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LICENCE

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COGNITIVE BEHAVIOURAL INTERVENTION FOR CHILD AND ADOLESCENT ANXIETY (ALI) IN FINNISH STUDENT WELFARE SERVICES - A SYSTEMATIC DESCRIPTION OF THE INTERVENTION DEVELOPMENT BASED ON GUIDED FRAMEWORK

ABSTRACT

Background: *The proportion of children and adolescents reporting anxiety symptoms has increased over several years in Finland, being currently more than 20%. Low-threshold evidence-based interventions for primary care are needed. Brief cognitive intervention for child and adolescent anxiety (ALI) has been developed for student welfare services. In general, descriptions of new interventions and their development are under-reported.* ***Aims:*** *The aim of this study was to examine how and from which conceptual foundations the ALI was developed.* ***Methods****: The qualitative study followed theory-driven content analysis using the Guidance for Reporting Intervention Development (GUIDED). Interview questions were based on the GUIDED and supplemented by one open-ended item to capture inductive data. In addition, a document analysis was conducted.* ***Results:*** *ALI was developed in response to the needs of children and adolescents experiencing anxiety symptoms, as well as the needs of student welfare professionals. Development was executed in a fairly short time by a small group of experts in child and adolescent psychology and psychiatry supported by a steering group. No established guidelines or theoretical frameworks were used in the development process. Several contextual issues related to student welfare services affected the development.* ***Conclusions:*** *ALI was developed purposefully targeting strong contextual fit in student welfare services. Now that the development phase is completed, it is crucial to assess its effectiveness in a student welfare setting. In the future, when new structured psychosocial interventions are needed to promote mental health of children and adolescents, the choice between developing a new intervention and adapting an existing evidence-based intervention should be carefully considered.*

KEYWORDS: ANXIETY, INTERVENTION DEVELOPMENT, CHILDREN, ADOLESCENTS, CONTEXTUAL FIT

BACKGROUND

Anxiety disorders are amongst the most common psychiatric disorders, occurring in 6.5% of all children and adolescents worldwide [1]. In a nationwide register-based study in Finland [2], new psychiatric diagnoses in children and adolescents increased by nearly a fifth between 2017 and 2021, with the second largest increase by diagnostic group (after eating disorders) found for depression and anxiety (21%). Further, 21.4% of adolescents reported having moderate or severe anxiety symptoms during the past two weeks in the national Finnish School Health Survey conducted in 2023 [3,4], which is a significantly larger amount compared to previous reports [5]. Despite the high prevalence, less than one half of children and adolescents diagnosed with anxiety disorder receive any care [6,7].

Due to the increased prevalence, the need for feasible evidence-based (EB) psychosocial interventions is evident. The Finnish Mental Health Strategy 2020-2030 emphasizes provision of short, EB low-threshold interventions in primary care [8] especially to address the most common clinical problems, such as depression and anxiety [9]. Also, the Finnish Government aims to improve support for the mental health of children and adolescents with a new legislative reform regarding the therapy guarantee for children and young people, that was put into effect in May 2025 [10]. The law guarantees children and adolescents

equal access to brief psychotherapy or other kinds of effective psychosocial treatment, which must be initiated within 28 days after the need for treatment has been assessed.

According to The Current Care Guidelines on Anxiety Disorders, the first-line treatment for anxiety in adolescence is psychosocial intervention, with interventions based on a cognitive behavioural framework having the strongest evidence [11]. Cognitive behavioural therapy (CBT) has been shown to be effective for preventing and treating childhood anxiety across a range of ages and formats [12,13]. However, CBT has not been found to reliably outperform active control conditions [14,15]. A meta-analysis that examined brief CBT interventions in treating anxiety disorders in youth showed that there was no significant difference between brief (M 5,9 sessions (SD 3,2)) interventions and standard length CBT [16].

As part of Finnish national health and social services reform between 2020-2022, primary care practitioners, including professionals working in school welfare services, were trained to use cognitive behavioural intervention Cool Kids™ (CK) [17]. CK is a licensed intervention with 10-12 sessions designed for treating anxiety in children and adolescents. CK was developed in Australia and has over 20 years of research supporting its efficacy in reducing anxiety symptoms [18–20]. However, healthcare providers in student welfare services have encountered challenges in implementing CK into the services [21]. Finnish student welfare services include school and student healthcare, and services of school social workers and psychologists.

In general, one central reason for poor implementation is limited intervention-context fit [22,23]. Contextual fit has been defined as the match between the strategies, procedures or elements of an intervention and the values, needs, skills and resources available in a setting [24]. The importance of contextual fit has been recognized, although there is no consensus or strong evidence on the elements that constitute contextual fit [24,25]. However, it has been stated that an intervention possesses good contextual fit when implementers, recipients and other stakeholders (e.g. parents or administrators) identify the intervention as acceptable, feasible, effective and sustainable [24].

In the case of psychosocial interventions, poor contextual fit can lead to impractical modifications of an intervention or even to a situation where the intervention is not used at all. This seems to be at least partially the case with CK in Finland, as in a thesis study interviewing professionals working in student welfare services, CK was reported as too long and rigid to be used in the services [21].

There are several options for addressing situations where the contextual fit of an existing EB intervention is limited like in the case of CK in Finnish student welfare. They include [26,27]:

1. adapting the existing evidence-based intervention
2. transferring a new EB intervention with an assumed better contextual fit without adaptation (i.e. adoption)
3. transferring and adapting a new EB intervention
4. developing a new intervention.

Adaptation is defined as intentional modification of an evidence-informed intervention, in order to achieve a better fit between an intervention and a new context [27]. There is evidence that interventions that are simply replicated (i.e. adopted with high fidelity) might be less likely to reproduce effects than those adapted to achieve a good fit between intervention and context [28,29].

To address CK implementation challenges in student welfare services and to achieve better contextual fit in Finnish primary care, the brief cognitive intervention for child and adolescent anxiety (Lasten ja nuorten ahdistuksen kognitiivinen lyhytinterventio, ALI) was developed in 2022-2023. ALI is a CBT-based time-limited psychosocial intervention designed for 7–17-year-olds, comprising three to eight sessions (Table 1) (Figure 1) [30]. The primary objective is to reduce anxiety symptoms and alleviate functional impairment caused by anxiety or avoidance behaviour. ALI was developed and is maintained by a Finnish government-funded project First-line Therapies Initiative (Terapiat etulinjaan) and aims at creating a modified stepped care model of psychosocial treatments appropriate for Finnish healthcare structures [31]. At the same time, to address the need for effective anxiety treatment in Finnish primary care, other interventions were also developed and evaluated, including a 9-session internet-based cognitive behavioural therapy programme called Master Your Worries [32].

Intervention development phase refers to the period when the intervention is developed to the point where it can reasonably be expected to have a worthwhile effect [33]. There are several approaches to intervention development, including a target population-centred approach, where the intervention is based on the views and actions of the people who will use it, or an implementation-based approach, where the intervention is developed with attention to ensuring it will be used in the real world [34]. The end point of the development phase is typically the production of a document or manual describing the intervention and how it should be delivered [35]. A successful intervention development was defined in a study by Turner et al. [36] as a process that resulted in effective interventions that were relevant, acceptable and could be implemented in real-world contexts.

There are several guidelines and frameworks for supporting intervention development [26,37–40], such as Guidance for Reporting Intervention Development (GUIDED) [37]. GUIDED aims to improve the quality and consistency of intervention development reporting in health research. Presenting intervention development following GUIDED will enable commissioners and practitioners to understand the context and methods that were used to develop the intervention, to help them make judgements about the quality and relevance of the intervention [37].

However, intervention development processes are globally under-reported. A more systematic, comprehensive and transparent approach to intervention development reporting is likely to enhance understanding of the process. Further, it would facilitate assessment of how intervention development approaches can lead to either effective or ineffective interventions that do or do not translate into practice change [37,38].

The aim of this study was to retrospectively assess how and from which conceptual foundations ALI was developed. The study focused on the perspectives of professionals who had been involved in developing the intervention. The specific research questions were:

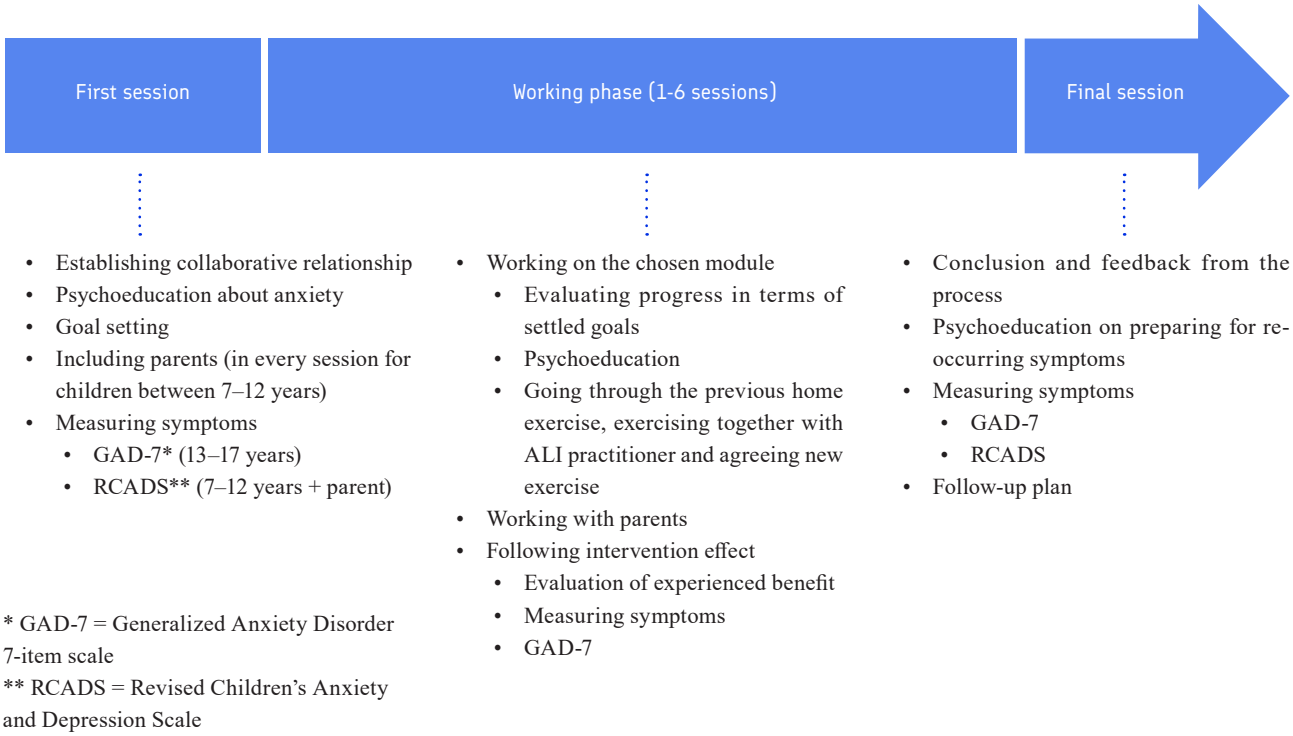
1. How was the ALI intervention developed when explored through the GUIDED intervention development reporting items?
2. What factors beyond the GUIDED influenced the development of the ALI intervention?

METHODS

INTERVENTION

As a part of this study, an intervention description of ALI (*Table 1*) was written. Description covers all the items of Template for Intervention Description and Replication (TIDieR) checklist [41], supplemented with additional information. Description was mainly based on the information provided on the e-learning platform of ALI and it was checked by the intervention developer. In addition, the process of executing ALI is presented in *Figure 1*.

Figure 1. ALI intervention process.



* GAD-7 = Generalized Anxiety Disorder 7-item scale
** RCADS = Revised Children's Anxiety and Depression Scale

Table 1. Description of the brief cognitive intervention for child and adolescent anxiety (ALI).

Intervention description item	ALI intervention description
Target population	The intervention is aimed at the early treatment of anxiety symptoms and fears in children and adolescents aged 7 to 17. Intervention is not suitable if a child or adolescent has: • severe anxiety symptoms • comorbidity • self-harming behaviour or suicidal thoughts • psychotic symptoms*
Goals	To reduce anxiety symptoms and alleviate functional impairment caused by anxiety or avoidance behaviours
Theory background	Cognitive behavioural therapy
Core elements/core components*	• A collaborative relationship between the professional and the child • Psychoeducation • Exposure in child's everyday contexts • Cognitive restructuring of thoughts and beliefs • Physiological relaxation techniques • Training problem-solving skills • Parental support
Training	• Duration ~6 months • 20 hours of online training including following theory modules: i) general information about anxiety, ii) introduction to cognitive approach, iii) specific characteristics of interventions for children and adolescents, iv) identifying and evaluating anxiety, v) interaction skills for professionals, vi) introduction to the ALI intervention • At least 12 hours of case work under supervision • 12 hours of supervision: 2 hours every ~three weeks in a group of 4-6
Providers	Social and healthcare professionals working in student welfare services or other primary care settings, who encounter children and adolescents experiencing anxiety or fear-related symptoms in their work. Support staff are not needed to provide the intervention.
Setting	Especially student welfare services but also other primary care services that provide mental health services for children and adolescents.

Execution	• Individual or individual + parent
	• Face-to-face
	• ALI includes four working modules of which one is chosen based on the needs of the child or adolescent. In addition, one complimentary module is included. The modules include:
	  • Facing fears
	  • Strengthening self-confidence
	  • Reducing worry
	  • Managing panic
	  • Supplementary module: Parental support
	• 3-8 sessions provided weekly (can be reduced to every 2-3 weeks), 45 minutes per session, 60 minutes if parents attend
	• See the detailed description of the ALI process from Figure 1.
	• It is estimated that preparing for an ALI session takes 30 minutes during the training and 15 minutes as more experience is gained. Documentation of patient/client information after the session takes 5-15 minutes.
	• Execution requires printed materials, paper, pen and rubber
	• Execution requires quiet working space

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Intervention description item	ALI intervention description
Tailoring	Of the four modules, the practitioner, in collaboration with the child/adolescent, selects the most appropriate module. Based on child's/adolescent's needs, exercises from additional modules may be integrated. The structured intervention protocol provides session-by-session content, which the practitioner tailors to the requirements of the child and family. It is recommended that the intervention includes working with the parents, especially in the case of younger children. In the case of adolescents, intervention providers decide the extent of parent involvement. All intervention exercises are delivered with consideration of the child's age and developmental level.
Fidelity assessment	No specific fidelity measure. Supervision included in the training.
Manual	The intervention theory and provision are described in the e-learning platform (https://koulutus.mielenterveystalo.fi/). The platform includes session-by-session description of the content, structure and materials (exercises, measures and other client material) needed to provide the intervention.

The content marked with * was partly derived from the e-learning platform of ALI and partly complemented by the intervention developer

STUDY DESIGN

The study design was a retrospective qualitative interview study. The aim of the qualitative study approach was to collect as rich a dataset as possible to enable a comprehensive and trustworthy description of the foundations, contributing factors and key stages of the development of the intervention [42,43].

STUDY POPULATION

A total of six professionals (n=6) participated in the study, all of whom had been involved in the development of the ALI intervention during the years 2022-2023. The participants were all current or former employees of the First-line Therapies Initiative. Their roles in the development of ALI comprised: contributing to the development of the intervention's content and materials, designing and implementing the associated training, defining the theoretical foundations and mechanisms of change for the intervention and participating in decision-making processes related to the development.

DATA COLLECTION

The data was collected by interviewing professionals who had contributed to the development of ALI. The First-line Therapies Initiative named three key informants and the other participants were recruited by using the snowball sampling method. Each interviewee was asked to identify key individuals who had been involved in the development of the intervention. The participants named overlapping individuals who had played a significant role in at least some phase of the development process.

At the beginning of each interview, participants were informed about the purpose of the study and data management procedures in accordance with good scientific practice, and the pseudonymization of the data. Informed consent to participate in the study was obtained from all interviewees. Due to the very limited number of individuals who were involved in the development of ALI, no further information regarding their demographic characteristics, specific professional fields or job titles is reported in order to protect the privacy of study participants.

The semi-structured interviews were conducted in Finnish from April to May 2025 by using Teams video software. Interview included 16 questions which were formulated to align as closely as possible with GUIDED (*Table 2*). In addition, one open-ended question, regarding other aspects the interviewee would like to add, was presented at the end of the interview. Clarifying questions were posed when needed, while the order of the main questions remained consistent across all interviews. The interview themes included, for example, the context of the intervention's development, its purpose, target group, theoretical background, areas of uncertainty and decision-making processes.

The duration of the interviews ranged from 32 minutes to 1 hour and 52 minutes (M=58,83, SD=25,09, Md=53,5). At the end of the interviews, participants were invited to submit relevant documents describing key developmental phases. The items 13 and 14 in GUIDED were left out because they are reported separately in this study (*Table 1*). The interviews were audio recorded and transcribed with the level of detail required according to the research method. All identifying information referring to personal data was removed from the transcriptions during the pseudonymization process.

Table 2. Interview protocol.

1. What has your role been in the development of ALI?
2. Who participated in developing ALI with you?
3. How was the decision made to start developing ALI?
4. What was the purpose of developing ALI?
5. For which context was ALI developed?
6. For which target population was ALI developed?
7. How systematic was the development process of ALI, and was any framework or development approach utilized in the development?
8. How was the intervention development guided by effectiveness-oriented thinking?
9. If/how existing theoretical framework informed the development of ALI?
10. How were components of existing interventions used in the development of ALI?
11. What kind of factors guided decision making regarding developing ALI? (eg. principals, people)
12. Which stakeholders contributed to the development of ALI and how?
13. How did ALI change in content and format during the development process?
14. If/how certain subgroups like language and age groups were considered during development?
15. What kinds of uncertainties were identified during the development process and how were they solved?
16. What documentation exists regarding the development process of ALI (e.g. manual versions)?
17. Is there something else you would like to add?

DATA ANALYSIS

Theory-driven content analysis, using the GUIDED intervention development reporting items, was chosen as the analysis method, as it enabled a structured response to the first research question and facilitated a systematic description of the development of ALI through the GUIDED [37]. This approach was methodologically appropriate for the current study, as it allowed for the systematic examination of how empirical material reflected and challenged the chosen theoretical constructs and enabled a structured interpretation of complex phenomena within a specific framework (GUIDED). The theory-driven content analysis ensured the analytical alignment with the theoretical predefined framework and supported the structured examination of the data [42,43].

The interview data transcription consisted of 109 pages, and the eight phases used in the analysis process are described in *Table 3*.

Table 3. Description of the analysis phases, methods and measures.

Analysis phase and method	Measure
1. Familiarizing with the data *Theory-driven content analysis*	• The transcribed data consisted of 109 pages (Word document) • The pseudonymized data were imported into the ATLAS.ti software • Forming a preliminary understanding of the data content, how it aligns with the theory-driven main categories and to the separate main category 13 • Main categories 1-12 named, subcategories not formed yet
2. Definition of coding rules for the main categories *Theory-driven content analysis*	• The coding rules were developed in reference to the GUIDED and documented in a separate document • Two coders verified that they had a shared understanding of the coding rules
3. Preliminary coding of data observations under main categories *Theory-driven content analysis*	• The data observations were coded in ATLAS.ti according to main categories numbered 1 to 12 • Preliminary patterns of subcategories began to emerge under each main category
4. Reviewing of coding rules for main categories *Theory-driven content analysis*	• The coding criteria for the main categories were further specified • Any potential overlaps were systematically examined • Revisions and clarifications were recorded in a separate document • Two coders reviewed and cross-checked their coding of the data observations to ensure consistency
5. Defining names for data-driven subcategories *Theory-driven content analysis*	• Data observations under main categories 1–12 were further organized into subcategories according to recurring thematic patterns • Each subcategory was assigned a descriptive label • Corresponding coding rules were developed for the subcategories
6. Generation of the results table and description of its content *Theory-driven content analysis*	• Frequencies of data observations within each main and subcategory were recorded in Table 5 • The percentage of the total number of observations was calculated to illustrate the relative distribution • To support the reporting of the findings, representative quotations were chosen to exemplify representative data observations corresponding to each subcategory • Six initially defined subcategories were integrated into other categories as they represented overlapping thematic content
7. Description of main category 13 *Data-driven content analysis*	• Corresponding coding rules were developed for the subcategories in main category 13 • Data observations under main category 13 were organized into subcategories according to recurring inductive thematic patterns
8. Description of the timeline *Document analysis*	• The content of the documents (n=21) was classified following the description of the material, interview number, usage status, justification for exclusion, content included in the timeline and other remarks • Information from the documents describing the timing of the development phase (n=6) was used to create the timeline in Table 4

The 12 theory-based main categories (*Table 3*) were complemented by a 13th category, which was developed inductively based on interview question number 17 (*Table 2*). This ensured that perspectives not covered by the original items were included in the analysis. This category was created to ensure analytical comprehensiveness and to enable a trustworthy response to the second research question [44].

At the end of the interview, participants who had been involved in documenting the development of ALI were asked to submit any materials they considered valuable for illustrating the developmental stages of the intervention. These were analyzed by document analysis [45] which is described in detail in *Table 3*. The selected materials were used to construct a timeline presented in *Table 4*.

RESULTS

The results are presented in three parts. First, we present a timeline for the development of ALI (*Table 4*). ALI development started in May 2022, the first version was ready in September, and the pilot was executed from January to June in 2023.

Second, we describe the development of ALI by categorizing the qualitative data according to the GUIDED (*Table 5*, main categories 1-12). Third, we present additional factors that influenced the development of ALI (*Table 5*, main category 13).

Table 4. The timeline for the ALI intervention's development process.

	Spring 2022	Autumn 2022	Spring 2023	Autumn 2023
Intervention development	• Decision about the development by the executive team of the First-Line Therapies Initiative • Development of ALI 1.0 started	• The first version of the content	• Content development based on the pilot • Ali 2.0 is ready	
Training model		• Developing Ali training and supervising model 1.0 • Supervisors' training started	• Training diary is finalized • Development of the training model (e.g. materials, diary, supervision) based on the pilot	• Training model 2.0 was developed based on the pilot feedback • First ALI 2.0 training
Piloting and implementation		• Recruiting pilot areas	• Pilot evaluation model finalized • Ali 1.0 pilot with 61 trainees in 6 wellbeing services counties and the city of Helsinki • Feedback survey for the trainees and supervisors • Reflection of the feedback with the pilot areas and the steering group	• Final survey of the pilot • ALI 2.0 implementation started

Table 5. Main and subcategories identified in the development of the ALI intervention including total number and frequencies of observations.

Main categories	Subcategories	Data observations in total	Percentage of total data observation
1. Context to which ALI was developed	1.1 Considerations regarding intervention practitioners in student welfare	12	
	1.2 Funding and financial considerations in the development of the intervention	6	
	1.3 Issues related to the contextual fit of existing interventions	32	
	1.4 Development in the service system	11	
	1.5 Increased prevalence of anxiety symptoms	3	
		Total: n=64	15%
2. Purpose of ALI development process	2.1 Early-stage support for anxiety symptoms	6	
	2.2 The contextual fit of ALI	16	
	2.3 Intervention accessibility	7	
		Total: n=29	7 %
3. Definition of the target group for ALI	Data-driven description: definitions of age groups and occurring anxiety symptoms	9	
		Total: n=8	2 %
4. Framework and approach for ALI development	Data-driven description: no formal development framework	9	
		Total: n=9	
			2 %
5. Evidence-informed thinking in the development of ALI	5.1 Previous interventions and research	17	
	5.2 The input of the developers	4	
		Total: n=21	5%
6. Theory-informed thinking in the development of ALI	Data-driven description: cognitive behavioural framework	10	
		Total: n=10	2 %
7. Using components from existing interventions in the development of ALI	7.1 Identification of components of existing interventions	9	
	7.2 Modification of components of existing interventions	6	
		Total: n=15	4 %

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Main categories	Subcategories	Data observations in total	Percentage of total data observation
8. Principles guiding decision making in the development of ALI	8.1 Key professionals involved in the development process	35	
	8.2 Expectations and requirements of student welfare professionals	26	
	8.3 Guidance provided by the steering group	6	
	8.4 Previous research and knowledge from other interventions	28	
	8.5 The objectives set for the ALI intervention	57	
		Total: n=152	36 %
9. Stakeholder contribution in the development of ALI	9.1 Piloting in student welfare services and feedback from professionals	20	
	9.2 Comments from child and adolescent psychiatry professionals and other stakeholders	14	
		Total: n=34	8 %
10. Changes in the content and form of ALI during its development	10.1 Modification needs from the feedback of ALI practitioners	5	
	10.2 Development of the content of the training	9	
	10.3 Changes in the content or form of the intervention	10	
		Total: n=24	5%
11. Considering subgroups in the development of ALI	Data-driven description: considerations of subgroups based on age, language or other factors	13	
		Total: n=13	3%
12. Uncertainties in the development of ALI	12.1 Considerations related to the intervention practitioners' basic mental health training	11	
	12.2 Considerations of suitability for different age groups	4	
	12.3 General considerations concerning implementation	6	
	12.4 Considerations related to the availability of time and resources	8	
		Total: n=29	7%

Main categories	Subcategories	Data observations in total	Percentage of total data observation
13. Other factors influencing the development of ALI	13.1 Tensions within the development environment	10	
	13.2 Critical assessment of the need for a new intervention	10	
		Total: n=20	5%
		Overall total: n=428	**100 %**

To answer the research questions, we present illustrative quotations that provide insight into the recurring responses within each subcategory. To support the pseudonymization of the research data, the interview quotations are presented without participant labels. The quotations (in total 39) have been selected from all participants as follows: 1. Interview 21%, 2. Interview 15%, 3. Interview 5%, 4. Interview 23%, 5. Interview 3% and 6. Interview 33%.

How was the ALI intervention developed when explored through the GUIDED intervention development reporting items? (RQ1)

Main category 1. Context to which the ALI was developed
The content of this main category was constructed from data observations in which the interviewees described the context into which the ALI was developed. By context, the interviewees referred to the environment in which the ALI was intended to be delivered. Further in this main category they referred to the factors that initiated ALI development and to factors related to context-fit issues. In addition, the observations were reflecting the changes in service system and organizational structures due to the health and social services reform in Finland.

Subcategory 1.1 Considerations regarding intervention practitioners in student welfare:

> *"The need probably arose most strongly from the school world, from student welfare services."*

Subcategory 1.2 Funding and financial considerations in the development of the intervention:

> *"That has probably been the central issue all along, that there hasn't been that kind of long-term funding element."*

Subcategory 1.3 Issues related to the contextual fit of existing interventions:

> *"This kind of licence-based system was too difficult to maintain... It (the Cool Kids intervention) had been made there, by them, for entirely different people and a different context (Australia)."*

> *"And then, of course, there was already user experience with Cool Kids, that it is quite too heavy for the school environment."*

Subcategory 1.4 Development in the service system:

> *"A complex service system with different professionals and different levels. There is a need for different anxiety treatments that share similar elements but are suited to different levels."*

Subcategory 1.5 Increased prevalence of anxiety symptoms:

> *"This anxiety had been increasing over the past ten years, so the need was pretty much obvious at that point already."*

Main category 2. Purpose of ALI development process
The second main category describes the objectives of ALI. The interviews highlighted a perceived need to develop an intervention that could offer children and adolescents support for anxiety symptoms in primary care. Another key theme identified in the data was the contextual fit of ALI for the student welfare services as it was considered as a foundational element in its development. In addition, participants highlighted that ensuring the accessibility of both ALI and its training was considered important already during the development phase.

Subcategory 2.1 Early-stage support for anxiety symptoms:

> *"...There would be a very low-threshold service, which would be easily accessible and also without long waiting time."*

Subcategory 2.2 The contextual fit of ALI:

> *"...that it would of course provide needed competence and knowledge....but would not be overly burdensome. And it could be incorporated to that work (in student welfare services) as well as possible."*

Subcategory 2.3 Intervention accessibility:

> *"...The wish that things would be nationwide... if there is a child suffering from anxiety, that they would at least receive certain information and that the parents would receive certain information somehow, about what it is all about."*

Main category 3. Definition of the target group for ALI

The data observations within the third main category focused on identifying the target group for whom ALI was developed. Participants described the intended age range, as well as children and adolescents exhibiting early signs of anxiety-related symptoms. In addition, they noted the involvement of parents in the intervention process.

> *"The target group was 7–17-year-old children, adolescents, and their families or parents. And particularly those at the entry point of the treatment system... presenting with mild anxiety symptoms."*

Main category 4. Framework and approach for ALI development

The data observations within this main category related to how participants described the potential use of a formal development framework in the development process of ALI. Participants consistently indicated that no formal development framework had been utilized. The development process was described as iterative, involving professionals with expertise in the subject matter.

> *"It is obvious that the way of developing the intervention could have been more systematic... Perhaps our starting point here was more like... that we had top experts in a particular therapeutic intervention and framework, who follow international developments in the field and are most familiar with them."*

Main category 5. Evidence-informed thinking in the development of ALI

The data observations within this main category included participants' reflections on what research evidence was used as a foundation for the development of ALI. Participants mainly described research originating from the cognitive framework, particularly regarding the elements of various EB CBT-based interventions. According to the interviews, the specialists involved in the development process had clinical experience of other interventions with research-based evidence of effectiveness. Participants also noted that there was no accompanying research project during the development of ALI, in which the potential effectiveness of the intervention would have been evaluated.

Subcategory 5.1 Previous interventions and research:

> *"When we started thinking about what components and elements the ALI intervention should consist of, we reviewed the latest research and existing interventions ...to get an understanding of what is effective based on current evidence"*

Subcategory 5.2 The input of the developers:

> *"The initial proposal for the structure was reviewed collectively, and feedback was requested. However, there was no clearly defined or systematic procedure in place; instead, consensus was sought through informal discussion."*

Main category 6. Theory-informed thinking in the development of ALI

The data observations within this main category consisted of how participants described the influence of existing theories on the development of ALI. Participants primarily referred to interventions and therapeutic approaches derived from the cognitive framework.

> *"What is generally known about cognitive approaches and the tools they offer, and what within that framework is useful"*

Main category 7. Using components from existing interventions in the development of ALI

The data observations within this main category captured participants' descriptions of the role that other interventions played in the development of ALI. Participants described how contents and components from existing interventions were

incorporated into the development process. Many participants in the study had prior training in various interventions based on the cognitive framework, as well as practical experience in applying these interventions. When modifying the content of ALI, particular emphasis was placed on ensuring that the exercises and material were understandable and accessible to professionals working in student welfare services.

Subcategory 7.1 Identification of components of existing interventions:

> *"Of course, it adds a bit of credibility to the new intervention when the components within it are ones that have been studied."*

Subcategory 7.2 Modification of components of existing interventions:

> *"...constructing an exposure hierarchy is something that appears in almost all anxiety treatment models in some form. So, in those aspects, there was no attempt to reinvent the wheel."*

Main category 8. Principles guiding decision making in the development of ALI

This main category contained the largest number of data observations. It included participants' descriptions of the individuals, sources of information, perceived needs and goals that guided decision making during the development of ALI. Participants consistently identified the same key individuals who were involved in both the development and coordination of the process. According to the data, decision making was influenced by feedback from student welfare professionals regarding the limited contextual fit of the Cool Kids intervention for school settings, as well as by an expressed need for practical tools that student welfare professionals could use to support children and adolescents with anxiety symptoms. In addition, decisions were informed by feedback from pilot groups, which was discussed within steering group and with professionals responsible for the training, and by existing research evidence on the effectiveness of other CBT-based interventions.

Subcategory 8.1 Key professionals involved in the development process:

> *"X (specialist's name) was the one who decided that development will be made".*

> *"X (specialist's name) was the one who did the most difficult structuring, which are those models and if we should keep the alternative modules"*

Subcategory 8.2 Expectations and requirements of student welfare professionals:

> *"All the feedback we receive through intervention supervision sessions, from the feedback questionnaires... from the training diaries, and also from what we hear from the coordinators within the service system, all of that contributes."*

Subcategory 8.3 Guidance provided by the steering group:

> *"From the very beginning, we had a steering group in this project, which included representatives from child psychiatry, adolescent psychiatry and adult psychiatry. We also had representatives from primary healthcare units and various others, so it was actually quite a broad group."*

Subcategory 8.4 Previous research and knowledge from other interventions:

> *"In other words, every component of the intervention must be justifiable and based on something. Interventions should not be created from scratch."*

Subcategory 8.5 The objectives set for ALI:

> *"The starting point was to genuinely increase the competence and understanding, and then to provide professionals with tools to go through these matters with the child or adolescent."*

Main category 9. Stakeholder contribution in the development of ALI

This main category focused on the involvement of stakeholders in the development of ALI. The data observations described the participation of external collaborators who did not hold formal responsibilities within the development process. Interviewees particularly emphasized the role of pilot groups within student welfare services and the feedback received from practitioners, which contributed to the refinement of the intervention. In addition, the data included references to input and recommendations provided by professionals in child and adolescent psychiatry, which were utilized to inform further development.

Subcategory 9.1 Piloting in student welfare services and feedback from professionals:

> *"We had a really good pilot group, and we received very active feedback from them."*

Subcategory 9.2 Comments from child and adolescent psychiatry professionals and other stakeholders:

> *"X (specialist's name), for example, handled those texts, and they commented and gave their input, and then they made corrections or additions, changes accordingly."*

> *"The coordinators conduct surveys in their regions and, of course, listen to the practitioners, and through them we receive feedback in regular coordination networks about how well intervention has fit."*

Main category 10. Changes in the content and form of ALI during its development

This main category focused in the ways the content and form of ALI evolved during its development. In general, the modifications were minor according to the interviews. The data observations included descriptions of modifications made based on feedback from practitioners, as well as the progression of the training process during the piloting phase. Examples of modifications included adapting forms to be understandable for younger children, producing a video to encourage parental involvement, and refining training materials to improve their pedagogical clarity and structure. In addition, participants reported needs to further develop ALI into a group-based format and to ensure its suitability for use with children from immigrant backgrounds.

Subcategory 10.1 Modification needs from the feedback of ALI practitioners:

> *"In the first version, at least, there was the wish that there would be more forms suitable for younger children... So we immediately started producing that material."*

Subcategory 10.2 Development of the content of the training:

> *"For the first group, we even had an extra survey halfway through the training, so we got the first training feedback already after the first few months, which gave us the opportunity to develop things already while the pilots were still ongoing."*

> *"An effort was made to find a balance between the lightness of the training and its sufficiency, particularly in terms of ensuring that professionals acquire adequate competence."*

Subcategory 10.3 Changes in the content or form of the intervention:

> *"The development and modification have been about supplementing and clarifying the materials."*

Main category 11. Considering subgroups in the development of ALI

In this main category, the data observations focused on how the specific needs and characteristics of different subgroups were addressed during the development of ALI. The data included considerations of how the intervention was targeted to particular age groups and how its suitability for children of various ages was assessed. Furthermore, the material highlighted the perceived need for language-specific versions and reflected on how other subgroups, such as children with immigrant backgrounds or those experiencing learning difficulties, were considered in the design of the content and materials of ALI.

> *"ALI is available in Finnish and Swedish… and the materials distributed to families are available in English. And especially in the wellbeing services counties where there are many immigrants… this request (of other languages) keeps coming up regularly."*

> *"A separate supplementary material for these neurodevelopmental difficulties has been made…"*

Main category 12. Uncertainties in the development of ALI

This main category focused on uncertainties associated with the development of ALI that emerged during the developmental process. The data observations included descriptions of concerns regarding the intervention practitioners educational background, as well as doubts about the applicability of the intervention to populations outside the defined target group (children and adolescents aged 7–17). Additionally, the data reflected concerns about the potential for the intervention to be used inappropriately, such as in cases involving severe mental health disorders which the intervention was not designed for. Resource-related uncertainties also emerged, including the availability of sufficient funding and time allocated for the development work. In addition, the data revealed reflections on the potential risks associated with exposure exercises, which were considered from multiple perspectives.

Subcategory 12.1 Considerations related to the intervention practitioners' basic mental health training:

> *"A clear limitation that we made was that exposure conducted in appointment was not included in ALI, even though there is very strong research evidence that it is very effective. We thought that it is an element that already requires more understanding."*

Subcategory 12.2 Considerations of suitability for different age groups:

> *"We have so far remained quite cautious, that we are by no means yet recommending it from our side for that (7-17-year-old) age group"*

Subcategory 12.3 General considerations concerning implementation:

> *"One uncertainty that comes clearly to mind was the evaluation aspect, how well the professionals are able to assess the question of for whom this is suitable and for whom it is not."*

Subcategory 12.4 Considerations related to the availability of time and resources:

> *"The project funding periods have been two or three years long. We have received additional funding piece by piece. That has been the challenge throughout, these are such long processes."*

What factors beyond the GUIDED influenced the development of the ALI intervention? (RQ2)

Main category 13. Other factors influencing the development of ALI

In this main category, the findings focused on factors that, according to the interviewees, influenced the development of ALI. The data observations highlighted some of the tensions within the broader development environment, including challenges related to the development, possibilities for adaptation and implementation of other interventions like cognitive brief therapy (Finnish acronym KLT). Furthermore, the data revealed how the critical assessment of the need for a new intervention, namely ALI, was conducted in relation to the existing service system and concurrent development initiatives in Finland.

Subcategory 13.1 Tensions within the development environment:

> *"The copyright negotiations with the Australians (Cool Kids). That probably took about a year and a half... so we quite quickly got the impression that this probably wouldn't work out."*

> *"What has perhaps bothered me from the beginning is somehow the setup… that there was an attempt to somehow replace Cool Kids or create a new Cool Kids or something like that."*

Subcategory 13.2 Critical assessment of the need for a new intervention:

> *"We looked in sync at what kinds of synergy benefits there might be, for example, since Cool Kids was already in place both for youth and children. And whether something separate like this is needed."*

> *"The central, interesting question is precisely related to the relationship between cognitive brief therapy and ALI, how they match."*

DISCUSSION

The results of this qualitative study present how ALI was developed based on the needs of professionals working in student welfare services in a situation where anxiety symptoms of children and adolescents have increased notably. Content of ALI relied mainly on components of existing CBT-based interventions and cognitive framework. ALI was developed and nationally implemented in a relatively short time due to exceptional government funding and already existing infrastructure, meaning e-learning platform, training system and national implementation network. The findings in this study suggest that the ALI development process could have benefited from a clearer structure, although many intervention development phases described in previous intervention development studies [37,39] could be identified.

Using the GUIDED in this study made it possible to get a comprehensive view on the ALI development process including influencing factors and uncertainties. As revealed by the data, quite a small group of specialists in child and adolescent psychology and psychiatry were responsible for developing ALI. According to the interview data, professionals involved in the development of ALI were described as having relevant knowledge of CBT, perceived competence, and suitable educational and professional backgrounds.

The interviewees of this study reported that no specific guidelines or frameworks were used in developing ALI. Characteristics of implementation-based and target population-based intervention development [34] can be recognized in ALI development, although according to interviewees the development was carried out without a specific development approach or application of structured models specifically designed for intervention development.

When viewed retrospectively, various items of the GUIDED were identifiable when reporting the development of ALI in this study. Some items were more explicitly reflected in the findings, whereas others were less evident. The UK Medical Research Council (MRC) published influential guidance on developing and evaluating complex interventions [26]. This was further supported by O'Cathain et al. [39] on actions to take during intervention development: i) seeing intervention development as a dynamic iterative process, ii) involving stakeholders, iii) reviewing published research evidence, iv) drawing on existing theories, v) articulating programme theory, vi) undertaking primary data collection, vii) understanding context, viii) paying attention to future implementation in the real world and ix) designing and refining intervention using iterative cycles of development with stakeholder input throughout.

The results of the study show that all of the above actions except for articulating programme theory could be identified from the development of ALI. Programme theory describes how an intervention is expected to lead to its effects and under what conditions [26]. Describing ALI programme theory in the future would support intervention providers' understanding of the change mechanisms of the intervention. Even though different steps of intervention development could be identified from ALI development, according to the findings, the actions were not always conscious decisions or systematic. Using published intervention development guidance to support ALI development could have made the process more structured and better documented.

This study revealed that one of the main reasons for developing ALI was that it seemed that the Cool Kids intervention, which was implemented at the time, was not feasible in student welfare services. Consequently, one key feature of developing ALI is that the development was guided by systematically collected feedback from professionals working in student welfare services. Involving stakeholders has been described to be a crucial part of intervention development [26,39].

Interviewees described that already from the beginning of the development of ALI, the target was national dissemination, which was possible due to already existing training and implementation structures. An acknowledged challenge in research literature is that many interventions have only been implemented in the academic settings in which they were developed [36]. Since the ALI pilot in spring 2023, a total of 438 ALI practitioners had been trained nationwide and 300 are currently in training (verbal communication provided by First-Line Therapies Initiative in June 2025).

Contextual fit is highly important in implementing interventions [46] and should be considered already in the development phase of the intervention [24,26,39], as was done during the development of ALI. In the study, interviewees reported that ALI practitioners had given mainly positive feedback about the fit of ALI to student welfare services. From the data, it was possible to identify that ALI intervention and training were developed according to this feedback. However, the data does not show modifications in detail. Interviewees reported that intervention practitioners have requested materials in most common immigrant languages, which has not yet been possible to execute due to limited resources. A systematic evaluation of contextual fit could benefit further development of the intervention in general and especially if applied to minorities.

According to the findings, one of the context-related uncertainties in the development process was to what extent it is safe and feasible to include exposure exercise. Uncertainty arises from the fact that public health nurses and social workers working in student welfare services do not generally have mental health training, so strong exposure of children and adolescents to their fears and avoided difficult feelings might be too risky for the participants, and too demanding for the providers without more profound training. Currently in ALI, exposure exercises are primarily conducted independently as homework assignments rather than in sessions with a student welfare professional. In a meta-analysis by Whiteside et. al [15] it was suggested that in-session exposure improves the efficacy and effectiveness of CBT protocols. Consequently, leaving it as an optional assignment for the participant might decrease the effectiveness of the intervention.

In addition, another significant contextual fit-related uncertainty reported in the study was that terms like therapy or treatment could be perceived as alienating, as Finnish student welfare services are a part of preventive healthcare - meaning that the focus of the work is in preventive interventions instead of treating mental disorders. These types of issues might be relevant in terms of implementation and highlight the importance of considering contextual fit while developing new interventions [24].

In the development of ALI, components of existing EB CBT-based interventions were used and current evidence guided decisions regarding content and structure of ALI. However, in the light of this study it is not possible to say to what extent. In general, there is a lack of evidence regarding which CBT components are necessary and sufficient for treatment success [15]. The First-line Therapies Initiative has reported preliminary results for ALI intervention, where pre-post measures show decrease in anxiety symptoms in children and adolescents after ALI intervention [47], but so far there is no evidence of its effectiveness. Now that the development phase of ALI has ended and it is being nationally disseminated, future studies should explore the effectiveness of the intervention - the need which was also presented by some of the interviewees.

Examining effectiveness requires consideration of implementation fidelity, i.e. if the intervention is delivered as designed [48,49]. Indices of implementation fidelity are needed to determine whether client improvement or lack thereof is a function of the failure of the intervention or of its application [48]. As the ALI description presented in the results show, there is currently no established fidelity assessment. Therefore, in the future, consideration should be given to developing a fidelity measure for ALI.

There is some evidence that the use of interventions with a previous evidence base in new contexts might be more efficient than developing new interventions [27]. New interventions need first to be developed, then tested for their efficacy and effectiveness, and finally assessed for their readiness for broad dissemination and implementation [50,51], which is highly resource consuming.

One option for developing ALI could have been adapting CK to student welfare as it was already being trained in Finland. CK is a branded product, i.e. protected by copyright which limits the possibility of adaptation [27]. At the same time the restrictions on who could be trained for CK were tightened so that the intervention was no longer an option for wider dissemination in student welfare services [52]. Therefore, a relevant option for developing ALI would have been to implement and adapt another EB intervention, such as the targeted school-based 5-session CBT (Vaag) [53] that was recently developed in Norway and has shown promising evidence, or some other intervention representing a different treatment modality than CBT.

There was no indication from the interviewees if options for intervention development, such as implementing and adapting another EB intervention instead of creating a new one, were considered, although the data did reveal instances of critical assessment regarding the need for a new intervention.

STRENGTHS AND LIMITATIONS

One of the strengths of this study lies in the diverse professional backgrounds of the interviewees, who held varying roles in the development of ALI. The use of the GUIDED items structured the interviews and served as the theoretical basis for content analysis, enabling the identification of uncertainties and developmental gaps that might not have emerged through purely inductive qualitative research approaches. An open-ended question, developed outside the theory-driven content analysis framework, also allowed interviewees to raise additional perspectives they considered relevant to the development of ALI. An additional strength is the detailed description of the ALI intervention following the TIDieR [41], which enhances transparency in often poor and heterogeneous reporting of interventions in the research literature. While the small sample size, six professionals, can be seen as a limitation, it also reflects the limited number of core professionals involved in the development of ALI. However, the data were enriched through supplementary document analysis. One limitation of the study is that the interview data were collected retrospectively, and participants responded based on their recollection. In addition, conducting in-person, semi-structured interviews may have enabled deeper exploration of participants' meaning-making and more nuanced reflections on the research topic than the study would have captured with some other methodological approach (e.g. questionnaire).

CONCLUSIONS

ALI was developed purposefully and in collaboration with student welfare professionals targeting strong contextual fit. It is likely that using guidance to support ALI development would have made the process more structured as well as better documented. Using research-based guidance in intervention development is recommended. Now that the development phase of ALI is completed, it is crucial to assess its effectiveness in student welfare setting. In the future, when new structured psychosocial interventions are needed to promote mental health of children and adolescents, the choice between developing a new intervention and adapting an existing EB intervention should be carefully considered.

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Supplementary Material

Supplementary data are available at Psychiatria Fennica online.

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