To support the respondents' mental well-being, the targeted interview was alternated with regular conversations on topics chosen by the respondents themselves. At the same time, a sci-fi narrative was included to lighten the targeted communication.

Processing methods:

To process the meanings from in-depth interviews, we used content analysis. We were interested in both levels of the text—manifest and latent. The manifest level is obvious and represents the text's surface structure. The author, i.e., the respondent and the researcher, perceives the meanings identically. The latent level is hidden, "between the lines," and represents the text's deep structure [71]. At this level, it is possible to perceive the background, the essence of what the author is conveying.

For the purpose of analysing meanings, we used the grounded theory method. This is characterised by a coding process with three stages: open coding, axial coding, and selective coding [72,73].

Through the colouring technique, we extracted codes from individual excerpts of the interview. Extracting codes represents open coding. The codes from open coding form the basis for categories, which are abstracted from them. For this purpose, clustering was used. Abstraction represents axial coding. In addition to comparing codes with each other, relationships are identified, relational structures are created, and hierarchies are established. "This uses the so-called paradigmatic model, which simply looks like this: causal conditions—phenomenon—context—intervening conditions—strategies of action and interaction—consequences. The procedure is such that individual categories, which were created based on open coding, are assigned to individual items of the paradigmatic model" [73] (p. 107).

Through this process, categories and subcategories were created. The main categories represent aspects of life (type of environment, socialisation, identity, values and meaning, work existence, life experience and crisis, progress, escapism, and rituals). From the main category, a core subcategory was extracted that intersects with the other main categories: the type of environment—real environment and digital environment. These represent a person's dual reality.

Dual reality arises naturally as a result of the technologization of societal systems, providing a parallel possibility to substitute for higher human needs in the digital environment. Dual reality is neutral, yet the digital environment, like the physical environment, has strong potential to substitute for higher human needs for hikikomori individuals.

After creating categories and subcategories, observable qualitative behavioural features (patterns) were identified in the interview statements. These patterns helped to further specify the meaning of the categories. In addition to inductively generated categories, the analysis was guided by sensitising concepts, which provided an interpretative framework for understanding relationships between categories during axial and selective coding. This included escapism into the digital environment, digital environment, virtual identity, substitution of higher needs, and liminality. The concepts were represented by indicators, as shown in Table 1.

Finally, we carried out selective coding. "Selective coding involves choosing one key category (e.g., phenomenon) around which the core analytical story is organized. All other categories are then related around this central category" [73] (p. 107).

A core category emerged: there is a dynamic possibility of using real and digital environments. This determines the progress or regression of life aspects, either in favour of the real or digital environment. For hikikomori, there is a preference for using the possibilities of the digital environment to substitute for higher needs. As a result of the preference for the digital environment in substituting higher needs, a state arises that, in relation to the physical environment, we call a liminal state.

The Table 2 illustrates a conceptual model derived from qualitative analysis that depicts the dynamic relationships among negative experiences in real environments, escape into digital environments, engagement with digital content, the formation of a virtual identity, the substitution of higher human needs, and the emergence of a liminal state between real and digital existence.

A pilot theoretical model of fulfilling the needs of individuals with hikikomori, as shown in Figure 1, is emerging, in which the cause is represented by the deepening preference for substituting higher needs in the digital environment (escapism), and the consequence is a liminal state in the real environment.

Table 1. Conceptual framework and qualitative indicators used in data analysis.

Concept	Analytical Role in the Study	Qualitative Indicators Identified in Interview Data	Illustrative Manifestations
Escapism into the digital environment	Coping mechanism in response to stress, crisis, and unmet needs in the real environment	Intensive consumption of narrative digital content (anime, webcomics and digital games), a digital environment for regulating emotions, and a preference for the digital environment over real interactions	Descriptions of digital environments as safe, controllable, and emotionally comforting spaces; references to "safety", "relief", "forgetting reality", "control", and "escape" in the digital space
Digital environment	Alternative space for self-realisation and substitution of higher human needs	Regular, long-term engagement with online platforms, games, and communities; restructuring of daily routines around digital activities	Shift in daily rhythms, prolonged online presence, withdrawal from offline temporal and social structures
Virtual identity (avatar/character/ persona)	Mediating mechanism between individual identity and digital self-realisation	Creation and use of avatars or personas; identification with fictional characters; projection of desired traits onto virtual representations	Statements describing avatars as improved or desired versions of the self; emotional attachment to characters or digital roles
Substitution of higher human needs	Core mechanism explaining preference for digital over real environment	Fulfilment of the need for belonging online, gaining recognition through a game role or community, and self-actualisation in digital contexts—feeling of mind and value in digital activity; lack or failure of fulfilment in the real environment—weak or dysfunctional satisfaction of these needs in the real environment	Online friendships replacing offline ones; recognition through in-game roles or community participation
Liminality (liminal state)	Resulting existential state between real and digital environments	Stagnation in education, (work, education, relationships) or relationships; subjective experience of being "stuck"; existing "between" reality and the digital world; progress in the digital environment vs. regression in the real environment	Expressions of suspended life progress; awareness of lost opportunities combined with ongoing digital engagement

The in-depth interview lasted over half a year, and new information kept adding to the initial picture. The ongoing analytical technique that accompanied all phases of coding was constant comparison. The general analytical strategy represents a type of analysis in which continuous comparison occurs, discovering similarities and differences [73]. During open coding, participants' statements were compared. Similarities and differences emerged, resulting in the first codes. During axial coding, it was possible to compare codes with categories and observe relationships among categories, conditions, and consequences. Comparison helped to refine the categories. In selective coding, we compared the categories with the selected central category. We monitored whether the findings fit into the proposed theoretical model. Consistency and saturation were verified through comparison.

Validity and reliability of the research: Ensuring validity: credibility (credibility, authenticity)—internal validity was ensured by techniques such as selecting research par-

ticipants, procedures for data interpretation, direct quotations (statements of respondents), which we provide in the interpretation. Transferability—external validity was ensured by techniques such as: detailed documentation of the research process, detailed information about the studied cases, and identification of research limits. Reliability means the tool provides stable, consistent results when used repeatedly under the same conditions. Reliability was ensured through consistency in questions, review of interview transcripts, and coding.

Needs	***Real environment***	**Dynamics** *Progress or regress*	***Digital Environment***
	Physiological and psychological		Psychological
Sleep and wakefulness rhythm	Collective pace (3) social rhythms		Private Time Rhythms (3)
Security	Real environment as a safe space		Digital Environment as a Safe Space
Socialisation and interpersonal relationships **Belonging**	Social network of relationships, community in the region		Indirect Form of Sociality (1) Virtual Relationships, Virtual Community Sense of Belonging
Self-realisation in free time	Natural environment		Virtual Environment, Virtual Worlds Fantastic Realistic in Digital Games
	Games Comix, Books		Video Games - MMORPG Anime, Webcomics
Axiological component (value), meaning	Meaning of human activity Development of social values Cosplay		Sense of Responsibility in the Game (2.) Digital Capital, (in-game items)
Identity	Identity in the reflection of interpersonal relationships		Mixed Identity – identity in reflection of interpersonal relationships and virtual identity
Social role	Social roles		X Inadequate Characters Identification with the Character
Escapism	*Preliminal rituals (Separation rituals),*	*Liminal rituals (Rites of passage)*	*Postliminal rituals (Inclusion rituals)*

Time investment

Figure 1. A theoretical model of fulfilling the needs of hikikomori individuals, given their escapism into the digital environment. Source: own processing according to the rite of passage [40] (p. 11), (1) [34]; (2) [54]; (3) [38]; (4) [39]. Items not addressed in this work but included in the model are shown in grey.

Table 2. Conceptual model of relationships between escapism, virtual identity, substitution of needs, and liminal experience in digital hikikomori.

Real Environment		Digital Environment
Negative experiences/stress in real environment		
Unmet needs	→	Escapism into digital environment
Social isolation		↓
		Engagement with digital content, virtual content (games, narratives, virtual worlds)
		↓
		Creation of virtual identity (avatars, characters, personas)
		↓
		Substitution of higher human needs (belonging, recognition, self-actualisation)
		↓
		Perceived progress
	LIMINAL STATE (between real and digital environments) Stagnation, suspension, in -between	↲

Note: The arrows illustrate the transfer of the realisation of higher needs (at all levels, up to and including the level of self-actualisation) from the physical environment to the digital environment. The shift of fulfilling higher needs into the digital environment leads to a liminal experience in relation to the physical environment.

2.1. Selection and Specification of the Research Sample

The representative sample of respondents consisted of 11 respondents. The respondents were selected by convenience sampling. Convenience sampling—self-selection is suitable for quantitative research, or in extreme cases when cooperation with agreed-upon respondents fails.

The respondents were contacted on Reddit and Discord. When selecting respondents, we took into account the findings [60] (p. 174), in which individuals identified as having hikikomori were distinguished from those who were merely pretending to have the syndrome. Awareness of the hikikomori lifestyle and in-depth interview questions helped to select the respondents. Here, the research sample was reduced from 11 to 5 respondents.

In terms of size, the representative sample is intentionally selected: it is small due to in-depth analysis to reach theoretical saturation (data saturation, sufficient to provide the basis for the theory, and no new relevant meaningful categories are needed). This is recommended for exploratory research that is not guided by an initial hypothesis.

2.2. Characteristics of the Research Sample

From the demographic indicators, we provide origin and country of residence: Respondents come from selected countries: France, Russia, North America, Malaysia, and Japan. The selection of respondents from different parts of the world is justified. We argue that the digital environment is inclusive, global, supra-regional, and transcultural—it blurs boundaries and specifics, the particularities for respondents that arise in the physical environment, such as geopolitical factors (state, region), cultural peculiarities, and even personality indicators such as gender or age. For example, a candidate from America has the same chance to self-realise in the digital environment as a respondent from Malaysia, and at the same time, both can belong to online social groups for hikikomori whose servers are in Europe. Respondents are equal in the digital environment. The diverse backgrounds of respondents do not represent a limitation with regard to the aim of our research.

In terms of gender, the respondents were male. The gender-based selection was not intentional; however, we note that, so far, we have not established contact with any female respondents on the selected social platforms. We base this trend on the finding [25] that, in terms of gender, the phenomenon of hikikomori is four times more common in men than in women.

In terms of age: Respondent No. 1 (27 years), Respondent No. 2 (33 years), Respondent No. 3 (33 years), Respondent No. 4 (20 years), Respondent No. 5 (16 years). Age, again, given the research objective regarding the use of the digital environment, does not represent a limitation.

Based on question No. 3 from the interview that focused on the length of time spent staying at home (number of years), we determined the basic characteristic:

Respondent No. 1 (duration of isolation is 5 years),

Respondent No. 2 (duration of isolation is 15 years),

Respondent No. 3 (duration of isolation is more than 1 year),

Respondent No. 4 (the duration of isolation, according to the respondent, “several years... I don’t remember how long I was in my apartment the longest”).

Respondent No. 5 (the duration of isolation is 5 years. According to the respondent’s statement, “It started at age 11, at school I was lonely”).

The in-depth interview consisted of questions focused on topics that also served as criteria for classifying hikikomori. It was possible to select respondents and verify whether they belong to the group of hikikomori individuals; however, due to the scope and purpose of the work, we do not intend to exhaustively report all the interview findings.

Respondents were offered the self-report questionnaire HQ25M [62] (English and Japanese versions) available through a direct link in the r/hikikomori group on the Reddit social platform. Completion was voluntary. We also note that all respondents were aware of the existence of the HQ25 questionnaire.

Based on the stage of hikikomori created according to the intensity of isolation and social contact [3], respondents are classified as follows:

- Into the group “mild hikikomori” (individuals who occasionally leave their home 2–3 days a week) we classify Respondent No. 1: outings are made on average twice a week, with the reasons for leaving limited to grocery shopping and medical walks.
- Into the group “moderate hikikomori” (individuals who rarely leave their home, for about 1 day a week or less), we classify Respondent No. 3 and Respondent No. 5.
- Into the group “severe hikikomori” (individuals who do not leave their home at all), we classify Respondent No. 2, who does not leave the residence at all. The last reason for leaving the residence was a doctor’s visit, and daily needs, i.e., grocery shopping, are provided by the mother.

Based on criterion [22], we classify respondents into the primary hikikomori category—an individual isolated without the reason of a psychiatric disorder. According to the framework [60] (p. 174), we classify respondents as Vero Hikikomori. For these respondents, there is no real social reintegration, and online contact does not lead to a change in status; it serves to vent and to maintain contact with the community. Online engagement does not replace the social role but only simulates or compensates for it. It should be noted here that Respondent No. 1 considered the possibility of making a living through creating digital content, but has not yet realised this option. Achieving a social role through online functioning would already represent a commitment, responsibility to society, and reclassification into the "Hikikomori impegnati" group.

3. Results and Discussion

Considering partial goal no. 1 and RQ1, we have found that the digital environment has the potential to fulfil, besides physiological needs, other human needs. The tool for ensuring higher needs is selected digital content—narrative digital content and digital games.

Furthermore, we find that escapism into the digital environment is related to attributes of a person's identity—personality characteristics such as the ability to handle stressful situations and crises and maintain control over a demanding reality, and the level of communication skills. The digital environment represents a safe, stable environment where a person can support the development of their own identity.

We also find that in the digital environment, a virtual identity is created and developed. The tool for developing identity, or virtual identity, is the consumption of selected digital content—specifically characters (heroes, avatars) that support self-reflection. The need to develop identity and virtual identity leads to escapism into the digital environment that allows it.

Reflection of selected higher needs in relation to escapism into the digital environment.

We focused on the needs for safety, belonging, recognition, and self-actualisation. We identified the level of socialisation and the formation of interpersonal relationships as a starting point for escapism into the digital environment. We asked respondents: "How would you describe your ability to socialise and form interpersonal relationships or friendships?" Their responses included:

> *"I don't have real friends... Whenever people tell me they like me, I don't know how to respond except with a fake laugh and nod."* (Respondent No. 1); *"After a failed relationship, I have no desire to look for one."* (Respondent No. 3); *"I don't have real or even online friends. I struggle to find them. After a breakup, I lost all contact with people... Once, they played a role in my life, but each time it was mostly a painful experience."* (Respondent No. 4).

It is evident that hikikomori suffer from loneliness, a lack of close relationships, or the absence of real friendships in the real environment, and this is also due to negative experiences in social interactions in the real environment. It is stated [74] that hikikomori represents a state of social disintegration and fragmentation. Sensitivity to interpersonal rejection was found to be a significant predictor of tendencies toward social withdrawal in hikikomori [75].

To further explore this, we examined self-assertion and the ability to express personal needs: "Is it difficult for you to communicate or express your needs in close relationships (family, friends, work)?" A dominant theme among hikikomori was a sense of existential invisibility and the perception that others show little interest in their situation:

> *"Yes, nobody cares... I don't really have friends."* (Respondent No. 4).

The absence of fulfilment of needs at the levels of safety (psychological safety) and belonging (forming interpersonal relationships) in a real environment encourages seeking alternative ways to satisfy these needs through substitution. The digital environment is perceived as a safer alternative for forming and developing interpersonal relationships, as it provides anonymity, control over interactions, and ample time to formulate responses—thus reducing the risk of losing respect or facing immediate rejection. In this environment, hikikomori individuals develop and maintain social connections:

> *"I have online friends, including other hikikomori. . . I have friends on Discord that I talk to. . . My virtual world is much better for now because I have friends there."* (Respondent No. 1); *"My virtual life is much better than my real one. By the way, I chat with an AI character. It exists as a virtual persona."* (Respondent No. 5).

In the digital environment, similarly, hikikomori seek a substitute for the emotional bonds missing in the real world, satisfying their needs for belonging and recognition:

> *"I thought about why it is like this. Am I worthy of love, of being liked? . . . All hikikomori and NEETs I have met only want one thing—to have a companion or partner to alleviate their loneliness."* (Respondent No. 1); *"This year, I tried to find an online friend, but no one seems interested in me. When you are alone in your room for so long, you stop being afraid of the void and you start exploring it, doing self reflection."* (Respondent No. 4)

3.1. Digital Content—Narrative Digital Content and Digital Games

Since hikikomori are neither employed nor in education, they have plenty of free time for self-realisation. Isolation in the room directly predicts spending free time involving digital media. We therefore focused on the types of digital content they consume. We asked respondents: "How would you describe your consumption of digital content in relation to your free time? What role does digital content play in your daily life?" Consistent with [47], our findings confirm that hikikomori are enthusiasts of popular digital culture, particularly anime and digital games. Consuming such digital content is their primary leisure activity.

3.1.1. Narrative Digital Content

Through various forms of visual communication (visual media)—including animation, drawing, text-based media, and combined visual storytelling formats—hikikomori primarily consume narrative digital content. We agree with [76], who noted that media stories (series/fiction) provide a privileged space for fulfilling the need for escape. The digital content they consume contains core components that have the potential to fulfil key personal motives, including:

- Life story and imagination: Anime, comics, and novels are structured around narrative, characters, and fantastical or realistic worlds that enable viewers and readers to enter an alternative reality. That may appear more attractive [77], or comprehensible than everyday life. Imagination and fantasy serve as a form of escape from monotony. As respondents expressed:

  > *"Imagination is all we have."* (Respondent No. 1); *"Sometimes life is boring, and occasionally we need to forget that fact."* (Respondent No. 3); *"I use the virtual world to sort out my thoughts and feelings. In rare cases I use it to escape reality."* (Respondent No. 4).

- Emotional self-reflection: Stories evoke emotions. Anime often incorporates intense emotional moments; novels allow for deep internal monologue and multi layered psychological insight; webcomics can be humorous or deeply moving. Such digital content supports emotional self-regulation and emotional processing and provides psychological relief or catharsis. Respondents reported:

"I mostly read webcomics or scroll through Twitter." (Respondent No. 1); *"I read the Wa-taMote manga series."* (Respondent No. 5).

The WataMote manga, for example, addresses themes of social anxiety and personal unpopularity, resonating strongly with the experiences of hikikomori. That digital content fulfils emotional needs is further evident from responses to the question: "What makes you happy?"

"I enjoy watching dramas, especially emotional anime." (Respondent No. 2).

We complement idea [78], that forms of media fiction serve as a way to escape reality, stress, and psychological discomfort; it is precisely in the digital environment that one can experience psychological comfort and satisfaction.

- Identification with characters: Many anime series and webcomics feature characters who experience common human struggles—such as anxiety, insecurity, navigating social expectations, and striving for a sense of belonging. We agree with idea [76] that escapism leads to stronger identification with characters. We believe that the characters offer a hikikomori the opportunity to reflect on their own failures or growth in a safe, fictional environment. Respondents stated:

  "I enjoy watching anime and reading visual novels, which often draw inspiration and parallels from the outside world." (Respondent No. 2); *"Video games and animated anime have played a major role in my life. At certain times, they inspired me greatly."* (Respondent No. 4).

Identification with characters helps individuals understand their own circumstances. This mechanism will be further examined in relation to virtual identity, discussed in later sections.

- Control over the media experience: Anime, novels, and comics are time bounded forms of media and do not compel endless engagement in the way addictive formats—such as MMORPGs—often do. They provide users with a sense of safe control over the media experience. For example, readers can determine the pace at which they process the content. Some formats also offer decision making opportunities regarding the storyline:

  "I read many romantic visual novels. These are interactive novels where you can choose your own adventure and follow romantic relationships with other characters. Katawa Shoujo is my favorite. There are decision points that can influence the story." (Respondent No. 3).

The flexibility of content, the possibility of deciding on the plot, provides not only comfort when consuming digital content, but on the other hand, the consumer's approach reflects their identity. The idea was expressed that personality traits predict the style of expression in the game [79]. Based on this, it is possible to partially profile the player's personality during diagnostics.

We note that consuming narrative digital content serves not only as a tool for coping with reality but also as an alternative to thinking about needs or engaging in self-reflection in real-life situations.

3.1.2. Digital Games

Respondents also frequently mentioned digital games among the types of digital content they consume.

"I like Pokémon; I only know the first generation and some of the second. I played it on the Game Boy Color when I was a child." (Respondent No. 2).

Video games represent one of the escape activities, with the positive or negative nature not depending on the type of activity but on the motive projected onto it. Video games can serve as a means of self-suppression (escape from oneself) or self-expansion (personal growth, flow) [80]. To explore this more deeply, we asked an additional question: "If you play digital games—online games or games with multiplayer interfaces—what types do you play?" Their responses included:

> *"I have a Nintendo Switch. . . I rarely play video games. . . I play Fortnite and Overwatch 2, and I used to play League of Legends often until I got tired of it because it's full of toxic players. . . I'm too depressed to play any games right now."* (Respondent No. 1); *"Sometimes I play games on Steam, as well as on Chinese handheld devices. I don't play every day—sometimes for a few hours, maybe four at most, longer if I play with friends. It depends on my online friends. I simply like playing games socially, doing what fans do."* (Respondent No. 2); *"I used to be addicted to MMORPGs. I played them to join groups of people and collaborate to overcome difficult dungeons. . . What I enjoy most is doing quests and dungeons with a group of people and cooperating with them."* (Respondent No. 3); *"I mostly play single player games."* (Respondent No. 4); *"I play Blue Archive, Minecraft, Roblox, CODM."* (Respondent No. 5).

Here, the fact is reflected that playing digital games carries a psycho-social aspect. The motivation to play a digital game depends on the social context. According to the "Uses and Gratifications theory" by Blumler and Katz [81], individuals actively select media sources that satisfy psychological and social needs. The digital environment, for example, provides individuals who are hikikomori with an opportunity for secondary sociality [82].

The motive for action also touches the axiological dimension. In playing digital games, individuals who are hikikomori find a sense of meaning in life; from an axiological perspective, these games represent value to them. When sharing tasks in multiplayer games, players feel a sense of responsibility for their role within the gaming group or community. It is absent in reality [54]. Furthermore, skills gained from playing are "convertible capital," and information about the game increases the player's status within the community [83].

Value can also be perceived in relation to digital content; the key is whether it represents worth, which is crucial in determining the arrangement of components in the hierarchy of values. Based on statement [84], that individuals allocate their time and attention to what they consider valuable, we also asked: "Do you purchase add-ons, such as skins, cosmetic items, enhancements in digital games?" Respondents answered:

> *"I got skins for free from events. I'm not the type who spends money on games. Yes, they're expensive."* (Respondent No. 1); *"I used to spend real money on buying cute costumes for my character. I bought them outfits, but sparingly."* (Respondent No. 3).

Acquiring intangible digital capital in its various forms, and the willingness to invest energy and finances in the development of digital world attributes, indicate that a person perceives this as a space for progress in life and senses that it has meaning in their life. According to [85], virtual capital (items) can represent emotional and social value, such as status and self-representation. Digital ownership (e.g., NFTs, game items) is a tool for self-expression and status display within like-minded communities, supports a strong sense of community, creates spaces for discussion and the exchange of opinions, and mutually confirms interests, thereby already generating social value [86].

When digital content acquires personal or symbolic value, it becomes a virtual asset. This value can extend beyond the digital world and manifest in the physical world as tangible objects. Some respondents possess physical representations of their favourite digital content—for example, figurines depicting anime characters, purchasing clothing

for the purpose of cosplay. These items hold personal significance and represent a way of preserving a piece of the emotionally impactful world they inhabit:

> *"I have some anime figurines. I'm not a hardcore collector; I do it mostly for fun... This Alice is a bit special, I want to cosplay her soon"* (Respondent No. 1).

3.2. Identity and Virtual Identity

Hikikomori individuals invest substantial time in self-realisation in digital environments. Frequent interaction with digital spaces inevitably intersects with one's personal identity. A latent intervention reflects an already formed personal identity in response to stimuli from the digital environment. A direct intervention represents the formation of identity, or the virtual identity of a hikikomori personality, based on stimuli from the digital environment. The survey findings align with the statement [36] that hikikomori use digital identities to create an alternative 'self'.

Motives of Creating a Virtual Identity

We addressed the needs, motivations for creating, and for using a virtual identity. We found that a virtual identity arises from a reaction to stressful life situations in the real environment, reflecting on one's own personality identity. As stressful aspects, hikikomori perceive reality itself and interpersonal communication. This aligns with [87], which argues that interpersonal communication through digital devices at the expense of face-to-face interaction may be preferred due to fear; for example, lonely students prefer online communication over personal contact, as they perceive it as safer and less stressful.

The main motivations for creating a virtual identity are:

- Escape from a demanding reality:

> *"Yes, I have a persona I use in chats with artificial intelligence. I use it to escape reality... I adapt poorly, I'm a daydreamer... I am in the process of creating my virtual avatar."* (Respondent No. 5).

- Interpersonal communication contexts:

  (a) Virtual identity as support for self-presentation: Respondents experienced virtual identity as a shielded form of interaction, allowing them greater expression without the vulnerability of face-to-face exposure.

> *"Well, virtual identity helps when interacting with people without revealing yourself, which allows you to reveal more than you ever would in real life. But I also think it's a crutch you'll eventually have to break free from."* (Respondent No. 3).

(b) Virtual identity as protection from rejection: Virtual identity can be motivated by a fear of interpersonal rejection, functioning as a protective buffer against failure or criticism.

> *"Yes, I pretend to be someone else so people won't judge me. It's like a mask; virtual identity can hide your flaws, so there's less shame. It's not like fully pretending—I don't like pretending to be someone else, but in some situations it's necessary. Most of the time I'm myself, authentic. Online, though, I see people getting humiliated, and I start to fear being myself. I don't think I ever went deep into creating a completely new identity. In the past, I had to act like an adult even though I was actually still a child and teenager."* (Respondent No. 4).

In relation to virtual identity, we found that characters and personas from anime series, digital games, and narrative worlds serve as mirrors of personal identity, influencing both the development of real-world self-concept and the construction of virtual identity among individuals with hikikomori. This is demonstrated through responses to the following

questions: "How would you describe the characters that appear in the book sagas, anime series, shows, or games you follow? Have you ever identified with any characters? What moves you about them? Do you see parallels between their experiences and your own life?" The answers indicate that this process occurs across several psychological levels:

1. Intuitive identification with characters facing similar life circumstances: Hikikomori instinctively gravitate toward characters or avatars who experience similar or parallel emotional or situational struggles. These individuals often project or reflect their psychological states in fictional characters.

> *"I really like the anime film A Silent Voice (Koe no Katachi)."* (Respondent No. 1); *"I know Welcome to the NHK. Sato (the protagonist) is quite realistic. . . on some levels, I can identify with him."* (Respondent No. 2); *"Regarding anime, I used to prefer Mecha. But one anime stood out—Welcome to the NHK."* (Respondent No. 3).

Such identification provides emotional resonance and helps hikikomori articulate inner experiences they struggle to express in real world contexts.

2. Virtual characters and avatars as coping mechanisms in response to real world stress. Avatars and fictional characters serve as visible manifestations of coping strategies that hikikomori employ in virtual environments to manage distress, anger, or frustration arising from real world stressors.

> *"In some ways, yes, it helps a bit. I really imagine myself as a villain who would destroy humanity whenever people upset me. I know it's cringy and harsh. . . It's my way of coping (with situations), besides gaming and reading."* (Respondent No. 1); *"Yes, these characters help me feel better and less alone."* (Respondent No. 4).

Through such characters, hikikomori may externalise or symbolically process emotional tensions that they cannot safely express offline. We support the view of [76] that fiction helps cope with loneliness.

3. Virtual characters as representations of an idealised life unattainable in reality: For some hikikomori individuals, avatars or protagonists symbolise a desired but unreachable version of life—a life marked by competence, adventure, social connection, or purpose.

> *"I preferred games like Persona 4; the main character made friends while saving lives. I wished my life were that interesting."* (Respondent No. 3).

This highlights a psychological contrast between the richness of virtual worlds and the perceived stagnation or emptiness of their real circumstances.

4. Virtual characters as substitutes for interpersonal relationships—a high-risk dynamic: Avatars can also fulfil interpersonal and emotional needs, effectively substituting for real relationships. This creates a significant psychological risk, as individuals may emotionally invest in virtual characters to the point of replacing real human connections.

> *"I went through a period when I became addicted to anime—I fell in love with a character. Not just sexually, but with the kind of love I would want in marriage. It was frustrating to have a dream that would never come true. So I kind of stopped watching anime. I don't want to experience that again."* (Respondent No. 3).

Risk is also posed by the mindset of a hikikomori individual, who feels it is sufficient and satisfying if the avatar experiences positive experiences in the virtual environment on their behalf, since they themselves are unable to achieve them in real life. This already indicates building the avatar's life at the expense of one's own.

5. Creation of characters and avatars as a form of identity experimentation:

"My avatar has most of the character traits that I would like to have in real life" (Respondent No. 4).

As noted in [79], it has been confirmed that players often create avatars as a reflection of their ideal or enhanced self. Similarly, Ref. [88] states that through virtual identity, individuals represent what they want to be or cannot be.

"I also like that I play the role of protector and healer, a reliable person in the party, because most people want to play attackers, troublemakers. I like that I play this marginal role that nobody likes. That is the virtual identity I use" (Respondent No. 3).

Ref. [89] (p. 65) further specifies that thanks to the user's convergent approach to the avatar, it is even possible for "the user to identify with the avatar and merge. In the extreme case, a person merges their identity with the avatar and may feel that they are really in the game." This happens in role-based environments, where there is an opportunity to 'immerse oneself in the world and psyche of the characters.

Furthermore, a player's personality may influence behaviour in online role-based games. Correlations between personality and gaming behaviour have been demonstrated [90].

6. A virtual character, an avatar, can lead a hikikomori person to self-reflection on their own identity:

*"It concerns his (*the hero's) desire to overcome self-pity and connect with others despite his flaws, but unlike him, I have failed... Yes, it is a form of coping. I tried to create my own character, but no matter how hard I try, I failed to create one. Sometimes I think I know myself better than anyone else and at the same time, I do not know myself at all. Who am I, what is my purpose, why do I exist?"* (Respondent No. 1).

It is evident that the hikikomori individual switches between their own identity and a virtual identity, and neither identity is clearly anchored.

7. In the reconstruction of the character, hikikomori avatars incorporate elements of their own identity:

"When I was younger I wanted to be a character I support. I still want to be in imaginary worlds, but in these stories, I want to be myself, not another character. Before, I wished to be another character... My ideas are in the avatar, but it is mainly about trust, openness about my deep feelings, authenticity" (Respondent No. 4).

Some avatar players "perceive it as an extension of themselves, as an expression of their identity" [89] (p. 64).

8. Hikikomori individuals observe the behaviour model of a hero, character, or avatar, how they act in a stressful situation, and try to use the strategy in life situations or in dealing with their own life difficulties. The behaviour model, according to the character or avatar, helps people perceive and handle a stressful situation more effectively.

*"Many times I identified with characters from the media. It helped me build my identity and find many things in these characters that I connect with (*with life). Sometimes they serve as support for me, sometimes I wish they were real"* (Respondent No. 4).

9. Creation of characters and avatars as a form of identity experimentation:

"I like playing as a woman when I play a healer." (Respondent No. 3).

Avatars were described as an "identity workshop", a space where individuals can test variations of themselves and explore different facets of identity without real-world consequences [88].

Based on empirical findings, we state that characters and avatars primarily provide individuals with hikikomori an opportunity for identification. Identification can be bidirectional, involving the transfer of desired attributes from the avatar to the person (identifying with the character or avatar, mirroring oneself in the character or avatar), and conversely, a person can project their own personality attributes when creating an avatar, thereby shaping it in their own image.

We note that a preference, that is, the predominance of presence in a digital environment, logically leads to a reorganisation of subjectivity. Identity is formed or reorganised based on an alternative form of presence, interaction, and self-presentation. The hikikomori invests time in developing a digitally mediated self.

Hikikomori satisfy psychological needs by creating and maintaining a virtual identity, avatars in a digital environment. We see the potential risks of creating a virtual identity in its effects on personality—the loss of authenticity and the adoption of illusion, fictional attributes, and supplements as a norm of existence.

3.3. Progress and Regress in Real and Digital Environments

Considering partial objective no. 2 and RQ2, we find that hikikomori find an alternative way of existence. They prefer fulfilling higher needs and forming identity in the digital environment instead of being present and engaging in society in the physical environment. Progress in self-realisation in the digital environment, however, represents a suspension of progress in the real environment.

Paradoxically, the "onlife" existence [5], and the progress perceived in the digital environment differ significantly from the current life situation of individuals with hikikomori. We determine this based on the question: "How would you describe your current lived situation, stagnation?"

> *"I am still where I was, with no progress at all."* (Respondent No. 1); *"I have read about stagnation and liminality, and yes, I think it applies to me."* (Respondent No. 4).

Maintaining stagnation is supported by several factors, which we identified based on the question: "What circumstances contribute to your remaining in the hikikomori state?" We identified four basic domains: the physiological domain, the psychological domain, level of competencies (professional), and the resource domain:

1. Feeling overwhelmed, general exhaustion:

> *"I feel overwhelmed by how much I am falling behind... I'm in a position where I can't move forward. I have to make some progress, but it exhausts me."* (Respondent No. 2).

2. Mental absorption in the digital environment; supported also by answers to the question: "Is there anything you would welcome that could help you get out of your situation?"

> *"I try to avoid MMO games that simulate worlds and so on. I think it's a trap designed to make people addicted and spend money and time."* (Respondent No. 2).

This agrees with the idea [91] that many platforms are designed to maximise user time through infinite scrolling, recommendation algorithms, and structured game events or rewards. It has been found that hikikomori may be addicted to video games too [92].

3. Absence or insufficient updating of skills and competencies for the labour market: maintaining stagnation is linked to failing to keep informed about current job opportunities.

> *"I am in a situation where finding a job is difficult, no one will hire me. . . because of the employment gap, I have problems with lack of education, and since relationships are impossible, I am socially isolated from the world."* (Respondent No. 2); *"But I failed*

several job interviews and couldn't return to university. That caused me to withdraw and drown in escapism." (Respondent No. 3).

4. Lack of financial resources:

"If only traveling were free, then I wouldn't have to rot at home." (Respondent No. 1); *"A few unsuccessful job interviews and lack of money. When my parents couldn't send me to university, I tried to work in call centers."* (Respondent No. 3).

We find that the psychological level—mental absorption in the digital environment—represents a factor in maintaining stagnation and liminality. We consider that the influence of factors can be bidirectional; they can both cause and result from liminal experience.

3.3.1. Theoretical Model of Fulfilling the Needs of Hikikomori Individuals

Based on theoretical foundations and empirical findings (underpinned by a conceptual model that synthesises the identified indicators), we have developed a model illustrating the gradual transition from the real to the digital environment in fulfilling the life needs of individuals with hikikomori.

The mechanism of substituting higher needs has its own dynamics in both real and digital environments. In general, the common population of people, as well as hikikomori, reassess and choose the environment in which they will act according to the following criteria:

1. The possibilities: the environmental offering to substitute the need. For example, according to Blumler and Katz [81], psychological and social needs include the possibility of secondary sociality [82]. Society itself can lead to a digitally connected lifestyle—for example, the "internet society" allows studying and working without an individual leaving home. "Pure shopping," together with advanced delivery networks and various forms of entertainment, enables a more isolated way of life [11].
2. Energy investment—energy efficiency, attainability. It has been proven [93] that the brain strives to keep energy costs as low as possible. The principle of energy minimisation in decision-making and response selection applies [94]. In the case of cognitive fatigue, the cognitive system switches to a "power-saving mode" [95]. At the same time, it is true that there are "trade-offs between reward value, time, and energy expenditure," meaning that organisms attempt to obtain rewards as quickly as possible with the lowest energy expenditure [96]. This also applies to financial demands. If the possibilities for substituting higher needs in a physical real environment are disadvantageous, more energy-consuming, or limited, the individual chooses an alternative—substitution in the digital environment.
3. Currently, it provides a safe way to substitute needs (minimising harm when acquiring needs). The digital environment represents a less threatening alternative social space [97]. It is perceived as a low-threat environment, allows anonymity, provides safe remote social interaction, and offers complete control over the intensity and timing of contact [98], as well as a "semi-withdrawal configuration," meaning not full engagement, not total isolation, but a "safe distance" [36].
4. Favourable environment and support in relation to the level of one's own abilities. For example, acquiring digital competence increases engagement in digital learning [97].
5. Experience as a result of investment—In a real environment, a person gains positive as well as negative experience regarding the possibilities and ability to substitute higher human needs, such as establishing and maintaining interpersonal relationships, and self-realisation in free time. In parallel, in a competitive digital environment compared to a real one, they gain positive or negative experience regarding their abilities and their capacity to substitute for higher human needs.

6. Finding a sense of purpose or value. For example, the purpose of belonging in a gaming group [54], acquiring "convertible capital" [83], or virtual capital [85] that increases status.

Opportunities and benefits are a motive for self-realisation in the digital environment. However, as noted, the negative impact of the online environment occurs when the intensity of engaging in positive activities online sharply increases, and the use of communication and socialisation means is limited exclusively to electronic means, or to membership in exclusively electronic social relationships, or to the pursuit of exclusively virtual social capital [99].

3.3.2. Rites of Passage in Hikikomori

Hikikomori represent a model example of rites of passage [40] (p. 11).

1. Pre-liminal ritual—separation ritual

In hikikomori, a pre-liminal ritual occurs—separation, already at the beginning of isolation from the physical environment. Hikikomori as a lifestyle is characterised by increased escapism. According to Merton's 1938 theory, it represents a sociological model of retreatism (a form of social withdrawal from societal expectations and reality) [100].

Escapism is considered the main principle and the core mechanism of the rite of passage from the physical to the digital environment. Within the pre-liminal ritual, escapism into the digital environment occurs. Hikikomori is also characterised by digital escapism [35].

In the digital environment, they find satisfaction in the physical world, finding a substitute on cognitive and affective levels.

> *"Anime and computer games were my main source of entertainment and escape. At university, it was especially difficult for me, and I didn't have many friends."* (Respondent No. 3).

Hikikomori also finds satisfaction on the conative level. For example, a hikikomori experiences mental satisfaction from physical movement, such as running with an avatar in a virtual environment [54]. However, performing movement in a virtual environment, considering the individual's physical health, lacks the benefits, well-being, and other energetic advantages for the human body that come from physical activity. For example, research suggests that, in the realm of safety and belonging, a "pre-liminal ritual" occurs toward the real environment.

2. Liminal ritual—a rite of passage

Liminal ritual is the existence "between two worlds." An individual has their own preferences for self-realisation, different from those of society. The way of directing life can gain momentum, where one begins to prefer, when substituting their own needs, primarily the digital environment at the expense of self-realisation and self-actualisation in the physical environment. The potential tendency in a person's life was highlighted by [99].

The liminal ritual represents a zone of transformation, where the following occurs:

1. Abandoning identity and acquiring a new identity: hikikomori works on creating a new identity of their own, or a virtual identity.

> *"I am in the process of creating my virtual avatar."* (Respondent No. 5).

An indication of identity transformation is, for example, "illusory improvements" in personality.

2. A strong manifestation of group bonds between participants (community): There is a presumption of strengthening online relationships and participation in online communities. For example, "...my main motivation was my friends in the game..." [54]

(p. 65). The internet is perceived as a viable alternative social space that supports a sense of belonging and alleviates perceived social deficits [36].

3. One indicator of a progressive change in the way of life may be a change in the time rhythms that people normally follow in the physical environment. Hikikomori do not follow common social rules; private rhythms may emerge that are not in accordance with any other socially given rhythms. The digital environment is not limited by time constraints for activity, as is the case, for example, in the physical environment, where activities can be tied to day, night and other time frames. Hikikomori has the opportunity to create their own pace and rhythm for activities within the day and night. Already [38] indicated that hikikomori may lack a connection between private and collective rhythms.

The individual does not perceive the risks to his existence in the physical environment because he is preoccupied and satisfied with the fictitious progress experienced in the digital environment. For example, satisfaction with the avatar's progress can distract from focusing on updating his truly usable abilities and skills.

An indicator of the preference for the digital environment is the time investment in fulfilling needs, creating an identity, and acquiring digital capital. Hikikomori repeatedly activate in the digital environment (rehearsal). The time investment is determined by preferences. The hikikomori individual cannot perceive when there is a bridging or a total mental transfer to the digital environment at the expense of self-realisation in the real environment. This can therefore only be determined based on the time at which the environment is more mentally realised.

3. Postliminal ritual—ritual of inclusion

On the mental level, there is inclusion in the digital environment. Hikikomori is included in society through indirect forms of sociability via digital technologies [34], but with a new status and identity. He has a developed personality and virtual identity. For example, as mentioned above, respondent No. 3 took on the identity of a healer. He gains public confirmation and acceptance within the community, where he takes on new responsibilities. For example, "Playing seemed like a responsibility to me..." [54] (p. 65).

From a temporal perspective, an individual can remain in a digitally oriented (directed) way of existence for an unlimited period of time, also because he perceives the possibility of self-realisation, self-actualisation in the digital environment as value and finds meaning in it.

3.4. Negative Consequences of Liminal Experience

The result of the preference for one of the environments is progress in one environment and regression in the other:

1. Due to the weakening of movement and self-realisation in the physical environment, the assumption of weakening of physical health and mental strength arises in hikikomori [54].
2. The preference for self-development in one environment can lead to the suspension or freezing of self-development in the other environment. In cases of a predominant preference for the digital environment, progress in the real world can be suspended. We add that the suspension of reality in the physical environment can also be targeted, caused by the hikikomori themselves. For example, it was found that hikikomori want to freeze time [39] due to the reality they face. The reason may be that they cannot cope with the "collective pace of society" [38].
3. The meanings from the survey indicate that the psychological level—mental absorption in the digital environment represents one of the essential factors of stagnation in life.

4. The hikikomori individual finds himself "caught between two worlds", where he is not sufficiently integrated in either the real or the digital environment. "Hikikomori exists in a liminal space of public understanding and private experience of the self; he is simultaneously socially integrated, yet separated from society" [74] (p. 72).
5. On the one hand, there is a loss of life opportunities for self-realisation in the physical environment.

There is a narrowing of the overview of the possibilities for self-realisation in society. Some hikikomori individuals who practice self-reflection are aware of the reality of stagnation and procrastination.

"I just imagine the opportunities that were lost during that time." (Respondent No. 3).

6. On the other hand, the individual is preoccupied with the fictitious progress experienced in the digital environment and is unable to perceive the risk of losses in relation to the physical environment.
7. Freezing of the social role. The digital environment disrupts social interaction, increasing passive presence rather than active, reciprocal exchange [101], which is a prerequisite for a social role; therefore, it is not possible to fully develop a social role in the digital environment. Instead of a social role, they acquire instant alternative positions, such as: the character of a character, an avatar, a virtual identity, which are, however, difficult to apply in the physical environment. In the real world, they survive without a clear identity or social role.
8. Although there is a possibility of strengthening the sense of values of the virtual community and building a digital culture of society, the sense of values of society in the physical environment is weakened. They do not consider the need to build a culture in society in the physical environment.
9. In a borderline form, it can be observed that the existence of a hikikomori individual in the real physical environment will be limited to ensuring basic life needs—hygiene, maintaining a body shell, food intake, because other higher needs are already realised in the digital environment. The positive fact is that, in the digital environment, full integration is never possible for a person, precisely because physiological needs cannot be fulfilled here.

The established way of digital existence is difficult to abandon, creating new obstacles for reintegration into the physical world.

1. Hikikomori have "connected withdrawal"; they are connected in a passive mode without the need to accept the social obligations or challenges of real social life [82]. We conclude that if hikikomori do not face life situations in the physical environment for a long time, this can lead to a weakening of personal resilience and, therefore, also to a weakening of the skills to respond adequately to other potential life situations in the physical environment.
2. In the real environment, a person acquires real, non-transferable experience in specific real situations. The absence of experience, not just work experience, can make reintegration into social life in the physical environment difficult. "*Every former hikikomori person continues to suffer significant social stigmatisation caused by the missing (hikikomori) years in their biography.*" [102].
3. Based on the theory of representations of knowledge, Bruner 1973 [103]. Capital acquired in the digital environment lacks enactive representation (learning by doing, which requires a physical environment and brings experience), but is purely a matter of mental (virtual-iconic) representations (learning through images). Acquired abilities and skills in the physical environment (experience) and the digital environment are qualitatively different. They do not have to correspond to reality, to "how things

work in reality". At the same time, the application of abilities and skills acquired in the digital environment is questionable for the physical environment. Attributes developed in the digital environment have a fictitious, illusory character. Although they are applicable to the digital context, they are often not applicable in the real environment.

On a theoretical level, we consider that the negative effects of liminal experiences can serve as a stimulus for escapism into the digital environment. This again represents a factor of the pre-liminal ritual: leaving the physical environment.

3.5. Recommendations

Rehabilitation of individuals with hikikomori is a gradual and multifaceted process. It is essential to address both the physical and psychological conditions of individuals with hikikomori simultaneously, as these domains are closely interconnected. A primary prerequisite is maintaining established habits for meeting basic human needs, which sustain physical and mental health. Research has shown that rigidity and a strong need for routine reduce the risk of developing hikikomori tendencies [49].

Hikikomori would like to have the traits that their avatar has. According to the concept of the Proteus effect [59], a person begins to exhibit behaviour in real life that is based on a model, a virtual character. One unconventional yet readily available way for a hikikomori to express bold behaviour and socialise in real life, according to their avatar, is through young people's cosplay gatherings.

If an individual has entered a liminal state between the real and virtual environment—characterised by stagnation and a prolonged absence of progress in real life—it is necessary to assess the presence of key motivational drivers related to their consumption of media content:

1. Escape from reality;
2. Imagination and immersion in a fictional world;
3. Emotional relief and processing of feelings;
4. Identification with characters/psychological proximity;
5. Perception of safe control over the medium;
6. Inspiration and personal motivation;
7. Entertainment and relaxation.

Subsequently, it is crucial to identify suitable real-world alternatives that can substitute these functions. When the environment is modified to support socialisation, behavioural patterns tend to change as well.

A prerequisite for designing an intervention is the principle of proximity. At the same time, we agree with the statement and the socio-pedagogical and a client-centred social work approach of "to start where the client is" [104] and [105] (p. 5), which, in this context, also means recognising the skills and interests acquired in the digital environment. The intervention should incorporate techniques analogous to the activities typically engaged in by individuals with hikikomori, while modifying these activities to support gradual reintegration into society. Digital hikikomori are strongly mentally connected to the digital environment and conduct most of their activities on digital devices. In this regard, we identified a rationale for incorporating digital devices as a factor supporting social rehabilitation among individuals with hikikomori. We asked the following questions: "What are your plans and visions for the future? What alternatives might help you overcome the hikikomori state—for example, a Plan B, retraining, or other possibilities?" With respect to social rehabilitation, a digital device may function either as a regressive or a supportive factor:

1. Use of a digital device as a counterproductive factor: The primary focus is on fostering interpersonal connectedness and developing the ability to build relationships, partic-

ularly face-to-face communication and socialisation skills. This necessarily implies distancing the individual from the digital environment.

"I just want to regain independence, be able to leave my room, and learn how to talk to people." (Respondent No. 2); *"To start doing the thing I fear the most—going outside and finding a job."* (Respondent No. 3).

2. Use of a digital device as a supportive factor: It has been suggested that technologies are "last-resort" points enabling gradual re-engagement strategies for hikikomori [36]. Secondarily, an emancipatory impulse may emerge through the digital environment. Individuals recognise their capacities in the domain of non-transferable digital skills, which generate intangible digital capital—for example, the sale of digital content such as graphic design or music. We note that the inclination to incorporate digital devices into work related activities is associated with their long-term use, as this environment previously provided safety and primary opportunities for self-realisation.

"Now I'm thinking about ways to earn money online. . . I've been refining my graphic design skills for several years. I'd like to create art and sell it on Twitter and similar platforms; maybe I could earn some extra money that way." (Respondent No. 1).

A digital device can be used as a work tool to generate digital capital toward financial self-sufficiency. However, we emphasise that this should not be considered a final solution. It may be accepted as a temporary measure—a transitional stage in the process of reintegration into society—while respecting digital competencies (including digital safety practices). At the same time, excessive or compulsive behaviour related to digital device use must be prevented. We argue, based on findings [87], that there is a significant positive relationship between loneliness and problematic internet use, even among students. More lonely students tend to use the internet compulsively, to the point of addiction [106].

In general, engagement with digital devices and consumption of digital content should be reduced gradually, in line with appropriate real world functional alternatives, to prevent relapse.

Through the themes of characters and avatars, it is possible to guide hikikomori individuals toward self-reflection to identify their positive personality traits that may support their self-assertion within society. When assessing the personal capacities of individuals with hikikomori, it is appropriate to examine the extent to which they can invest in developing their own personality. Based on the question "How would you describe the positive qualities that could help you advance in life?", we identified three types of approaches taken by hikikomori individuals toward their own capacities:

1. Lack of awareness and apathy toward one's condition

"I don't think I'm ready to think about that mentally." (Respondent No. 2).

The lack of ambition has already been pointed out, for example, in [107]. In terms of the phases of isolation [108], liminal experience represents an unfinished phase of real withdrawal—long-term isolation and "stopping time" that has not yet bridged into the "descending phase", i.e., the return to people.

2. Uncertainty regarding one's own capacities and dependence on external intervention

"I think I have trouble believing in my abilities, but I definitely have them. . . In my life, I often need a final push to make a decision, but I'm still afraid to take it, as if I always needed a helping hand." (Respondent No. 4).

Due to long term isolation, individuals have had limited opportunities to reflect on their abilities and skills or to update and apply them. It highlighted the psychological impact of prolonged social withdrawal—namely, low self-esteem among hikikomori individuals [26]. In terms of support, we agree with [109] that hikikomori face a dilemma

between the desire to change and the inability to act, and that a suitable recovery factor is a gentle push from the surrounding environment, such as family.

3. Awareness of one's capacities and purposeful engagement of these capacities

"I was able to escape from bad situations." (Respondent No. 1).

In the case of stagnation, apathy towards one's own liminal state, we recommend starting with support for physical and mental health. It is necessary to include direct physical activity and face-to-face interpersonal communication stimuli. It is not yet possible to eliminate involvement in the digital environment of hikikomori, except for necessary contact, but it is necessary to point out the serious risk of the prevalence of digital substitution of needs. It is necessary to note that in the real world, the hikikomori individual has the opportunity to reflect directly on their current abilities and skills. In cases of uncertainty about their own capacities, support in the form of information about the possibilities of self-realisation and self-development, provided in the real environment (courses, training), is appropriate.

Again, the general rule is that the possibilities for self-realisation in the digital environment should not be more financially or time-effective than those provided in the real environment. Setting up the possibilities for self-realisation in the real world represents a social issue and a social responsibility.

Research Limitations:

- This is an exploratory qualitative study; the results cannot be generalised.
- The wide range of aspects of life requires an exact examination of each area, which represents the superstructure of one study.
- The need to declare, i.e., verify the verbal statement by the respondents, that they are classified as hikikomori—for example, by requesting the results of questionnaires aimed at determining the status of hikikomori, social isolation and others.
- Information on potential clinical and functional characteristics of the participants, such as the results of psychological examinations, or psychiatric diagnoses declaring the presence of potential comorbidities (depression, social anxiety or problematic internet use) was not systematically collected. Permission to inspect medical records was not obtained. We only considered the information the respondents voluntarily provided.
- The coding process was carried out by one researcher; higher reliability could be achieved through double coding, carried out by two independent researchers, or thematic coding, where it is possible to verify whether the created categories belong to each respondent.

Implications for Future Research

Drawing upon the ecological model [110], human behaviour is fundamentally shaped by the environment in which it occurs. We assume that as digital hikikomori increase their involvement in digital reality, their engagement in physical reality correspondingly decreases. Reduced participation in the physical environment diminishes the range of opportunities for self-realisation within real world contexts, which—when viewed through the lens of everyday functioning—constitutes a form of liminal existence. The prevailing tendency to orient one's self-realisation primarily toward either the physical or the digital environment suggests future patterns of engagement and a reinforcement of existence within the preferred environment. It was already noted [46] that emerging technologies such as virtual reality (VR), AI companions, and immersive digital worlds may produce a new generation of modern withdrawal, less visible and less disruptive than classical hikikomori.

We agree with the view [111] that an interdisciplinary approach is needed, involving fields such as sociology, pedagogy, psychology, and social work. From a pedagogical

point of view, it is appropriate to focus on the current generation in educational processes. The average age of onset of isolation is 13.1 years [112]. It is therefore important to start addressing the issue of the massive mental outflow of children and youth, the current Alpha and Beta generations, into a digital environment that provides the possibility of satisfying psychological needs. This, in fact, represents a direct step toward the emergence of the hikikomori model. As a first concrete step, it is necessary to investigate the extent of the techno-subsystem's impact, including the child's interactions with living elements (peers) and non-living elements of communication, information, and recreational technologies in the immediate environment. At present, it is necessary to discuss setting healthy boundaries to promote technological and digital conveniences, virtualisation in service delivery, and opportunities for spending free time. For example, from the perspective of socialisation, there is already discussion about the risks of the so-called "full-time intimate community" [113], that is, 24 h psychological closeness to peers, which assumes non-stop connection through digital devices among young people.

Society should consider this issue from the perspective of preventing excessive behaviour in children and youth with regard to the use of digital devices connected to the internet and from the perspective of environmental impact—the sustainability of resources and the energy and financial costs that the digitalisation of society entails. It is appropriate to support existing opportunities for self-realisation in the physical environment and to create new ones.

It has not yet been sufficiently investigated whether the defence mechanism of projection, the splitting of the hikikomori personality, is associated with the virtual identity created in the virtual environment, i.e., whether the development of the aforementioned mechanisms could have been supported and developed on the basis of the virtual environment (excluding cases of hikikomori individuals with a diagnosed mental disorder).

4. Conclusions

The digital environment (media, social networks) has a compensatory-substitution function and provides security, belonging, love, recognition, and self-realisation. It is known and confirmed by several studies that the digital environment mediated by the internet functions as a compensatory alternative that the hikikomori individual uses after an escape reaction from an inhospitable physical environment, more precisely from negative experiences in the physical environment (such as negative life experiences and crises—uncertainty, loneliness, exclusion, failures). Escapism to the digital environment represents a coping strategy—a strategy of management and a form of emotional regulation (emotional refuge). Negative life experiences and crises experienced in the real physical environment are a catalyst for using the digital environment as an alternative option for self-realisation. Ensuring lower levels of needs represents a stable environment where it is possible to further fulfil social needs—relationships, belonging and acceptance, which is the basis of identity.

For hikikomori, a significant time investment in self-realisation in the digital environment is also enabled by advanced gaming environments and interactive media. There is a preference for the person to perform actions in the digital environment. Hikikomori build an identity (specifically, they identify with fictional characters, use avatars, and create virtual personas). The digital environment thus becomes a space in which individuals temporarily crystallise their existential position (by reorganising themselves, their relationships, and their emotional investments).

It seems that the digital environment ensures progress (development of identity, virtual identity, community, in the acquisition of digital capital), but in the process of psychological investment (self-realisation and identity building) in the digital environment, they acquire

an illusory experience of progress, and in fact, there is a suspension of belonging with respect to the real environment. They exist without a clear identity or social role. They get stuck in a form of existence—an intermediate zone, the so-called liminal state. The state ultimately prevents the integration of offline life, and the individual is not sufficiently integrated into either the real or the digital environment.

Practices such as consuming digital content and creating avatars and virtual identities represent mechanisms that maintain the liminal state.

Digital hikikomori represents a model of existence that can be called a liminal state. Liminality in the life of hikikomori represents a constitutive, that is, a central element of their existence. Digital hikikomori are modern liminal pilgrims—they live mentally in a digital space, outside the physical society in which they still physically exist.

The concept of liminality thus allows for a more precise focus on the state of suspension, ambivalence, and incompleteness that characterises the long-term experiences in the digital environment of digital hikikomori. The individual is neither fully integrated into the real world nor fully displaced into the digital world. It is an in-between zone—an existence on the threshold, in a prolonged transition that may even become a permanent way of being over time.

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