



Social withdrawal of adolescents and emerging adults: A systematic scoping review

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ABSTRACT

This systematic scoping review explores social withdrawal among adolescents and emerging adults, focusing on its theorisation, methodologies, forms, different groups and associated factors. Social withdrawal, characterised by voluntary isolation, has significant social and psychological impacts, including depression and peer problems. The review includes studies published over a period of 15 years (2009 to 2024), targeting individuals aged 12–29. Using systematic search methods, 125 primarily quantitative studies were identified, highlighting the influence of parents, peers, mental health, and cultural factors. The review underscores the need for a multidisciplinary approach to fully understand social withdrawal and recommends future research to focus on longitudinal studies to explore causal relationships and develop effective interventions.

1. Introduction

Social withdrawal is often described as an umbrella term for a certain behaviour associated with solitude and a voluntary withdrawal of oneself from others (Rubin et al., 2009). Rather than referring to individuals being actively isolated by others who do not wish to interact with them, the focus lies on socially withdrawn individuals who voluntarily withdraw from others (Coplan & Armer, 2007). Though many researchers sought to pin it down to one definition, the phenomenon has many “faces” (Rubin et al., 2009). Social withdrawal is also shown to be a relatively stable phenomenon, meaning that it does not only occur for a short period of time, but can be identified to be prevalent over a longer time span (Rubin, 2021). There are several explanations as to which internal mechanisms are most responsible for social withdrawal, such as a strong behavioural inhibition for example (Rubin et al., 2009).

Social withdrawal is of social and scientific relevance, as – while it is not an entirely negatively perceived phenomenon – it can have problematic consequences at different analysis levels. For reasons to be introduced later, we prefer rather speaking of outcomes. These include depression, lower subjective well-being, substance-abuse, excessive use of social media, problematic eating behaviours, disrupted educational pathways and work careers among individuals. For institutions, communities and societies, a higher level of withdrawal may mean disruption of functioning, particularly of social processes (incl. participatory activities).

Asendorpf (1990) identifies two independent behavioural tendencies

regarding social withdrawal: social approach and social avoidance motivation. Meeting others, one is faced with the (non-)arousal of both of those motivations, creating conflicts between approaching and avoiding others, that either persist or get resolved by a compromise, resulting in ambivalent behaviour. Asendorpf thus derives three distinct forms of social withdrawal, based on different combinations of those two motivations that we will define later: shyness, unsociability and avoidance. This taxonomy of three subtypes of social withdrawal constitutes a very important base for social withdrawal theory and research (Coplan & Armer, 2007; Rubin et al., 2009), although Asendorpf (1990) based this concept on studying younger children.

In the literature, social withdrawal is often connected with maladjustment issues and negative outcomes in children and adolescents (Coplan & Armer, 2007; Rubin et al., 2009), depending on its nature such as the subtype for example. Then again, social withdrawal does not always lead to a negative outcome (Coplan & Bowker, 2014a). Furthermore, it would be abbreviated to only look at internal factors influencing social withdrawal. There are several external factors such as parents and peers, school and culture, which can influence the development of social withdrawal.

There is a common ground between social withdrawal and the phenomenon of Hikikomori, which is the reason why there are multiple articles on Hikikomori in the reviewed sample, without having included the term into the search strategy. Hikikomori (Kato et al., 2019; Saito & Angles, 2013) is used to describe the phenomenon of (prolonged/severe) social withdrawal, originally in Japan, then in South East Asia and since

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more than 10 years in the rest of the world (Kirjavainen & Jalonen, 2020; Neoh et al., 2023; Tajan, 2015). Most often Hikikomori refers to the third subtype of social avoidance, when individuals voluntarily and actively avoid meeting others by not leaving their room or home for a longer period of time.

While some studies on Hikikomori suggest it being a clinical definition of its own (American Psychiatric Association & American Psychiatric Association, 2013), others clearly disagree (Kato et al., 2019, 2024; Tajan, 2015; Teo & Gaw, 2010). Agreeing with the latter authors, Rubin (2009, p. 6) also states that social withdrawal “is not a clinically defined behavioural, social, or emotional disorder”. Social withdrawal appears to be a phenomenon influenced by biological, psychological, social, cultural and environmental aspects. In order to further investigate the phenomenon of social withdrawal we decided for this systematic scoping review to take a look at social withdrawal from a social science perspective, aiming to add additional perspectives to a more individually focused and psychological view and thus excluding clinical and medical studies explicitly.

Looking at existing systematic reviews on social withdrawal indicates that social withdrawal and *Hikikomori* – as prolonged or severe social withdrawal (Kato et al., 2019) – among young people are rather under-researched phenomena, particularly beyond Asia. The systematic review from Chen & Liu (2023) is the only one specifically focusing on youth and using social withdrawal as an umbrella term, while the systematic review by Li and Wong (2015) is one of the few that covers Hikikomori among young people. The review by Hu (2024) is not a systematic review, and other reviews with a special focus on Hikikomori (Esposito, 2024; Neoh et al., 2023; Nonaka et al., 2022; Tajan, 2015) do not center on adolescents or emerging adults.

Thus, in the present systematic review study, we will focus on youth social withdrawal in terms of active social isolation, centring on social withdrawal as an umbrella term as well as studies on Hikikomori from a (constructionist) social science perspective. Due to the rather unspecified definition of social withdrawal, especially regarding different age groups, it seems appropriate to conduct a systematic scoping review to map out existing research.

All of the above, leads us to pose the following research questions guiding the review:

How is social withdrawal theorised? Which methodologies are applied in the study of social withdrawal? Which forms of social withdrawal are discussed in empirical youth research? Which groups of youth are particularly prone to withdraw? Which determinants, outcomes and correlates of social withdrawal are studied?

2. Methods

We followed the framework for systematic scoping reviews described by Arksey and O'Malley (2005), by Levac et al. (2010) and in the corresponding chapter on scoping reviews in the JBI Reviewer's Manual (Peters et al., 2020). Employing the term of a systematic scoping review, we want to emphasise a strongly systematic approach to identifying and assessing the broad state of research on the topic: we identified relevant research in the field, then mapped key concepts, outcomes and gaps to explore in future studies. As per recommendations for scoping reviews, we did not assess the quality of the studies we included. We used CADIMA software (Kohl et al., 2018b, 2018a) for the review. The research team consisted of the two authors.

2.1. Search strategy

The search strategy was developed in line with the research questions over the course of one month, tracking the whole process in protocol. Discussions between the two authors on the outcomes of each search led to narrowing down the hits and defining the final search string. During this development of the final search string, we had various

insights. One central insight was the need to limit the search to only relevant disciplines, in order to for example exclude findings on social withdrawal in animals. Secondly, realizing the high number of duplicates following the first few imports into CADIMA, we stayed with our decision to only use two major databases. There were various attempts to include additional keywords into the search strings along the research questions, such as “type, form, taxonomy” and “group, inequality”. This resulted in a severe decrease of total hits, which is why we decided against any of these limitations. Thus we conducted our search in two major databases (SCOPUS, Web of Science) and limited it to (1) articles and book chapters (incl. early online access) (2) in English, (3) published within the last 15 years. The (1) SCOPUS search was limited to the disciplines of psychology, social sciences, and arts and humanities. The (2) Web of Science search excluded non-relevant categories (relating to medical and clinical studies). The last search was on 27. September 2024. We did not supplement that database searches with additional systematic or hand-searches. The search strings are available online as [Supplementary Material](#) (“Search strings used for the scoping review”).

2.2. Study selection

We screened abstracts using predefined inclusion/exclusion criteria (Peters et al. 2020, p. 418). In addition to the contextual criteria we included in the search string, we included (1) only studies on adolescents and emerging adults that (2) refer to the concept “social withdrawal” and were (3) peer-reviewed. We validated these criteria with a consistency check on a random sample of 25 articles before each author screened half the abstracts. Defining the age range with the first criteria was an iterative process. We first aimed for studies only targeting emerging adults (18–29 of age). Various searches made us acknowledge the different definitions of adolescence and emerging adulthood and decide to include both age phases in order to be able to show the state of research on young people in general (Table 1).

To screen the full-text, we refined the criteria. We included studies

Table 1
Our original inclusion and exclusion criteria.

Type	Emphasis	Inclusion criteria	Exclusion criteria
Participants	Age	Participants are adolescents or emerging adults between 12–29 years old. Overlapping ranges: most years had to fall within the age range (e.g. 9 to 16 would be included [4 years of range, the bigger part, over the threshold, 3 years of range, the smaller part, under the threshold; 7 to 14 would be excluded).	Participants outside this age range and criteria
Concept	Terms	The study referred to the concept “social withdrawal” as it described active self-isolation	No relation to social withdrawal; social withdrawal was a passive component of the study, outside its focus
Context Context	Language Date of publication	English Studies published between 1. January 2009 and 31. August of 2024	Not English Studies published outside of this time period
Evidence sources	Study design	Qualitative, quantitative, or mixed study based on original or secondary data; peer-reviewed; no clinical or medical studies	Literature reviews, bachelor's and master's thesis, publications without empirical data, media

(1) with a diverse sample of participants regarding age: if the group of adolescents or emerging adults had been questioned separately and results for this sample could be distinguished from those relating to other age groups. The concept (2) of social withdrawal needed to be central to the study or at least given the same weight as other variables. To keep our focus on social sciences research, we excluded (3) clinical studies that tested drugs or focused on diagnosing illnesses as severe disabilities, but including studies on diagnoses of psychological disorders, e.g., depression or anxiety. Both authors screened the full-text of each article (Table 2).

2.3. Data extraction

We adhered to JBI guidelines (Peters et al., 2020) for extracting data. We created categories to characterise the studies and extract necessary data to answer the research question. We used CADIMA to automatically create categories (author, title, publication year) and added six (before the pre-test) resp. eight (following the discussion after the pretest) more categories in line with the scoping review methodology and our research questions. In a pretest both authors extracted data from the first 10 articles, independently, for all the categories: discipline; methods; theory; dimensions and typologies; groups and inequalities; correlates. The extraction in the pretest was based on the category title and the discussion leading to defining those. Discussing the results of the pretest together, we added two more categories (age; country) and phrased specific questions reflecting the data that we wanted to have extracted in each category. This step was crucial, since it helped develop a common and detailed understanding of the categories and what data exactly needed to be extracted, adding to the validation of the data extraction step. The data extraction was performed online in CADIMA and was split equally between both authors, meaning both authors were responsible to extract data along their four assigned categories for all the articles (Table 3).

2.4. Resulting sample

The final search yielded 1,210 articles; of these 270 were automatically identified and excluded as duplicates. We removed a further two studies as a next step, because there was no abstract and text available (as identified by CADIMA) and an additional search revealed those two studies to fall outside our age range. Using our initial inclusion/

Table 2
This table shows the criteria we added to those listed in Table 1.

Type	Inclusion criteria	Exclusion criteria
Participants	(1) If various groups were questioned (e.g. parents, social workers, young people): adolescents / emerging adults must have been questioned directly(2) If the age range is broader (e.g. 12 – 65), the study can be included if adolescents / emerging adults were treated as a separate group	–
Concept	(1) Social withdrawal must have been the main / principal focus of the study(2) Social withdrawal was an outcome or one of multiple, equally weighted outcomes	(1) If social withdrawal was an outcome but was not weighted as heavily as other outcomes, e.g., treated like a “side effect”
Sources of evidence	(1) If the study was about diagnosed illnesses but they were (a) not severe and (b) the study focused on psychological / psychic disabilities (e.g. depression, social anxiety)	(1) If the name included “clinical study”(2) If the study tested drugs / medicine(3) If the study focused on diagnosed illnesses that caused severe disabilities, e.g., Autism Spectrum Syndrome)

Table 3
Description of the extraction categories.

Category (Author)	Description
Age	What was the age range of the participants?
Country	Which were the countries of origin of study participants?
Discipline	In which disciplines were the authors working? What was the disciplinary focus of the article?
Methods	What methods were used in the study: qualitative, quantitative or mixed? How was the sample compiled? (Not extracted: data analysis method)
Theory	Which theories / concepts of social withdrawal or basic theories / concepts to describe social withdrawal were used? If the study strongly focused on correlates, we extracted theories about mechanisms that may explain the connection between these correlates and social withdrawal.
Dimensions/Typologies	Did outcomes include dimensions, typologies, types, taxonomies of social withdrawal? What outcomes were associated with social withdrawal?
Groups & Inequalities	Who was affected by social withdrawal? Were outcomes stratified by group characteristics, e.g., gender, SES?
Correlates	Which correlates were associated with social withdrawal (e.g., depressive symptoms, school factors, type of parenting)? Are there correlates suggesting determinants or outcomes of social withdrawal?

exclusion criteria, we screened the title and abstract of 938 articles; of these, we excluded 613 articles that did not meet our inclusion criteria for age, did not meet our evidence source criteria, or did not focus on social withdrawal. Of the remaining 325 articles, 10 were missing; we successfully retrieved 3 of these after contacting authors directly on [researchgate.net](#). Of the 318 remaining articles, we excluded one study because it had been retracted, three studies that were not written in English, and five duplicates our initial (automatic) screening had missed. After applying our updated criteria list, we excluded a further 184 articles, most of which lacked or had only a marginal conceptual focus on social withdrawal or were clinical studies; a few did not match our age criteria when we took a closer look at the sample. The full-text screening revealed a total of 28 inconsistencies among the two authors, resulting in a Cohen’s Kappa value of 0.82, indicating high interrater agreement. We resolved our differences through discussion and included the final set of 125 studies to be included into this systematic scoping review (Fig. 1).

A detailed list of the included studies is available online as [Supplementary Material](#) (“Overview of articles used in the scoping review”).

3. Results

We will now present the results of the systematic scoping review on methodologies, conceptual frameworks, dimensions and typologies, inequalities between different groups and determinants, outcomes and correlates.

3.1. Methods used in social withdrawal research

In the 125 studies we finally included, research on social withdrawal was predominantly quantitative, resembling the core disciplinary focus in psychology, social psychology and health sciences. These disciplines have shaped the terminology used to describe the topic and aspects of social withdrawal that are studied.

Studies of social withdrawal in adolescence and emerging adulthood often draw samples from secondary school (e.g. [Bamps et al., 2022](#); [Sousa et al., 2023](#)) or university students (e.g. [Clifford & Nelson, 2019](#); [Tateno et al., 2019](#)). Authors sometimes explicitly describe these as convenience samples ([Amendola & Cerutti, 2024](#); [Li, Zhan, et al., 2021](#) for secondary school student samples; [Ng & Ang, 2021](#); [Watson & Nesdale, 2012](#) for university student samples). Very few studies are based on representative samples of youth or adolescents (e.g. the Tracking Adolescents’ Individual Lives Survey/TRAILS, [Barzeva et al., 2021](#), or the

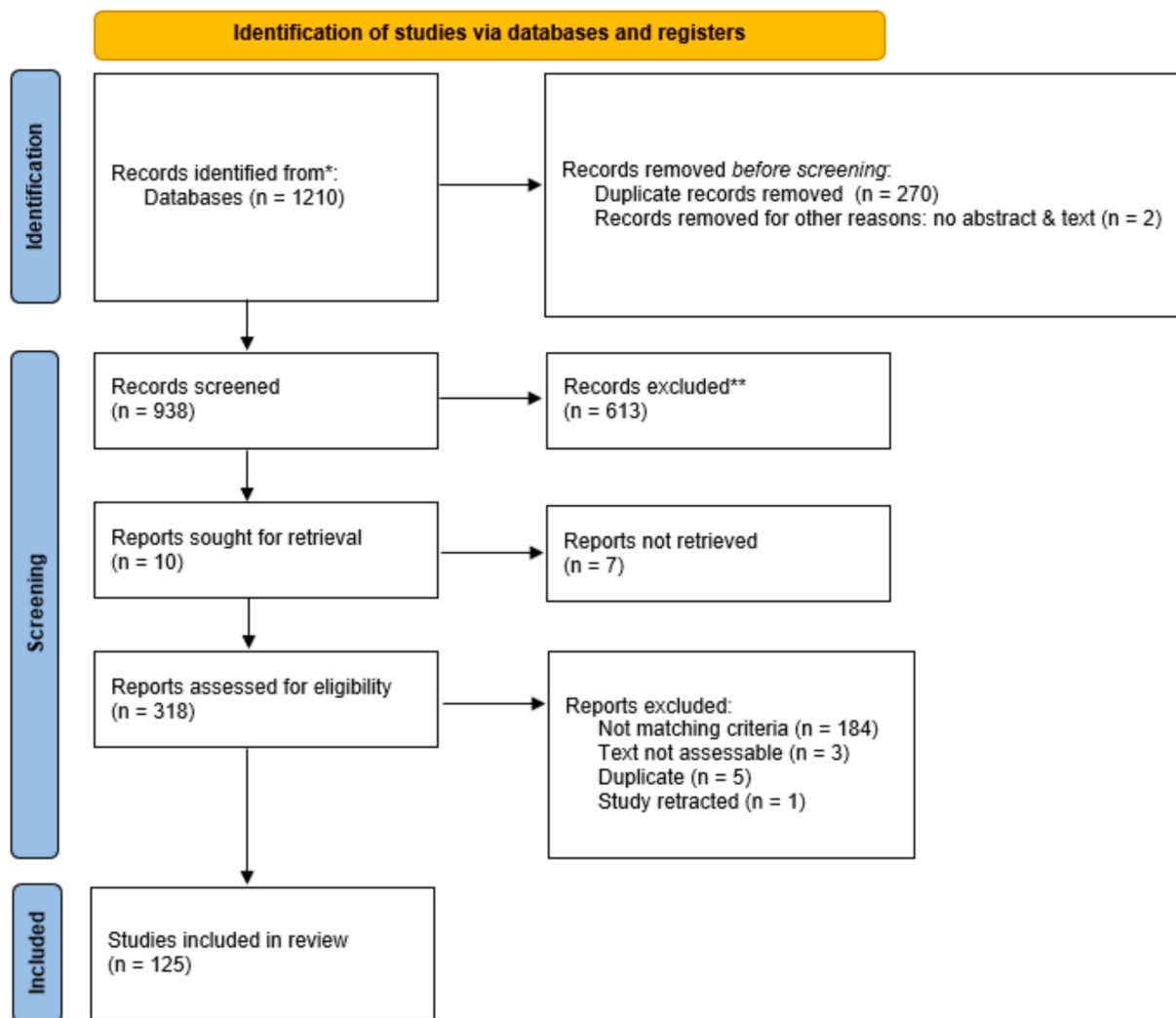


Fig. 1. Flow diagram displaying the identification of studies along Page et al. (2021).

Korean Children and Youth Panel Survey, Lim, 2023; Millett et al., 2023's US study that stratified a random sample of 18 year-olds).

Most studies focused on withdrawal attitudes and behaviour, while few focused on severely withdrawn adolescents or aimed at reaching hidden youth. The internet is used in most attempts to reach withdrawn youth populations, but some studies reached further. For example, the Hongkong study by Chan & Lo (2014) approached hidden youth through online gaming platforms, Facebook, blogs, the investigator's own networks, and members of social withdrawal groups. Husu & Välimäki's (2017) study in Finland gathered data (threads) from an online bulletin board called "Hikikomero," which was a peer support group for the depressed and socially excluded. Hikikomero was hosted by Ylilauta, a Finnish youth website that allows anonymous discussions on varied topics of interest.

Quantitative studies were mainly (75%) cross-sectional, though some had a longitudinal panel design. Young adolescents were usually surveyed at one time point. These cross-sectional surveys did not draw causal conclusions, though some used path analysis and structural equation modelling to analyze data (e.g. Chan & Lo, 2016; Xiong et al., 2023). Few studies were designed to determine causality. Those that were typically used panel designs with time-lagged data and cross-lagged path analysis to examine relationships over time, e.g., the Korean study of Lee, Choi & Na (2024) or Lim (2023).

There were two dominant methodologies for data analysis. The first was structural equation modelling (or path analysis), which allowed

researchers to test complex relationships between variables and revealed both direct and indirect effects (e.g. Xiao et al., 2021; Zheng, Coplan, Chen, et al., 2023). The second was regression analysis, with which researchers could identify predictors and outcomes of social withdrawal, including hierarchical and logistic regression models (e.g. Clifford & Nelson, 2019; de Hooge et al., 2018). Both methodologies were used to reveal mediation effects (e.g. Lucas et al., 2020), analysing indirect associations between factors and outcomes via another factor or other factors, and to show moderation effects (e.g. Stavropoulos et al., 2019), determining how one association is shaped by another factor. Some researchers combined mediation and moderation analysis (Ng & Ang 2021).

Less than 5% of studies were qualitative or used narrative or semi-structured interviews to gather in-depth information about participants' experiences and perspectives on social withdrawal (e.g. Su et al., 2023). Even fewer used focus groups to explore collective views and spark discussions about social withdrawal between participants (e.g. Beccaria et al., 2022). Qualitative studies mainly used thematic (e.g. Kljakovic et al., 2021; Liu et al., 2018) or phenomenological analysis (e.g. Caputo, 2021). A study from Uganda quantified data extracted from (qualitative) open survey questions (Zhang & Eggum-Wilkens, 2018). Even fewer (2/125) studies explicitly reported and triangulated mixed-methods results (Beccaria et al., 2022; Chan, 2019), e.g., combining quantitative data analysis (questionnaire survey with youth) and qualitative data analysis (face-to-face interviews or focus groups).

A few studies include experimental designs (e.g. Kokin et al., 2016 on facial expression recognition or de Hooge et al. 2018 on shame).

3.2. Theories and concepts used in social withdrawal research

Many theories and concepts of social withdrawal centered on dimensions and typologies, but some articles drew on definitions and concepts of Hikikomori as an extreme form of social withdrawal (Table 4).

3.2.1. Theories and concepts of social withdrawal

A multitude of recent studies (e.g. Barzeva et al., 2022; Galanaki et al., 2023; McVarnock & Closson, 2022; Ng & Ang, 2021) cite Rubin et al. (2009) when discussing social withdrawal, using it as an umbrella term for a multidimensional construct of actively withdrawing oneself from known people and strangers. In addition to this main source from Rubin et al., many studies (Bamps et al., 2022; Ding & Zhang, 2022; Indias García & De Paül Ochotorena, 2016) also reference the Handbook of Solitude in its two editions (Coplan, Bowker, et al., 2021; Coplan & Bowker, 2014b). In the reviewed studies researchers have seen social withdrawal as a risk factor for development because it promotes maladjustment (Lin et al., 2020; Nelson et al., 2016; Smith et al., 2017; Sousa et al., 2023). They have linked social withdrawal to problematic peer relationships (Lucas et al., 2020; Ran et al., 2022). Socially withdrawn adolescents and emerging adults interact less with peers, so they have worse social skills and feel less competent and less accepted by their peers. They missed out on experiences that would have positively influenced their development positively (S. Lim, 2023).

Loneliness and concepts of social withdrawal appear to be linked (Psychogiou et al., 2022); both were associated with negative outcomes when they occurred in adolescence. In a study in the Netherlands, Verhagen et al. (2023) identified strong behavioural inhibition in infants that might have promoted social withdrawal in adolescence, later contributing to loneliness in two ways: (1) withdrawn individuals may have many fewer meaningful social interactions that provide opportunities to connect with other people and reduce loneliness; (2) fewer opportunities for social interactions could inhibit development of social skills. The link to behavioural inhibition was shown by other articles too (e.g. Li et al., 2024).

Solitude was closely linked to social withdrawal in several articles and was integrated into the study’s theoretical framework (e.g. Borg & Willoughby, 2023; Liu et al., 2024). Spending time alone, in solitude is

associated with well-being when time spent alone and time spent with others are in balance (Closson et al., 2022). There is a presumption that if the balance between solitude and socializing is “just right” (the Goldilocks Hypothesis), people will benefit, but if a person has too little or too much, they may suffer from either loneliness or “aloneliness” (Coplan, Hipson, et al., 2021). Spending time alone was found to benefit those in early adolescence less; alone time is more welcome in late adolescence and among emerging adults (Borg & Willoughby, 2023; Hipson et al., 2021; Hu et al., 2022; Wang, 2016).

Many articles mention subtypes of social withdrawal. These rely on Asendorpf’s (1990) model of three subtypes (shyness, unsociability, social avoidance) based on two motivational dimensions: social approach and social avoidance (Barzeva et al., 2020; Braathu et al. (2022); Etkin et al., 2016; McVarnock & Closson, 2022; Millett et al., 2023). Most articles (e.g. Barzeva et al., 2019; Nelson, 2013) also mention Coplan & Armer’s (2007) study of these three subtypes in early childhood.

Shyness, the first subtype, was associated with mental distress and general relationship problems (Barstead et al., 2018; Millett et al., 2023). Some theorized that, since shy people feel uncomfortable and fearful in social situations, a social surrogate might facilitate social contact and encourage shy people to engage more with others (Closson et al., 2019). They shyness subtype is also described as anxious-withdrawal (Bowker et al., 2023; Ojanen et al., 2017). Some articles only investigate this subtype (Bullock et al., 2018; Kalutskaya & Buhs, 2015; Li et al., 2020; Li et al., 2021).

Unsociability, the second subtype, was often regarded benignly (Bowker & Raja, 2011; Liu et al., 2015), as a form of social withdrawal that may positively affect creativity and encourage young people to form their own identity (Millett et al., 2023). But a “preference for solitude,” which is often associated with or treated just like unsociability, is associated with more loneliness and having fewer intimate friends in early adolescence (Wang, 2016). Other labels for unsociability included social disinterest (low motivation to seek others out), affinity for aloneliness (when not enough time alone causes discomfort), and solitropic orientation (gravitation towards solitude without fear or social anxiety) (Xiao et al., 2021; Zheng, Coplan, Chen, et al., 2023).

Avoidance, the third subtype, was mostly associated with negative outcomes including internalising difficulties, negative socio-emotional outcomes, problematic media use. (Ding et al., 2023; Millett et al., 2023). This subtype was described as most likely to have been heavily influenced by peer rejection and exclusion that caused adolescents and emerging adults to avoid social interaction (Millett et al., 2023). Like unsociability, avoidance was also linked to a preference for solitude (Wang, 2016). Avoidance has been called the least researched and least understood subtype (Millett et al., 2023).

One article (Galanaki et al., 2023) added a fourth subtype, isolation, characterised by involuntary social withdrawal (exclusion).

3.2.2. Theory on Hikikomori

There are several articles in our sample (Amendola et al., 2021; Caputo, 2021; Chan & Lo, 2016; Hu et al., 2022; Lin et al., 2022; Wong et al., 2015) that examined the phenomenon of Hikikomori, drew on related theories, and referred to empirical evidence. These mostly refer to the work of Saito, who introduced Hikikomori to scholars outside of Japan (Saitō & Angles, 2013), to (Kato et al., 2012, 2019), and a few others. Hikikomori is often called prolonged, severe, or pathological social withdrawal (Amendola et al., 2022; Fong & Yip, 2023; Orsolini et al., 2022; Wu et al., 2020; Yong & Nomura, 2019). Some refer to socially withdrawn young people as “hidden youth” or “young people in hidden situations” (Chan & Lo, 2016; Wong, 2020; Wong, 2014). Some articles (Colledani et al., 2024; Gavin & Brosnan, 2022) divide Hikikomori into primary and secondary states. Primary Hikikomori is social withdrawal associated with behavioural problems, without accompanying mental illness. Primary Hikikomori is further divided into two subtypes: (1) individuals don’t leave their room and (2) individuals who

Table 4
Overview on theories and concepts used in social withdrawal research.

Theory / concept	Core aspects and links to social withdrawal
Loneliness	Behavioural inhibition: fewer social interactions in general and fewer meaningful social interactions lead to low social competence, promoting social withdrawal and subsequently loneliness
Solitude	Balance between the amount of time spent alone and spent together with others is crucial, else it might promote social withdrawal and lead to (a)loneliness
Subtype: Shyness	High social approach, high social avoidance. Feeling uncomfortable, fearful and anxious in social situations.
Subtype: Unsociability	Low social approach, low social avoidance. Fewer intimate friends and more prone to loneliness; preference for too much solitude.
Subtype: Avoidance	Low social approach, high social avoidance. Past experiences caused fewer social interactions, leading to avoidance; preference for too much solitude.
Subtype: Isolation Hikikomori	Exclusion by others leading to involuntary social withdrawal. Severe, prolonged or pathological social withdrawal. Distinction into primary (no comorbidity with mental illnesses) and secondary (comorbidity with mental illness) Hikikomori. Differing severity of social withdrawal with not leaving the house at all ore still going outside. Hikikomori as alternative lifestyle, not complying with cultural norms. Connected with NEET.

do go out and have interactions. Secondary Hikikomori is defined as social withdrawal associated with mental disorders and psychological issues.

Some theorists describe Hikikomori to be influenced by cultural factors (Beccaria et al., 2022; Liew et al., 2021). In these cases, individuals withdraw so they do not have to comply with cultural norms, adopting an alternative lifestyle. Several articles (Amendola & Cerutti, 2024; Indias García & De Paúl Ochotorena, 2016; Li et al., 2024; Tan, 2024) connected social withdrawal theories and concepts to theories and evidence about Hikikomori. Some articles (Gavin & Brosnan, 2022; Li et al., 2018; Liew et al., 2021) connected theory and evidence about individuals with Hikikomori to evidence about individuals not in employment, education or training (NEET).

3.3. Dimensions and typologies of social withdrawal

Multiple studies (Bowker & Raja, 2011; McVarnock & Closson, 2022; Millett et al., 2023; Nelson, 2013; Sette et al., 2023) confirmed study participants could be classed into Asendorpf's three subtypes (1990). Others (Millett et al., 2023; Schwartz et al., 2023) identified groups of mixed-withdrawn individuals (individuals who not fit neatly into a single subtype), of non-withdrawn individuals (Coplan, Hipson, et al., 2021) who constitute a balanced group (a "just right" amount of solitude), and of a-lonely individuals (who do not have enough solitude to satisfy them). Some studies (Ojanen et al., 2017; Zhang & Eggum-Wilkens, 2018) only focused on shyness and unsociability subtypes; these confirmed the distinction between the two and found shyness much more common than unsociability. Adolescents could have co-occurring social withdrawal motivations (Amendola & Cerutti, 2024; Eggum-Wilkens et al. (2020)); researchers argued that acknowledging multiple motivations may make it easier to identify and support those affected (Table 5).

Some studies also identified *shyness* (Barry et al., 2013; Barstead et al., 2018; Yang et al., 2021) as a risk factor for child and adolescent

development, and in emerging adults (McVarnock & Closson, 2022). When adolescents perceived parents to be psychologically controlling, this appeared to exacerbate negative effects of shyness (Bullock et al., 2018). Externally observed or measured psychological control by parents and addiction behaviours (smartphone and internet) were also associated with shyness. Shyness was a risk factor for internalising symptoms (interpersonal stress, rumination) among adolescents (Li et al., 2021) and for subjective well-being (Li et al., 2020). Shy adolescents would often befriend shy peers, which might then make them more shy and lonely (Yang et al., 2021).

The theories and empirical findings of (Bowker & Raja, 2011; McVarnock & Closson, 2022) suggested *unsociability* was a more benign form of social withdrawal. As children advance from early adolescence to emerging adulthood, unsociability might grow less benign as effects, e.g. being away from peers and missing out on important experiences, accumulate (Bowker & Raja, 2011), but unsociability was, overall, associated with fewer problems (Nelson, 2013). Unsociable emerging adults seemed to receive the same level of social support as sociable peers (Closson et al., 2022). Unsociable adults reported higher levels of self-worth and were happier and more satisfied with life than shy peers. When unsociability and peer problems were connected (Ding et al., 2015), behavioural control may have been protective for unsociable adolescents. Unsociability was also associated with affinity-for-solitude and preference-for-solitude (Borg & Willoughby, 2023). Being in a group with low sociability was more strongly associated with negative psychosocial adjustment than a preference or affinity for solitude alone.

Avoidance was the subtype associated with the highest rate of socio-emotional difficulties (Sang et al., 2018). Avoidant emerging adults received less social support than unsociable peers (Closson et al., 2022) but they appeared to be significantly happier. Avoidant individuals were much likelier to exhibit problematic media use (PMU) than shy and unsociable individuals (Nelson et al., 2016); problematic media use (PMU) was predictive of more withdrawn behaviour. Some researchers (McVarnock & Closson, 2022) found that avoidance was not always maladaptive.

The three subtypes were compared to each other in some studies (Bowker & Raja, 2011; Braathu et al. (2022); Nelson, 2013; Schwartz et al., 2023). The studies found that, in emerging adults, shyness and avoidance had higher associations with internalised problems, loneliness, exclusion, depression, lower life satisfaction, and more difficulty developing identity development than unsociability was. All three subtypes were associated with peer problems (Bowker & Raja, 2011). Peer exclusion was regarded as key to understanding the association between social withdrawal and loneliness. The three subtypes of social withdrawal were associated with maladjustment, with some overlapping associations between subtypes (Sang et al., 2018). Avoidance was most strongly associated with negative adjustments. Bowker et al (Bowker et al., 2012, 2017, 2023) sought to determine whether they could use Asendorpf's model of approach and avoidance motivation to validate the three subtypes. While early results were inconclusive, the most recent study used combinations of Asendorpf's weak/strong approach and avoidance tendencies to confirm the subtypes could be distinguished from each other.

More types of social withdrawal were defined analyzing trajectories of social withdrawal, gaming behaviour and preference for solitude. Barzeva et al. (2019) described different social withdrawal trajectories in adolescents and emerging adults. They define one group that exhibited low and stable social withdrawal, a second group that exhibited high and decreasing social withdrawal, and a third group that formed a U-linear curve: withdrawal was high in mid-adolescence, low towards the end of adolescence, and then increased in emerging adults. The second group was strongly associated with shyness, little social contact, and more severe maladjustment. The third group (of emerging adults at 25 years of age) had higher social withdrawal than the low-stable group.

A study from China (Wang, Li, et al., 2021) that investigated the link between social withdrawal and gaming identified three types of gamers:

Table 5
Overview on dimensions and typologies of social withdrawal.

Dimensions and typologies	Main points
Three subtypes: Shyness, Unsociability, Avoidance	<i>Shyness</i> is a risk factor for development, perceived parental psychological control exacerbates shyness and shy adolescents befriend shy peers. <i>Unsociability</i> becomes less benign the longer it persists and is marked by a strong preference-for-solitude. Unsociable individuals are at higher risk when grouped together but receive equal social support as sociable peers. <i>Avoidance</i> shows the highest tendency for maladjustment. Avoidant young people are likelier to show problematic media use which increases social withdrawal.
Three subtypes: Common grounds and prevalence	<i>Shyness</i> and <i>Avoidance</i> share many common associations like internalized problems, loneliness, depression, lower life satisfaction – higher than <i>Unsociability</i> . All three subtypes are associated with peer problems and maladjustment. Ultimately all three subtypes can be identified separately from each other in recent studies.
Typology along trajectories	Social withdrawal was identified to (1) stay low and stable, (2) start high and decrease with ongoing adolescence, (3) follow a U-shaped curve, increasing again when entering emerging adulthood.
Typology along gaming behaviour	Three types of gamers: recreational, achiever and escaper. Whereas the first group didn't show social withdrawal tendency the latter two did, with the escapers being at high risk.
Typology along solitude	Low-, moderate- and high-solitude groups showed an increasing tendency to social withdrawal and negative consequences the higher the solitude

recreational; achiever; and escaper. Recreational players enjoyed gaming as a leisure activity without negative psychosocial outcomes; achievers would were at moderate risk of social withdrawal; escapers were at high risk of social withdrawal.

One study (Liu et al., 2024) ranked three groups of emerging adults according by degree of solitude. The low-solitude group exhibited positive qualities, the moderate-solitude group was marked by passive withdrawal and loneliness, and individuals in the high-solitude group voluntarily distanced themselves from others and were at higher risk of exhibiting negative psychological traits.

3.4. Axes of inequality in social withdrawal

This section covers inequalities in social withdrawal and the structural categories (axes of inequality) into which individuals or groups are systematically differentiated. These are not determinants, as axes of inequality do not function as determinants of differences; rather, inequalities are caused by related social processes and mechanisms. We found that researchers rarely asked who was particularly prone to social withdrawal, though they voiced various opinions at different levels in the studies we analyzed (Table 6).

At the micro-level, findings on gender differences are contradictory. Some studies (Amendola et al., 2021; Bowker et al., 2017; Hihara et al., 2022; Lin et al., 2020; Lucas et al., 2020) tested for and then reported no gender differences. Other studies, mostly researching the Hikikomori state, found boys and young men were more prone to social withdrawal than girls and young women (Fong & Yip, 2023; Wong et al., 2015; Wong, 2014; Yong & Nomura, 2019). Barzeva et al.'s (2021) study in the Netherlands found that young men's withdrawal had a greater detrimental effect on the quality and dynamics of romantic relationships, and that young men had more negative outcomes when they withdrew. In group settings in which friendship quality was studied, shyness appeared to have a negative effect for boys, but not for girls (Wang, Bowker, et al., 2021). These studies theorized that boys were more competitive in larger group settings, so shy boys would find it more difficult to sustain meaningful friendships than girls, who generally tend to socialize in smaller group settings. Contrary to all of these findings, in a Canadian study, women reported higher on all three subtypes than males (Closson et al., 2022). Also, female university students seem to be at higher risk for social withdrawal (Li et al., 2024). Female students were also more prone to Hikikomori and more at risk of developing problematic internet use than male students (Orsolini et al., 2022). In late adolescence, some researchers theorized withdrawn girls might be more endangered than boys, since girls need more dyadic friendships (Barzeva et al., 2022).

In the studies we examined, less education was more strongly associated with social withdrawal, as was a history of dropping out of education (Wong et al., 2015; Yong & Nomura, 2019). Previous psychiatric treatment was associated with higher likelihood of Hikikomori (Yong & Nomura, 2019), as was spending more time on the internet (Fong & Yip,

2023).

On a meso-level, in Muzi, Rogier & Pace's (2022) Italian sample, adolescents living with a single parent who had separated or divorced, or whose other parent had died or abandoned them were at higher risk of social withdrawal.

On a macro-level, findings suggested inequality shaped by broader cultural factors and societal structures, e.g. social hierarchies, value systems, and institutional practices. Findings differed across cultures, especially between Western societies (individualist) and Asian societies (collective) such as China (Ding et al., 2023; Li et al., 2021; Liu et al., 2015; Zhang & Eggum-Wilkens, 2018; Zheng, Coplan, Teng, et al., 2023). Shyness was not associated with negative adjustments in Asian societies, whereas unsociability was; the reverse was true for Western societies: Being shy would be regarded negatively, while in Asian cultures it was perceived as rather positive and being unsociable would stand out positively in Western societies, but receive negative reactions in Asian societies. Although recent studies (Ding et al., 2023; Li et al., 2021; Liu et al., 2015) also found that the effects of economic and social change in China, for example, were associated with more negative adjustment in shy people. Generally (Sang et al., 2018), all types of social withdrawal have negative effects in collective cultures, such as China for example. This finding is in line with the suggestion of an association between social withdrawal and a cultural marginalisation in collectivistic cultures (Liew et al., 2021).

Social withdrawal also appears to be influenced by the norms and values of a society, as Bowker et al. found in their cross-sectional study comparing social withdrawal motivations across 10 countries (Bowker et al., 2023).

Social origin and social status were not frequently studied as factors. One study (Wu et al., 2020) found they were not associated with social withdrawal, while another study by Xiong, Hu & Ye (2023) found relative deprivation was positively associated with social withdrawal.

3.5. Determinants, outcomes and correlates of social withdrawal

The studies we included mainly focused on outcomes or correlates and, less frequently, on determinants of social withdrawal. Since few studies were longitudinal, they could not determine causal relationships between potential factors and outcomes. Findings derived from non-causal cross-sectional analysis have mainly been conceptual, so, we employ the terminology of determinants and outcomes instead of causes and effects.

We identified several determinants of social withdrawal in the literature we reviewed: parental influences; peer relationships; and mental health factors. There were far fewer of these studies than those that examined outcomes. Outcome-focused research mainly addressed mental health issues (e.g., depression, anxiety), developmental challenges (e.g., identity development, relationship quality), and well-being (e.g., life satisfaction, loneliness). In addition to determinants and outcomes, we also discuss findings on factors that studies explicitly labelled as correlates.

3.5.1. Determinants of social withdrawal

We categorized determinants within a multilevel framework: micro-level (individual characteristics), micro-social and meso-level (parents, peers), and macro-level (societal or cultural influences, often filtered through individual perception). Many studies examined determinants at several levels simultaneously (Table 7).

Of individual characteristics on the micro level, mental health issues and related behaviours are often studied – particularly from a psychological perspective. An analysis of a US study by Chango et al. (2015) found that behaviours that undermined autonomy and relatedness at age 13 (measured as reactions towards a video experiment) predicted social withdrawal at age 21, and that close-friendship competence at age 18 reduced social withdrawal at age 21. In their Chinese study, Zheng et al. (Zheng, Coplan, Chen, et al., 2023) found that fluctuations in depressive

Table 6
Overview on axes of inequality in social withdrawal.

Axis of inequality	Main points
Gender	Studies report contradictory findings where either male or female individuals seem to be more prone to social withdrawal and its negative implications with differences to group settings and specific age categories.
Education	A lower education as well as dropping out from school are both higher associated with social withdrawal.
Family situation	Living with a single parent because of separation, divorce, death or abandonment increases the risk for social withdrawal.
Cultural and societal norms	There are different perceptions in individualistic and collectivistic societies towards shyness and unsociability. Social and cultural norms tend to marginalize socially withdrawn individuals.

Table 7
Overview on determinants of social withdrawal.

Determinants	Main points
Mental health	Depressive symptoms and behavioural inhibition might promote social withdrawal. While autonomy-undermining behaviour can increase the risk for social withdrawal, a competence for close friendships acts as a protective factor.
Relative deprivation	Relative deprivation is shown as an indirect contributor to social withdrawal mediated by (lack of) social support and moderated by in-group identity.
Parental and sibling influences	Negative parental attitudes and behaviours promote social withdrawal, while parental support and warm sibling relationships might reduce social withdrawal and prevent negative outcomes of social withdrawal
Peer relationships	Peer problems such as bullying, peer rejection and peer victimisation promote social withdrawal. Positive and amicable peer relationship, peer communication help prevent social withdrawal. High quality friendships and physical relocation act as protective factors.
School	Bigger sized classrooms have higher rates of social withdrawal. School closings during the COVID-19 pandemic might increase social withdrawal.
Societal pressure	High expectations and pressure from society might promote social withdrawal among young people.

symptoms consistently predicted fluctuations in preference for solitude a year later (but not vice versa), supporting a symptoms-driven model. Behavioural inhibition in children was an indirect predictor for loneliness in adolescents through social withdrawal (Verhagen et al., 2023).

Micro-level factors in studies that took a more social perspective included relative deprivation as a determinant. Xiong, Hu & Ye (2023) indicated in their cross-sectional path analysis of subjects in China that relative deprivation accompanied social withdrawal, mediated by (lack of) social support. In the same study, in-group identity (another individual factor) was found to moderate the indirect effect of relative deprivation on social withdrawal via perceived social support; a high level of in-group identity weakened the association between relative deprivation and perceived social support. Social support was also highlighted as a mediator in a study on hidden youth (Hikikomori) in Hong Kong (Chan & Lo, 2014), which found that hidden youth in social withdrawal who receive social support and experience positive emotions have improved quality-of-life.

At the *micro-social level*, the social relations of adolescents, and their parental influences and peer influences were associated with social withdrawal. A South Korean study showed negative parental attitudes and behaviours, e.g., psychological control and neglectful attitudes promoted social withdrawal in adolescents (Choi et al., 2020; Lim & Kim, 2023). Interparental conflict (IPC) increased preference-for-solitude in adolescents, but was mediated by depressive symptoms (Zheng et al., 2023). Parental support can prevent negative outcomes of withdrawal. For example, in an Italian study, parental secure attachment influenced withdrawal, mediated by positive peer attachment (Muzi et al., 2022). Kwon (2024) indicated that outcomes of social withdrawal can be mitigated and attenuated by parental support. There is also evidence that associates warm relationships between siblings with reduced shyness and greater motivation to participate in peer groups; it may be harder for shy adolescents to build warm relationships with siblings (Chen, Chen, et al., 2021).

The studies we used as examples to illustrate the influence of parental characteristics introduced another factor: peers relationships. Positive peer relationships were associated with a reduction in withdrawal tendencies, while a poor quality peer relationships and peer rejection were associated with an increase in social withdrawal. Barzeva et al.'s (2020) in the Netherlands revealed that negative peer experiences predicted higher self- and parent-reported withdrawal at age 13 and higher parent-reported withdrawal at age 16. Experiences of bullying and peer victimisation are frequently studied because

researchers agree they are significant determinants of social withdrawal (for Portugal, Coelho et al., 2022; for South Korea, Choi et al., 2022). Choi et al.'s study (2022) indicated that parental involvement moderated the link between bullying victimisation and withdrawal: the effect of bullying was lower when parental involvement was greater. In line with these findings, there was positive correlation between social withdrawal and ostracism in adolescents, and an indirect impact associated with threats to self-esteem, leading them to withdraw further (Lei et al., 2024). Additionally, rejection sensitivity may increase the threat to self-esteem in ostracized individuals, while amicable peer relations may protect adolescents from developing social withdrawal (Choi et al., 2020; Muzi et al., 2022). Peer communication in college may increase satisfaction with college life and help reduce the risk of social withdrawal (Clifford & Nelson, 2019). High quality friendships may be protective for older adolescents in social withdrawal (Barzeva et al., 2022) and physical relocation might reduce social withdrawal by expanding an individual's network of friends.

Although they relate to *other (higher) levels*, feelings of cultural marginalization and social rejection are primarily experience at the *micro- and micro-social levels* and may be linked to social withdrawal. The findings of the Singaporean study by Liew et al. (2021) were consistent with earlier findings from Japan: risks of Hikikomori tendencies; in particular, social withdrawal in unemployed young people who are not in school nor working (NEET), was linked to perceptions of cultural marginalisation, perceived social rejection, and poor self-image.

While some of these micro-level factors may exert influence at the *meso-level* of social institutions—particularly peer effects in school—studies of levels beyond the micro and micro-social determinants of social withdrawal are rare. We mentioned the Portuguese study by Coelho et al. (2022) that included classroom size as a *meso-level* factor: this study suggests trajectories of social anxiety and social withdrawal are moderated by classroom size: classrooms with more students have higher rates of withdrawal. Social withdrawal among cyberbully victims appeared to be even higher in larger classrooms. Another Portuguese study by Cruz et al. (2023) analyzed a longitudinal sample that suggested that as schools closed during the COVID-19 pandemic, more adolescents would experience social withdrawal. At the same time, the latter study confirmed that higher self-esteem would act as a protective factor against social withdrawal.

At the societal level, Beccaria et al.'s study (2022) from Italy identified societal expectations and pressures as potentially pushing individuals towards social withdrawal if they felt unable to live up to them. This research highlighted the “shop window effect” of social life: adolescents, who feel pressured to exhibit and share every social occasion to boost their virtual image, may become less able to live “here and now.”

3.5.2. Outcomes of social withdrawal

The state-of-research provided many more insights into outcomes of social withdrawal than into determinants. Almost all studies focused on the micro level, but some factors (e.g., behavioural outcomes) may also have micro-social effects. We systematised these by examining individual outcomes at an attitudinal or emotional level, e.g., health and wellbeing, individual behavioural outcomes and other outcomes that may affect the micro-social environment (Table 8).

At the individual level, research on *health and wellbeing outcomes of social withdrawal* often focused on internalised problems, particularly increased anxiety, depression, and loneliness. Social withdrawal is often associated with higher levels of depression and anxiety, lower life satisfaction and worse subjective well-being (for Canada: Closson et al., 2022; for Italy: Sette et al., 2023). But it makes sense to distinguish between different withdrawal types: while the Sette et al. (2023) study indicates avoidant youth and shy youth are the loneliest subgroup with the lowest life satisfaction, unsociable youth appear closer to youth who have not withdrawn. And while higher shyness and avoidance were associated with higher loneliness in all studied countries, feeling lonelier

Table 8

Overview on outcomes of social withdrawal.

Outcomes	Main points
Mental health and well-being	Internalised problems, such as anxiety, depression and loneliness, as well as lower life satisfaction and subjective well-being.
Developmental challenges	Problems with developmental tasks such as identity forming, building relationships, developing beliefs.
Behavioural issues	Problematic internet use and smartphone dependency, eating disorders and sleep difficulties. While problematic internet use was moderated by family functioning, smartphone dependency is linked to peer relationships.
Self-harm and suicidal behaviour	Social withdrawal is associated with self-harm and suicidal behaviour, though most likely indirectly through other outcomes, being mediated by psychological factors.
Resilience factors	Self-regulatory abilities and being connected to nature act as protective factors towards negative outcomes of social withdrawal. If social withdrawal is the preferred life choice it does not impair the quality of life.
Peer relationships	Social withdrawal is associated with more difficulties with peers, such as rejection, victimisation and lower-quality relationships. These effects are buffered by prosocial behaviour.
Romantic relationships	Socially withdrawn young people tend to be romantically involved much later than their peers and seem to have difficulties building such relationships.
School	Social withdrawal is linked with lower academic achievement, but moderated by a positive teacher-student relationship.

was an outcome of social withdrawal only in the US (Bowker et al., 2023).

From a more purely psychological perspective, *personality dysfunction and developmental issues* are often-studied outcomes of social withdrawal. High levels of social withdrawal motivations have been associated with overall personality dysfunction and interpersonal sensitivity. In some cases, similar outcomes were explicitly related to developmental tasks. For example, Barry et al.'s US study (2013) focused on developmental factors as outcomes of certain withdrawal subtypes: In adolescents, social withdrawal, particularly being shy and anxious, was associated with negative outcomes on developmental tasks, including developing (religious) beliefs, forming an identity as well as building quality relationships with peers and parents. Amendola & Cerutti's (2023) Italian study analysed different groups of individuals with social withdrawal and found that adolescents with high motivation to socially withdraw and high Hikikomori symptoms had the highest overall personality dysfunction and interpersonal sensitivity.

Researchers have also studied *behavioural issues* linked to individual internal problems that may result from social withdrawal. Such behavioural problems include problematic internet use, eating disorders and sleep difficulties. Regarding internet use, Chen, Gao, et al.'s (2021) Chinese cross-sectional analyses found a link between shyness and mobile phone dependency, mediated by psychological needs; family cohesion played an even more complex role as a moderator. Choi, Han & Kang et al.'s Korean study (2022) claimed social withdrawal had a direct positive correlation with problematic internet use, while withdrawal somewhat mediated the link between bullying victimisation and problematic internet use. Li et al.'s (2021) Chinese study found that social withdrawal was associated with an increase in pathologically high internet use, but was also a moderator: family functioning was linked to less pathological internet use for individuals with low social withdrawal, but not for individuals with high social withdrawal. A Korean study by Lee, Choi & Na (2024), established only an indirect link between social withdrawal and smartphone use: social withdrawal only affects smartphone use via negative peer relationships.

Eating and sleeping behaviours have also been linked to social withdrawal. Etkin et al.'s US study (2016) found that that shyness and

preference-for-solitude as aspects of social withdrawal are associated with increase in emotional eating, mediated by depression and social anxiety. Rotenberg et al. (2013), Rotenberg et al. (2017) found more severe obesity and bulimic symptoms in socially withdrawn youth, although the study does not treat these aspects as determinants or consequences, but rather correlates. Bowker et al. (2023) did a cross-sectional analysis of sleeping problems and found associations between anxious-withdrawal and several types of sleep problems, e.g., sleeping too much, nightmares, and trouble sleeping. This US study found that anxious-withdrawal at the earlier wave was associated with trouble sleeping at a later time point, but only for young adolescents who were highly excluded/victimised.

Social withdrawal is also associated with self-harm and suicidal behaviour, though the associations might be mediated by additional psychological factors, e.g. depression (Zhu et al., 2021). Fong & Yip's Hong Kong study of Hikikomori (2023) identified the same association between social withdrawal and suicidal behaviour.

A few studies identified positive relationships between social withdrawal and resilience factors. For example, a study (Smith et al., 2017) based on a longitudinal sample of adolescents shows that self-regulatory abilities connected to conscientiousness in withdrawn youth may buffer against heightened risk of depressive symptoms. A Chinese study (Chen et al., 2023) found that being connected to nature may reduce the effects of social exclusion experienced through social withdrawal. Likewise, Chan & Lo's findings (2014) on social support suggest that young people in social withdrawal may not necessarily be socially excluded; they may just have shifted from face-to-face interpersonal interactions to digital interactions. In some cases, social withdrawal might be seen as a preferred choice of lifestyle that does not impair quality of life; this conclusion aligns with the findings of other studies (Caputo, 2021; Husu & Välimäki, 2017).

The micro-social effect of social withdrawal on *social relationships* (peer relationships and romantic relationships) is also discussed in the literature. Socially withdrawn individuals tend to have more difficulties with peers, e.g., rejection, victimisation, and lower-quality relationships. Freitas et al.'s Portuguese study (2019) found that anxious-withdrawn adolescents had the worst group-level peer outcomes in the category of being excluded by peers. However, prosocial behaviour appeared to moderate and buffer the positive association between anxious-withdrawal and peer exclusion, particularly in boys.

Socially withdrawn youth are also more likely to experience romantic non-involvement and relationship problems. Barzeva et al.'s longitudinal study in the Netherlands (2020) indicated effects in both directions: negative peer experiences predicted higher self- and parent-reported withdrawal at 13 years and parent-reported withdrawal at 16 years; self-reported withdrawal at 13 years predicted negative peer experiences at 16 years. The results of causal analyses in Lee, Choi & Na's Korean study (2024) indicated that social withdrawal shaped negative peer relationships. Barzeva et al.'s study in the Netherlands (2021) show found that higher levels of social withdrawal predicted higher likelihood of delayed romantic involvement. According to the study, higher withdrawal levels may increase the likelihood individuals will be single at subsequent waves and will start first intimate relationships later.

Academic and social adjustment are frequently studied outcomes of social withdrawal and are important at the micro- and as well as on the meso-level, since those two forms of adjustment in school are strongly linked to school environments. Researchers have studied factors like poor academic performance (because social withdrawal has been linked to difficulty adjusting to academic environments) and general social maladjustment (socially withdrawn youth find social adjustment and functioning more difficult). Z. Wang et al.'s Chinese study (2021) established the link between shyness as an aspect of withdrawal and lower academic achievement; positive teacher-student relationships may moderate or prevent this negative outcome. A comparison between youth in China and Canada (Liu et al., 2015) identified a negative link between shyness, school competence, and academic achievement in

both countries, thought unsociability seemed more strongly associated with adjustment difficulties in China than in Canada. Kwon's Korean (longitudinal) study (2024) linked social withdrawal in the first year of high school to lower achievement motivation to at a later point in time.

Not only with regard to outcomes, but also with regard to determinants and correlates, cross-cultural variations need to be taken into account. The impact and perception of social withdrawal can vary significantly across cultural contexts, as demonstrated by Bowker et al. (2023) and as the sometimes ambiguous findings from different contexts indicate.

3.5.3. Correlates of social withdrawal

Phenomena that were explicitly specified as correlates were often psychological constructs. In some studies, they were also axes of inequality or behaviours that were also specified as outcomes or consequences. Here, we focus on psychological constructs. Sang et al.'s study in China (2018) concluded that the withdrawal core dimensions of shyness, unsociability, and social avoidance were uniquely associated with emotion dysregulation (difficulty managing emotions) and self-reported internalising problems. Correlations with personality factors are at the core of Amendola et al.'s Italian sub-study (2021) based on a non-clinical sample. In this study, overall personality dysfunction and interpersonal sensitivity and depression correlated with social withdrawal, but not directly with problematic internet use and anxiety.

Social withdrawal in Hikikomori was associated with a variety of types of gaming behaviours. Fong et al.'s study (Fong et al., 2023) distinguished between risk levels that ranged from low to high for depressive symptoms, suicidal ideation, and help-seeking. One study of internet use and addiction among Hikikomori (Tateno et al., 2019) found that using the internet for gaming was associated with higher risk of social withdrawal and Hikikomori than using the internet for social media.

4. Conclusion

In the studies we included in this scoping review, the term social withdrawal is used either as an umbrella term, depicting the overarching meaning of the phenomenon in general, or to describe a particular subtype or a threefold set of subtypes. Most studies rely on the concepts of opposing approach, avoidance motivations and solitude, which serve as their theoretical foundations. The term Hikikomori is often used either as a synonym for social withdrawal (using both words interchangeably during the study, mostly in studies that included Asian subjects) or as a standalone and specific term to describe an extreme form of social withdrawal and the affected people itself. Comparing these terms as how they were used within the reviewed studies leads to the following conclusion: The main difference between the concept of Hikikomori and the general term of social withdrawal seems to be that Hikikomori is based on a very specific definition with three criteria that must be fulfilled in order to occur, whereas social withdrawal doesn't rely on a clear and definite set of criteria. On the other hand, the main common aspect between those two concepts is their theoretical basis on the approach / avoidance motivation and solitary behaviour.

Though the determinants in the studies are rarely proven to directly cause social withdrawal, they are likely to be connected to the emergence and continuation of social withdrawal, which is unlikely to be caused by a single determinant only. The field of interaction is bound to be complex, especially when factoring in axes of inequality and correlates. To illustrate this: The most impactful factors seem to appear likewise among the determinants as well as among the outcomes: *mental health, peer relationships and school*. Suffering from mental health problems can promote social withdrawal, which in turn might exacerbate those mental health problems. Being rejected, victimised and bullied by peers is a risk for social withdrawal and at the same time, being socially withdrawn solidifies these peer problems making it more difficult to reconnect and build high-quality relationships. The school as an

environment for social adjustment, self-efficacy and achievement can promote social withdrawal when individuals are failed to be seen and noticed, with socially withdrawn students sliding into lower academic achievement and dropping out of school. Those three factors show the vicious circle of social withdrawal when the once-determining factors of the phenomenon also become its consequences which aggravate it even further.

Concluding, based on the current state of research, we describe an analytical framework for the comprehensive study of social withdrawal in Fig. 2.

Fig. 2 shows the importance of a social science perspective on social withdrawal. Though the psychological concepts of approach/avoidance motivations and solitude might be at its core, most of the correlating and most likely influencing factors are located in the environment around the affected individuals. Thus, it seems non-negotiable to assign a greater importance to social systems on the micro-, meso- and macro-level, which those individuals are a part of – or, in this case, most frequently not.

Applying a broader perspective like just described, when researching and developing interventions for social withdrawal, has already been shown by findings from other studies (Husu & Välimäki, 2017; Wong et al., 2015) on social withdrawal and Hikikomori. Their authors suggest that the phenomenon of social withdrawal in young people needs to be studied from an environmental, social, psychological and economic perspective all at once. This is in line with the bio-psycho-socio-cultural model of Hikikomori presented by Kato et al. (2019).

Regarding the outcomes in Fig. 2, the call for intervention seems obvious and urgent. With this review we hope to shed some light on the deep and underlying mechanisms connected to social withdrawal. They suggest that for example mental illnesses, internalising behaviours or disorders should not be only be treated from a individual and pathological perspective, but also centre on supporting individuals in reconnecting with other people, building meaningful relationships and ultimately promote social competence. At the same time, there have been results showing that social withdrawal is not necessarily always connected to negative outcomes but in some cases may be experienced positively and represent a choice of life for certain individuals, for example those with a much higher preference-for-solitude.

5. Implications for research

Even though a lot of the reviewed studies are based on Asendorpf's model of approach/avoidance motivations and some of them even proof the three subtypes to be distinguishable when researching socially withdrawn young people, a critical reflection is in need. Asendorpf's study has been published more than 30 years ago and the typology is based on findings on young children. Though the main mechanic of the opposing motivations seems to be present among adolescents and emerging adults, few studies ever asked about other subtypes beyond the three already defined. Considering mediatisation and digitalisation progressing over the decades there might be more nuances or even new subtypes to be found. With this in mind, when studying social withdrawal it remains important to operate with the umbrella term, since the different behaviours along the three subtypes may overlap and not always be identified clearly as belonging to only one subtype, like e.g. Barzeva et al. mention (Barzeva et al., 2019).

Along the words of Bowker and colleagues (2011, p. 211), it appears to be crucial to always study “when and why withdrawal is most detrimental to adjustment”. As shown in a Chinese study (Ding et al., 2023), associations between the three social withdrawal subtypes and negative or positive adjustment may differ by age group (childhood, adolescence, emerging adulthood) and thus need to be researched and addressed respectively and specifically. Being socially withdrawn and in a transition, e.g. from adolescence and early adulthood to adulthood, might put individuals especially at risk (Barzeva et al., 2019). Looking specifically at the transition from adolescence to emerging adulthood,

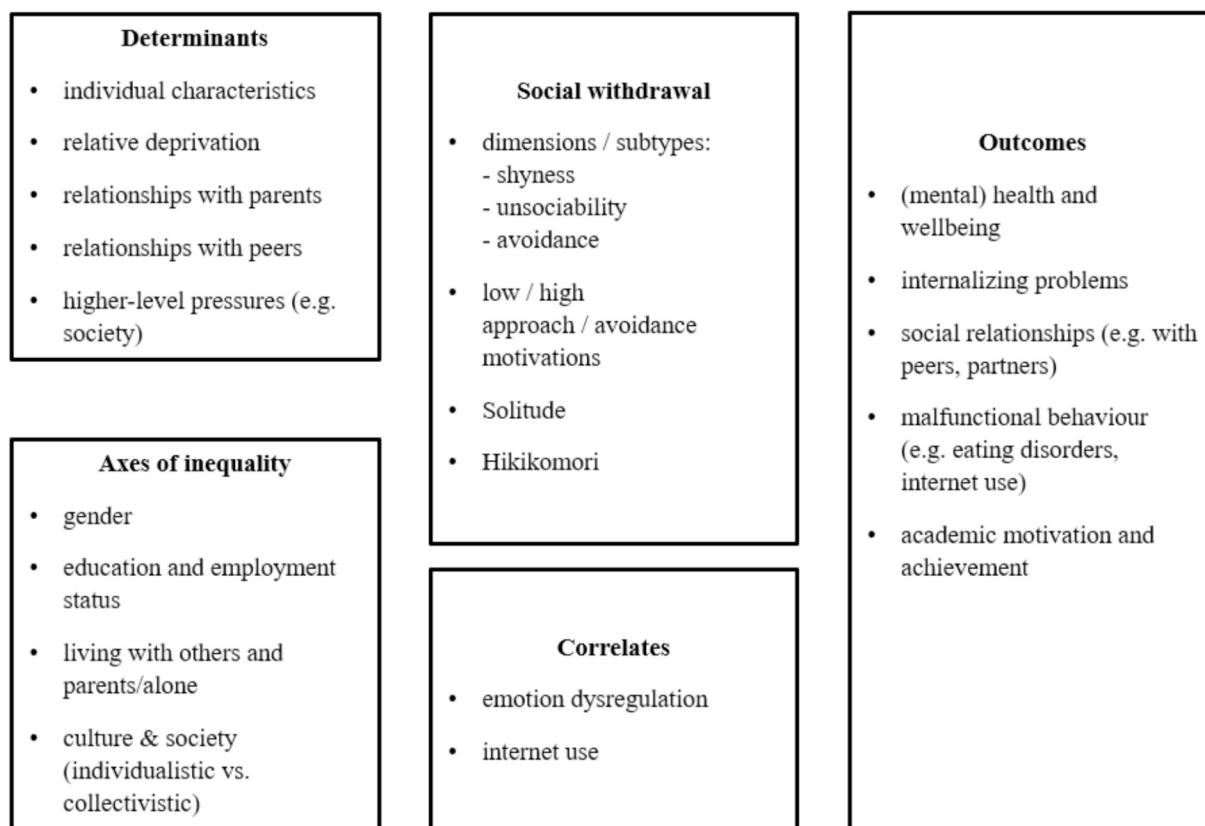


Fig. 2. Analytical framework based on the current state of research.

the determinants and correlates mentioned in Fig. 2 will gain more importance, since the individuals are expected to enter a more autonomous phase in their life.

Social withdrawal is, as in the (extreme) case of Hikikomori but also generally, described as culture-bound or connected to culture, as well as depending on societal structures (Bowker et al., 2019, 2023; Zheng, Coplan, Chen, et al., 2023). Remembering the different perceptions of social withdrawal (subtypes shyness and unsociability) in Western and Asian cultures, but also the findings from the study with Portuguese adolescents (Freitas et al., 2019) and the one study comparing emerging adults in Australia and the U.S. (Stavropoulos et al., 2019), it is of great importance to always consider culture and society, when studying social withdrawal. It seems, that in rather collectivistic societies, where engagement for social cohesion is the desired norm, young people with a motivation to participate (shyness) are still perceived well, even though they might appear more socially withdrawn. Whereas in rather individualistic societies, the opposite seems to be the case, making this type of society much more prone to have even more socially withdrawn people, because keeping to yourself is regarded as fitting the norm. On the other hand, the negative consequences socially withdrawn people are confronted with, seem to be harsher within collectivistic societies than in individualistic societies. These hypothetical conclusions might highlight the need to not only include culture and society as factors into the analyses of social withdrawal, but also when thinking about supporting interventions for socially withdrawn young people. While the review focused on studies from a socio-psychological perspective (not covering explicitly clinical studies), findings of this systematic scoping review indicate a disciplinary domination of psychology in this research field. Thus, the micro-level of analysis (micro-social relations) are most frequently analysed, while the role of institutions (*meso*-level) or society (*macro*-level) is largely under-researched. Thus, future research on social withdrawal could include the genuine social science perspective in a more pronounced way.

Critically discussing the results of this review of the current state of research, a coherent educational framework and a coherent definition of social withdrawal is still a desideratum. While the most frequently used methods in the studies on social withdrawal are quantitative approaches, there is a severe lack of qualitative analyses and causal quantitative longitudinal analyses (particularly lagged models). This systematic review shows how the various determinants and outcomes are interwoven; analysing causal or consequential mechanisms with quantitative, longitudinal studies should consider including various of these factors and not only focus on one, which would allow to show the interdependency within these mechanisms. The scarcity of qualitative studies makes it impossible to develop a deep understanding of the subjective meaning of social withdrawal for young people. This type of understanding is needed to develop effective and supporting interventions for those young people who face mostly negative consequences from social withdrawal. Using qualitative, narrative interviews with young people who are socially withdrawn or have been socially withdrawn would be one way to gather such insights. Furthermore the reviewed studies regarding emerging adults are often times based on a sample of university students which might limit the representativeness and generalizability of results. Future research should strive to include diverse samples regarding academic education but also other axes of inequality as mentioned throughout the article. Finally, while late childhood and early adolescence is well covered, emerging adults deserve more attention. Preferably, further studies would focus on one of those age phases specifically or on both, while clearly distinguishing one group from the other, making it possible to interpret the results in the light of their respective developmental differences. For example, regarding digital media and internet use might have different relevance and impact on social withdrawal among those two age groups, probably making it even more impactful among emerging adults concerning their challenge to become independent individuals.

A final point for discussion is the question of how free the choice of

social withdrawal is. Defining social withdrawal, scholars stress that the phenomenon is about voluntary withdrawal (e.g. Rubin et al. 2009). However, as withdrawal shows negative consequences, withdrawal may be a conscious decision, but not a real free choice, but forced by certain circumstances. Combining this concept with elements of the structural violence discourse (e.g. Galtung, 1969) may help here. Social withdrawal is presumably caused by social structures or institutions, harming individuals or groups by preventing them from meeting their basic needs or realising their full potential.

6. Limitations and strengths

Considering limitations, first of all, a systematic scoping review does not cover the entire landscape of the state of research on a given topic as rigid criteria are applied. In our case, research beyond (1) English-speaking publications and (2) clinical and medical studies were not covered. This first limiting criteria is especially restricting regarding the topic of Hikikomori. Even though there is a substantial amount of articles on Hikikomori included in the review, we have to assume there are many more which are only published in Japanese and other Asian languages, due to the decades-long prevalence of the phenomenon in Japan and East Asia. The second limitation – excluding clinical and medical studies – might have helped, on one hand, to sort out studies where social withdrawal is defined exclusively linked to a psychic disorder as a symptom or consequence, in line with the DSM-5 (depression, anxiety and personality disorders, etc.). On the other hand this limitation might have led to missing out on findings of clinical studies on social withdrawal as a separate occurrence and phenomenon, in line with the ICD-11 (MB23.Q). The same limitation applies to the studies which operate with a clinical definition of Hikikomori. Yet this second limiting factor might also be seen as a strength as we would like to apply a social science perspective to be able to provide specific insights helping to identify respective measures to deal with social withdrawal within these disciplines and their practice fields.

An additional limitation is the usage of only two databases in the search, namely SCOPUS and Web of Sciences. Though those two databases show a broad coverage of literature, ensuring high credibility, quality, and international visibility, we might have missed highly specific, niche and regional, as well as more practice oriented journals. This may constrain the comprehensiveness of this scoping review, potentially omitting important details such as additional determinants, axes of inequality, outcomes, or correlates.

The major strength of this review lies in the fact that it is specifically on adolescents and emerging adults. This allows to show findings on social withdrawal among young people only, highlighting not only a broad prevalence of social withdrawal throughout several countries but also drawing a picture of its complexity. At the same time summarizing adolescents and emerging adults instead of reviewing the categories separately, limits the interpretability of the results regarding their age specific characteristics. Obviously, social withdrawal is not prevalent and impactful in these two phases of life only, but it might be of greater impact during adolescence and emerging adulthood due to an accumulation of transitions, as well as those phases being significant in determining the direction of one's life.

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CRediT authorship contribution statement

Both authors contributed equally to every part of the research,

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Informed consent

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.childyouth.2026.109038>.

Data availability

No data was used for the research described in the article.

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