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Research Paper

Dissociative features related to imaginary companions in the assessment of childhood adversity and dissociation: A pilot study

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A R T I C L E   I N F O

A B S T R A C T

Childhood imaginary companions (ICs) are common and a normal part of child development, but certain aspects of ICs are also connected to adversity and dissociation. The purpose of this pilot study is to find out what kind of ICs children in mental health care have, are the features of ICs related to stressful childhood experiences, and whether the assessment of ICs could provide insight to the assessment of children. 19 7-12-year-old participants were recruited via a Finnish child psychiatry clinic. The children were interviewed using the imaginary companions interview. The legal guardians reported background information and information about stressful childhood experiences. The data was analyzed both quantitatively and qualitatively. In general, the ICs were more likely to have normative features than dissociative features. However, some dissociative IC features were also commonly reported. The SCE duration ($U = 39.0$, $p = 0.029$) and the number of dissociative IC features ($U = 59.5$, $p = 0.005$) were significantly higher for children with 6 or more ICs than for children with 1-2 ICs. There was a positive correlation between SCE duration and number of ICs (1-2 ICs vs. 6 or more ICs), r(12)) = 62, $p = .018$, and between dissociative IC features and number of ICs, r(15)) = 676, $p = .003$. Due to the small sample size in this study, the results cannot be generalized outside the clinical population with the specific age and symptom profile described in this study. Children were willing to talk about their ICs and interviewing them about their ICs seemed to add value to the assessments. Results and modifications made to the imaginary companions interview are discussed.

1. Introduction

Imaginary companions (ICs) are a normal part of child development, that is usually no cause for concern (Baum, 1978; Taylor, 1999; Taylor & Mottweiler, 2008). However, ICs are also linked to childhood adversity and psychopathology (e.g., Davis et al. 2019), and certain aspects of ICs might be a sign of pathological dissociation (McLewin & Muller, 2006; Silberg, 2013). The existence and nature of ICs has not routinely been part of dissociation assessment nor an issue of discussions in cases of childhood adversity in clinical settings. The aim of this pilot study is to find out what kind of ICs children in mental health care have, and are they related to stressful childhood experiences. We also aim to evaluate whether the assessment of the number and features of ICs would provide valuable insight to the assessment of childhood dissociation.

1.1. Imaginary companions

In previous research, ICs have been defined in various ways (McLewin & Muller, 2006). Klein (1985), for example, defines an IC to be invisible transitional phenomenon, that is beneficial to the child's development, and helps the child to gain control over one's impulses. Along with invisible ICs, Singer & Singer (1990) include stuffed animals, which assume living, humanlike properties, to be ICs. They see ICs as make-believe companions that have adaptive and compensatory quality for the growing child. Taylor (1999) defines ICs as "very vivid imaginary characters (person, animal) with which a child interacts during his/her play and daily activities." An IC can be invisible, or it can be a toy or a doll. According to Taylor, an IC toy or doll should be distinguished from a transitional object, which are thought to help children make the distinction between the self and the other. Transitional objects and IC toys might both be important for the child, and they might both be of comfort for the child. The child might also talk and listen to both. The distinction between a transitional object and an IC toy is that the child creates a distinct personality for the latter, and they (IC toys) have enduring human-like features.

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Taylor (1999) further includes impersonating someone or something to be an IC if it can be separated from common role-play, which is usual for children. For impersonating to be included as an IC, the identification of the child to the role (s)he is playing should be complete, persistent, and long-term. A child might impersonate a human, or an animal, and persistently act like the impersonated subject. For example, a child might act like a cat and refuse to talk or eat at the table.

The prevalence of ICs among children varies greatly across studies. McLewin & Muller (2006) showed in their review that 9.8% to 46.2% of children have ICs. The variation in the prevalence rate depends on the definition of ICs and the informant used in different studies. Some research has included personified objects, and/or child's own personification as an imaginary companion, and some have excluded both. Further, children themselves report 2,6 times more ICs than their parents (Moriguchi & Todo, 2018). ICs have been found most common among 3–6-year-old children, and more common amongst girls and firstborns (McLewin & Muller, 2006). Culture has not been found to affect the total prevalence of ICs but may affect the type of ICs, as Moriguchi & Todo (2018) found that children in Western cultures reported more invisible friends than Japanese children.

Reasons for the development of ICs can be found in the child's need to have a companion and to simulate social relationships. ICs can also serve as a mean to cope with difficult-to-manage situations, and as means to practice emotion- and self-regulation and other skills needed later in adulthood (Gleason, 2017). Further, ICs can be a way to cope with ordinary fears and restrictions, guilt, helplessness, or limitations of children's own abilities, as well as traumatic experiences (Taylor, 1999). In this sense, ICs are thought to serve as a defense mechanism against stressors a child is experiencing (Baum, 1978).

Children with ICs have been shown, for example, to have better emotion understanding and theory of mind (Giménez-Dasí et al., 2016; Lin et al., 2020), as well as more positive coping mechanisms (e.g., getting advice from someone or reading, in comparison to getting into a fight or hurting oneself) (Taylor et al., 2010), than children without ICs. The quality of relationship between child and his/her ICs seems to affect these differences. Children with egalitarian relationships (e.g., more reciprocal, caring, and guiding relationship) with their ICs have better false belief understanding (e.g., understanding deception in social stories) than children with hierarchical relationships with their ICs (e.g., where the child is more in charge of the IC) (Lin et al., 2020). Children with egalitarian ICs are also rated more positive and popular by peers, and higher in social competence by teachers than children with hierarchical IC relationships (Lin et al., 2018).

Further, there seems to be some gender differences in what kind of ICs children have. Girls tend to be more nurturing towards their ICs (e.g., teaching them skills), while boys tend to be more competitive with their ICs (e.g., comment to be faster at running or biking) (Coetzee & Shute, 2003). Girls tend to have less competent ICs (e.g., worse at running, climbing, doing puzzles, naming colours, and counting) than themselves (Coetzee & Shute, 2003; Harter & Chao, 1992). For boys, the distinction is not as clear, as Harter & Chao (1992) found that boys tend to have ICs that are more competent than themselves, but Coetzee and Shute (2003) found that half of the boys rated their ICs as less competent than themselves.

Childhood ICs are also connected to more externalizing symptoms in childhood (Taylor et al., 2010) and higher hallucination proneness in adulthood (Fernyhough et al., 2019). Fernyhough et al. (2019) further found that adults who both had ICs as adults and reported having ICs as children, scored higher on hallucination proneness and dialogic inner speech, especially evaluative/critical inner speech, than those who only had childhood ICs, or never had an IC. Concerning prodromal psychosis symptoms, ICs are connected to childhood adversity and prodromal hallucinations, but not unusual thought content or negative symptoms (Davis et al., 2019).

1.2. ICs and childhood dissociation

Dissociation is often defined as "a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behaviour" (American Psychiatric Association, 2013). However, as Ford (2013) points out, there is still no consensus on the definition and concept of dissociation. Ford (2013) describes dissociation as "a shift in self-regulation from growth-focused psychobiological operations to survival-based hypervigilance…, resulting in a reduced capacity to sustain an integrated and coherent set of mental representations of self and relationships", highlighting the role of self-regulation in dissociative processes. Similarly, different theories describing the development of dissociation in children have addressed the significance of self-regulatory processes (Putnam, 1997; Silberg, 2013).

Traumatic or highly stressful life-events may cause dissociation as an adaptive defense mechanism. Dissociation includes amnesia, depersonalization, derealization, identity confusion, and identity alteration. (Steinberg & Schnall, 2003). Dissociative experiences are ordinary also in healthy people, whose dissociative experiences are brief and rare, and do not affect one's ability to function. For people with disordered or pathological dissociation the experiences are persistent and recurrent and disrupt their ability to function in daily life. In some instances, dissociative parts of identity can develop (Steinberg & Schnall, 2003). McLewin and Muller (2006) demonstrate that ICs might at times be a sign of pathological dissociation. Normal ICs are thought to stay under the childs' control, act in ways that are beneficial to the child, and the child can remember things the IC has done (McLewin & Muller, 2006; Taylor, 1999). In contrast, ICs as dissociative symptoms can control the childs' body, make the child do things the child does not want to do, and act outside the childs' awareness, so that the child may not remember what was done when the IC was in control (McLewin & Muller, 2006; Silberg, 2013). It is also more common for children with dissociative disorders to have ICs, their ICs are more permanent, and they have more ICs (on average 6,5) than children in normative samples (1-2 ICs) (McLewin & Muller, 2006). In childhood, dissociative parts of identity might appear like externalized ICs (McLewin & Muller, 2006).

To better understand normal versus dissociative IC features, Silberg (2013) developed an imaginary companions questionnaire, and presented the questionnaire to 19 children with a dissociative disorder and 51 emotionally healthy children. Children who had a dissociative disorder had, more often than the others, ICs that were experienced as annoying, commanded the child and made the child do things the child did not want to do, did bad things and blamed the child, and fought with each other about the child. The ICs appeared to the child more often when the child was angry and did not want other people to know about their existence. These children also thought that their ICs were more than just imagination and wished that the ICs would go away. The ICs of the children in the normative group often came to the child when the child was happy and when the child wanted them to come, knew things that the child did not know, and requested the child to keep secrets. According to McLewin and Muller (2006) and Silberg (2013), certain features of ICs might be a sign of dissociation in children.

1.3. Research questions

This pilot study aims to find out what kind of ICs children in mental health care have, and whether certain features of ICs are related to stressful childhood experiences among a clinical sample of 7–12-year-old children. The dissociative IC features are explored against normative IC features.

2. Method and measures

2.1. Procedure and participants

This pilot study is a part of a larger project aiming to evaluate the validity and reliability of the methods used to evaluate traumatization and dissociative symptoms of children, in a Finnish clinical sample. The ethical committee of the health care district of XX, Finland, has made an ethical statement for the research, and the health care district of XX has granted permission for the research. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

The participants for the pilot study were recruited via the child psychiatric clinic of XX, Finland, during Spring 2019—Spring 2021. All 7–12-year-old children with ICs visiting the child psychiatric clinic were invited to participate. Children were asked whether they had any ICs. From those answering yes, an informed consent of participation was requested. An informed consent was also requested from the parents/legal guardians of participating children. Altogether 19 participants and their guardians gave their consent to participate. Four children and/or guardians declined from the study; in two cases, the child was not willing, and in two, the guardian. The participating children were interviewed about their ICs using translated version of Imaginary Companions Questionnaire as an interview (Silberg, 2013). The parents reported background information, including learning difficulties, psychological and psychiatric symptoms, and potentially traumatic life experiences.

2.2. Imaginary companions interview

Imaginary Companions Questionnaire is a questionnaire developed by Silberg (2013), and consists of 15 questions, each answered "Yes" or "No". To our knowledge, it is the only available questionnaire to evaluate dissociative IC phenomena. The questionnaire is used to explore the features of children's ICs, some of which are believed to refer to ordinary, non-alarming ICs, and others are believed to refer to dissociative phenomena. The IC questionnaire has not been officially translated to any language, and there is no other research of the questionnaire than Silbergs (2013) own. Nevertheless, it has been used, to some extent, in Finland, as a part of psychological evaluations of children.

For this research, the latest version of the questionnaire was back-translated to Finnish. Further, two questions (16. "Imaginary companions come to me only when I want them to", and 17. "My imaginary companions do bad things and blames me") were added. Silberg (2013) has used these two questions in her own research, but they are not included in the original English version of the questionnaire. In this research, the questionnaire is used as an interview because this makes it easier to identify questions that might be difficult for the children to understand and thus need to be revised, and because some of the participating children have not yet learned to read. ICs were defined as (1) an imaginary character, (2) an object or a toy that is important for the child, if it has enduring human like features, or (3) a character the child impersonates if the identification is complete and long-term.

The interview followed Taylor's (1999) guidelines for interviewing children about their ICs and started as follows:

> "Now I'm going to ask you some questions about friends. Some friends are real like the kids who live on your street, the ones you play with. And some friends are pretend friends. Pretend friends are ones that are make-believe, that you pretend are real. Do you have a pretend friend?" (Taylor, 1999)

If a child told that (s)he has a pretend friend/imaginary companion, (s)he was further interviewed following the Imaginary Companions Questionnaire. If it was not clear whether the friend the child was talking about was indeed imaginary and not a real friend, the guardian of the child was asked to clarify.

2.3. Stressful childhood experiences

Guardians reported whether the child has been exposed to stressful childhood experiences as part of the background information questionnaire, which was developed for this study. The stressful childhood experiences in this study included (1) emotional and physical bullying at school, (2) death of a loved one (e.g., parent, sibling, friend), (3) parental divorce, (4) separation from parent(s), (5) parental alcohol abuse or somatic or mental illness, (6) parental verbal or physical fighting, (7) continuous verbal or physical fighting between siblings, (8) other verbal or physical abuse, (9) sexual abuse within family or outside family, (10) physical neglect, (11) media exposure to violent or sexual material, or (12) other violent experience. The guardians also reported for how many years the child has been exposed to these experiences, and for how many years they have received support for the consequences of these experiences. For support, it was reported whether the child has had support from professionals, parents, siblings, friends, other support, or no support.

2.4. Background information questionnaire

Information about the family income and education, child date of birth, gender, residency, number of siblings, somatic illness, learning disabilities, and psychiatric diagnosis were reported by the guardians in the background information questionnaire. Psychiatric diagnoses included ADHD, autism spectrum disorders (ASD), Tourette, intellectual disability, anxiety and mood disorders, psychosis, eating disorders, conduct disorder, attachment disorders, and trauma-based disorders.

2.5. Analysis

To explore what kind of ICs children have, and whether certain features of the ICs are related to childhood adversity, descriptive statistics including frequencies and percentages were calculated. Mann-Whitney U test was used to compare the differences in SCE and support scores in relation to the number of dissociative IC features. Spearman correlation coefficient was calculated to discover the correlations between the variables. The data was analyzed using the IBM SPSS Statistics 27 −program. The features of ICs were also analyzed qualitatively.

3. Results

Table 1 shows the background information of the participants, of whom 12 were girls and 7 boys, with an age range of 7–12 years. The participants were somatically rather healthy; one had migraine, two had bladder/bowel disorders, two had allergies, and two had other somatic disorders. Regarding learning disabilities, four participants had dyslexia, two had language disorder, four had perceptual disorder, one had pervasive learning disorder, and two had other learning difficulties. Out of neuropsychiatric disorders, five had ADHD/ADD, one had ASD, and two had Tourette. For mood disorders, three had fear- and anxiety disorders, and one had depression. Four had trauma related disorders, and two had attachment disorders. Two had conduct disorder, and one had disorders in self-regulation. Two had eating disorders, and two had sleeping disorders.

3.1. The amount and nature of ICs

Children reported the number of their ICs in the IC interview (Table 2). Most of the children had 1–2 ICs, and three children had 7

Table 1
Background information.

		n
Age	7	2
	8	5
	9	4
	10	4
	11	1
	12	3
	Total	19
Gender	Female	12
	Male	7
	Other	0
	Total	19
Children in family	1	3
	2	4
	3	7
	4	3
	5	1
	Total	18
Residency	Biological family	5
	Biological mother	4
	Biological father	3
	Foster family	3
	Foster mother	0
	Foster father	0
	Adoption family	1
	Social services / institution	3
	Total	19

Table 2
Number of ICs.

		n	%
Number of ICs	1	5	27.8
	2	6	33.3
	3	1	5.6
	4	0	0.0
	5	2	11.1
	6	1	5.6
	7 or more	3	16.7

or more ICs. One child did not report the number of his/her ICs. Tables 3 and 4 show the prevalence of normal and dissociative features of the ICs. The IC features are defined as normative or dissociative according to whether the features have been linked to normative or dissociative IC phenomena in previous research (McLewin & Muller, 2006; Silberg, 2013). If a child had several ICs, they often had different features; in these cases, both "yes" and "no" were marked in the interview, and these cases are shown as "both" in Tables 3 and 4.

In general, children reported the ICs more likely to have normative features (e.g., gives advice, is with the child when lonely) than dissociative features (e.g., IC is annoying, controlling, or commanding). However, children were slightly more likely to consider the ICs to be more than just imagination, which has been linked to dissociation in earlier studies. Also, the ICs were slightly more likely not to want others to know about them, and that the ICs appeared to the children when they were angry (also linked to dissociation in earlier studies). Further, regarding the dissociative features, 11 out of 19 children told that they could not control their ICs, and two out of 19 children could control some of their ICs, but not all.

3.2. Qualitative analysis of nature of ICs

3.2.1. "Takes over and controls me"

One child had ICs that made him hit himself and other people, and in these situations the child was physically hurting. The ICs also

Table 3
Normative IC features.

		n	%
IC gives advice	Yes	12	66.7
	No	5	27.8
	Both	1	5.6
IC asks the child to keep secrets	Yes	11	57.9
	No	7	36.8
	Both	1	5.3
IC has knowledge child does not	Yes	6	33.3
	No	12	66.7
	Both	0	0.0
IC has abilities child does not	Yes	11	57.9
	No	8	42.1
	Both	0	0.0
IC is with the child when (s)he is lonely	Yes	13	68.4
	No	5	26.3
	Both	1	5.3
Child hopes that others could see the IC the same way (s)he can	Yes	8	42.1
	No	10	52.6
	Both	1	5.3
IC helps the child when (s)he is scared	Yes	10	52.6
	No	7	36.8
	Both	2	10.5
IC is with the child when (s)he is happy	Yes	18	94.7
	No	1	5.3
	Both	0	0.0
IC is controlled by the child	Yes	6	31.6
	No	11	57.9
	Both	2	10.5

squished his head, which hurt, and he was wondering how something that is not really there can actually hurt you. Same kind of confusion was described by another child, who told that "My IC tells me to hit or hug other people, but actually it does not make me do things I do not want to do, because it only does what I want to do." Children

Table 4
. Dissociative IC features.

		n	%
IC is more than just imagination	Yes	11	61.1
	No	7	38.9
	Both	0	0.0
ICs disagree with each other	Yes	6	31.6
	No	12	63.2
	Both	1	5.3
IC is annoying	Yes	5	26.3
	No	12	63.2
	Both	2	10.5
Child hopes that the IC would go away	Yes	5	26.3
	No	12	63.2
	Both	2	10.5
ICs takes over and makes the child do things (s)he does not want to do	Yes	3	15.8
	No	15	78.9
	Both	1	5.3
IC tries to command the child	Yes	3	15.8
	No	14	73.7
	Both	2	10.5
IC does not want others to know about it	Yes	10	52.6
	No	7	36.8
	Both	2	10.5
IC is with the child when (s)he is angry	Yes	11	57.9
	No	7	36.8
	Both	1	5.3
IC agenda when angry	Helpfull	5	45.5
	Agitative	2	18.2
	Both above	1	9.1
	Scared/Sulking	3	27.3
IC does bad things and blames the child	Yes	3	15.8
	No	15	78.9
	Both	1	5.3

Table 5
IC number and dissociative features by SCE scores and support.

		SCE score Mean	SCE duration (years) Mean	Support score Mean	Duration of support (years) Mean
Sum of dissociative IC features	1	5.0	4.0	2.0	3.0
	2	7.0	3.0	3.0	2.0
	3	9.0	3.0	2.0	3.0
	4	5.0	8.0	2.0	6.0
	6	5.0	4.0	2.0	1.0
	9	10.0	5.0	2.0	2.0
Number of ICs	1	7.0	5.0	3.0	3.0
	2	5.0	3.0	2.0	2.0
	3	6.0	2.0	1.0	3.0
	4	0.0	0.0	0.0	0.0
	5	5.0	6.0	2.0	5.0
	6	10.0	3.0	0.0	2.0
	7 or more	9.0	8.0	3.0	3.0

described that ICs told them, for example, to do household work or schoolwork the child would not like to do (either make the child do these or then the ICs could do these instead of the child himself), make them play games and watch videos when not allowed to, hit themselves, parents and others, and also, make their muscles twitch.

Some children told that they do not remember what they have done when the ICs were in control, or what was done when the IC was being mean. One child aptly pointed out that the ICs cannot be called imaginary "friends", which is the Finnish term for ICs, because they (his ICs) are mean.

3.2.2. "With me when I'm angry"

Eleven out of nineteen children reported having an IC that was with the child when (s)he was angry, but the agenda of ICs varied, as is shown on Table 4. One child reported that he had different ICs and some of them where agitative, while others were trying to calm him and the other ICs down. He told that the mean ICs were trying to kill each other, and one of the ICs, the nice one, tried to calm everyone down. The mean ones also told the child to kill other people, but he told them that he does not want to do that, because then he would go to jail. One of his ICs also told him to kill himself, "because no one cares". The child told further that this specific IC used to be nice but turned evil after his parents divorced.

3.2.3. "Wish others can see my IC"

Eight out of nineteen children wished others could see the ICs the same way as him/herself, and 10 children did not wish that. One told that he wanted others to see some of them, but not others. The reasons behind these opinions were diverse. One child wished others would see and hear the ICs because then others would believe him and that the ICs make him misbehave. Another wished instead that the IC would go away and "I would not infect others with it, because it's mean." At the same time, he also wished the IC not to go away, because sometimes it was nice and kept the child company at night. Another child simply did not want others to see the ICs because they were his secret.

3.3. Stressful childhood experiences (SCE) and ICs

Table 5 shows the sum of dissociative IC features ranging 0–9 (see Table 4) and the number of ICs by the SCEs, SCE duration, and number of different forms of support and support duration. SCE score was summed up from the different stressful experiences the guardians reported the child had experienced. The support score sums up the number of different forms of support child had received, e.g., professionals, parents, siblings, friend, other, or none. The SCE score, SCE duration, support score and duration of support are shown in Table 5 as mean scores.

Table 5 shows that children with more ICs and ICs with more dissociative features tend to have higher SCE score and duration. There was no notable variation in support scores and duration in relation to IC number or dissociative IC features. Mann-Whitney U test was computed to find out whether the SCE and support scores are significantly different for children with assumed normative or dissociative ICs. The data was analyzed comparing children with 1-2 ICs to children with 6 or more ICs. These classes were drawn from previous research indicating 1-2 ICs as normative and 6 or more ICs as dissociative (McLewin & Muller, 2006). The Mann-Whitney U test (Table 6) indicated that the SCE duration ($U(n_{1-2} = 9, n_{6 \text{ or more}} = 5) = 39.0$, $z = 2.240$, $p = 0.029$) and the number of dissociative features ($U(n_{1-2} = 11, n_{6 \text{ or more}} = 6) = 59.5$, $z = 2.703$, $p = 0.005$) were significantly higher for children with 6 or more ICs than for children with 1-2 ICs. The difference was not significant for SCE score, support score, or for duration of support. Spearman's rank correlation was computed to assess the relationship between the above variables. There was a positive correlation between SCE duration and number of ICs (1-2 ICs vs. 6 or more ICs), $r(12)) = 62$, $p = .018$, and between dissociative IC features and number of ICs, $r(15) = .676$, $p = .003$. There were no other significant correlations. The meaning and limitations of these findings are discussed next.

4. Discussion

The aim of this pilot study was to find out what kind of ICs children have, and whether certain IC features were related to stressful childhood experiences and dissociation. We also strived to shed light on whether the IC interview could serve as a part of psychological evaluation of childhood adversity and dissociation. The children talked quite willingly about their ICs, and were willing to participate in the research, even though a few children wanted to think about participating for a few days.

Table 6
Mann-Whitney U test for differences in SCE and support scores in relation to the number of dissociative IC features.

	Mean rank		U	z	p
	1–2 ICs	6 or more ICs			
SCE duration	5.67	10.80	39.00	2.240	0.029
SCE score	8.09	10.67	43.00	1.016	0.350
Number of dissociative features	6.59	13.42	59.50	2.703	0.005
Support score	9.68	7.75	25.50	-0.789	0.462
Duration of support	8.41	10.08	39.50	0.667	0.525

The number and features of ICs the children had varied. Most children only had 1−2 ICs, and the ICs were more likely to have normative than dissociative features. However, most children reported, for example, not being able to control the ICs, and the ICs appearing to the children when they were angry. According to previous research (McLewin & Muller, 2006; Silberg, 2013) this might indicate toward dissociative IC features. The sample in this study consisted of patients in child psychiatry clinic, which could explain the high prevalence of these features compared to normative population.

In terms of psychological evaluation, it might be worthwhile to find out whether the dissociative features in ICs have developed alongside with stressful life experiences, as indicated by Silberg (2013). For example, whether the children have had control over the ICs before, and lost control at some point, or if they never felt like they have control over these ICs. One child in our study, for example, reported an IC turning evil after his parents' divorce and that this IC told him that no one cares about him.

In our sample, children with 6 or more ICs were compared to children with 1-2 ICs. Children with 6 or more ICs had higher SCE duration and more dissociative IC features, indicating to the possibility of associations between the number of ICs, dissociative IC features and long duration of SCEs. In the literature, ICs have been seen as a way to cope with traumatic experiences or a defense mechanism against stress (Baum, 1978; Taylor, 1999), a lot in the same way as dissociation (Silberg, 2013; Steinberg & Schnall, 2003). Thus, there might be some covariation and overlap in these phenomena. In this pilot study, validated questionnaires assessing childhood dissociation were not included. Thus, the links between IC features, SCE, and dissociation cannot be established. More research including validated childhood dissociation questionnaires is required.

Despite the above, simply having an IC should not be taken as a sign of pathological development. It has been shown, for example, that larger amount of parental mental state speech at six months of age was connected to higher likelihood of a child having an IC at four years of age (Motoshima et al., 2014). Mental state speech is generally thought of as a positive aspect of parenthood, and thereby ICs could be interpreted as reflecting the positive aspects of child development (for example, Giménez-Dasí et al. 2016, Lin et al. 2018, 2020). The number and features of the ICs, on the other hand, might be worth exploring.

This study served as a pilot study for a larger data collection. We pointed out some limitations that will be corrected for the becoming study. First, many children had ICs that had opposite features, and thus, a "Both/Some yes, some no" -answer was added along with the dichotomic "Yes" or "No" answers. Some questions were twofold (for example, "My imaginary friend bugs me and I wish it would go away"), and these were separated to be different questions in the becoming research. For the questions concerning the child having control over the IC, supplementary questions about if the child has had control over the IC before, and then lost the control at some point of life, were added. Also, in relation to the question about the ICs coming to the child when the child is angry, supplementary questions about the agenda of the IC were added. Further, some questions were made more understandable to the children.

Due to the small sample size in this study, the results cannot be generalized outside the clinical population with the specific age and symptom profile described in this study. Data with more participants and comparative data between clinical and normative samples are needed in future research. Further, the diverse diagnostic groups and significant age difference of the participants might have an impact on the results and needs to be taken into consideration when applying the results into practice. The age and gender of the participants should be considered in future research, since age and gender have an influence on ICs (McLewin & Muller, 2006; Pearson et al., 2001; Silberg, 2013). In this pilot study, we could not specify the type of SCE due to the small sample size. According to previous research (Vonderlin et al., 2018) dissociation is most strongly connected to traumatization at a younger age, to sexual and physical abuse, to intra-familiar trauma, and to cumulative traumatization. Thus, the type of SCE should be taken into consideration in future research.

Altogether, it seems that interviewing children about their ICsadd value to the psychological evaluations of children, as SCEs seemed to relate on number and dissociative aspects of ICs. It is also possible that children may distance some challenging thoughts, feelings, experiences and even behaviors to their ICs. Children in this study shared, for example, information about their desires and needs, fears, loneliness, and other difficult emotions, problematic and undesirable behaviors, troubled eating, and even suicidal thoughts, many of which they had not told to anyone before. Some children shared their need to be heard, or to protect other people (from the child's ICs). Thus, talking about the ICs might shed further light on experiences that are difficult to share, and increase empathy felt towards these children. It might also help construct a secure relationship with the child, and help the child share meaningful and challenging thoughts and experiences he might otherwise not share. Yet, we need more information about the IC features that might signal negative, rather than positive coping of a child.

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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