**Mapping evidence-based interventions to the care of unaccompanied minor refugees using a group formulation approach**

Supplement

Content:

S1 Figure: Dynamic adaptation and development of intervention p2

S2 Legal & statutory situation of UASCs in Germany p2

S3 Referral and assessment p3

S4 Sources of patient data p3

S5 Table: Questions for qualitative and quantitative evaluation p4

S6 Qualitative Analysis p5

S7 Group program

7a Figure: Mapping model to needs: Adapted Program Structure & Content p5
 7b Modules content and reasoning p6

References p8

S1 Figure: Dynamic adaptation and development of intervention



Legend S1

Step 1: Descriptive overview of group characteristics. Based on these findings, an initial formulation was developed, including an assessment of resilience and resources with reference to psychological principles and literature review. Step 2: Draft and trial of first adaptation of tested intervention (Teaching recovery techniques (TRT)). Step 3: Iterative updating of model, using a participative circular process based on triangulated feedback from services users, carers and therapists. Step 4: Where >60% attendance had been achieved, pilot quantitative evaluation was used to assess the effectiveness of the intervention with regards to symptom improvement.

S2 Legal & statutory situation of UASC in Germany

UASCs are considered as Looked-after-children (LAC) until the age of 18 and provided with a statutory legal guardian from the local authority, in addition to a carer (e.g., support worker or foster parent). The guardian is responsible for all legal, financial, educational, and health related matters. UASC are accommodated, depending on their age, needs and levels of independence in children’s homes, foster families or semi-independent living arrangements. It is obligatory for young people to access education up to the age of 18. These will be integration classes initially that are separate from mainstream educational settings. UASC have full access to health services. Asylum applications are processed during the year before they reach their 18th birthday and will usually be filed by their guardian.

S3 Referral and assessment

All UASC were referred for assessment by their carers or via emergency services. Following referral to the clinic they underwent an initial assessment and mental state examination. They also completed the Child and Adolescent Trauma Screen (CATS) (1) and the Child and Adolescent Behavior Checklist (CBCL) (2). Where needed, interpreters were used. Language competences was recorded using the Common European reference framework (3). Following initial assessment UASC were placed on the treatment waiting list (WL). Initially participants were administered no-verbal cognitive tests. However, later ability was recorded according to the clinician’s impression and documented on ICD1 Axis III in the clinical summary, because results of non-verbal culture fair cognitive testing frequently suggested mild - moderate LD which appeared incongruent with overall (school/clinicians’) impression. Prior to commencing the group program UASC were administered again the CATS and Beck’s Depression Inventory (BDI-II) (4) were possible.

S4 Sources of patient data

Basic Sociodemographic data were routinely recorded on initial registration. Further data for group descriptive characteristics were obtained via retrospective data mining from records, prior to program adaptation. Sources of information included documentation from clinical assessment and summary letters, written information such as notes during appointments, relevant documented written information from legal guardians or support workers, as well as routine assessments via questionnaires and psychological tests.

S5 Table: Questions for qualitative and quantitative evaluation

|  |
| --- |
| Evaluation questionnaires |
|  | Participant | Carer | Therapist |
| Qualitative | Session by session (recorded verbatim plus observations by co-therapist) |  |  |
|  | What was important for you today? |  | * Were there any special observations with regards to the reactions, interactions or responses of the group?
* What went well in program delivery?
* What did you learn today?

Any suggestions for improvement? |
|  | End of Group |  |  |
|  | * What was good in the group?
* What would you like to be different?
 | * Was the content understandable?
* Did you (the carer) learn anything new?
* Was there anything that you would use in the future with your/other UASCs
* What was the feedback of the young person?
* Overall: What was good? What improvements would you suggest?
 |  |
| Quantitative | How was the group? * Fun ☹\_\_\_☺
* Understandable ☹\_\_\_☺
* Interesting/useful ☹\_\_\_☺
* Overall ☹\_\_\_☺
 |  |  |

Legend

Triangulated feedback was obtained from participants, carers, therapists. For overall feedback, participants were instructed to look through their workbook to avoid recency bias and prompt their reflection on what had been important for them over the course of the program.

S6 Qualitative Analysis

In keeping with a circular updating process, feedback themes were inductively derived, interpreted and fed back into program adaptation after each round. In the inductive phase the texts were read several times to gain a general impression of the feedback (VD&MK). Text was then divided into meaning units. Second, a coding index was generated based on the first 4 cases. The aim here was to capture the content on a more abstract level. In the following ratings, codes for newly emerging meaning units were added to the index. Third, the emerging themes were grouped on the basis of conceptual similarities under a descriptive label. Fourth, in the deductive phase, a developmental and cognitive behavioral framework was used to derive overarching therapeutic themes. The overall aim was to elicit which explicit or implicit content was relevant to UASC and which implicit or explicit processes supported engagement and learning. Feedback that was of insufficient detail to help us deduct relevant therapeutic learning points was discarded (e.g. ‘learning a lot’ or ‘first to last session was great’). Where overall feedback content lacked detail, themes were additionally explored through the detailed comments in the session-by-session feedback.

S7a Figure: Mapping model to needs: Adapted Program Structure & Content

Session elements

Modules

Future

Trauma

Distress

Starting together

Daily hassles



**Content adaptations**

* Sharing daily problems and building skills via peer exchange (first 30mins)
* Enhancing coping skills
* Managing multiple trauma
* Mananging uncertainty/
* prospect of return

**Process adaptations**

* Ritualised structure
* Games
* Inductive learning
* Problems explained via visual materials
* Building peer to peer expertise
* Resource focus

Building relationships

Understanding the problem

Learning & practicing a new skill

How can I do this at home?

Mapping to EB trauma therapy

Arousal managment

Future prospect

Pycho-education

Exposure and cognitive reprocessing

Legend

While the program is eclectic in nature, it was mapped on to the basic structure of evidence based (EB) trauma treatments (5). In order to map the program onto hypothesized needs and psychological theory we adapted structure, process and content. Considering the importance of peer relationships and sense of self-agency during late adolescence, promotion of relationship building, peer advise, building agency was embedded in the program both through process and content adaptations (see table 3 main paper for detail). Each session was started with a reflection of the week, problem solving of day-to-day hassles as well as revision of new skills in a group discussion moderated via the group leaders, followed by a game. New bite-size content was offered using games, cartoons, enactment, followed by some practice activity. The session ended with a round of shared reflection on what had been important in the session, plan for the week, checking the feeling thermometer and a statement of gratitude.

S7b Modules content and reasoning

Module 1

Engagement and psychoeducation

Introduction and session one: Engagement and psychoeducation. The young persons and their carers are invited for an informal information session. Introduction of group leaders is followed by a game in which everyone (incl. group leaders) takes part. The game is designed for participants get to know each other, by name, nationality and a hobby. Based on our hypothesis of cognitive compromise as a result of high stress levels this avoided placing demands on working memory (i.e. the stressor of having to remember someone else’s name). Based on experimental social inclusion paradigms (6) the sense of inclusion is enhanced where everyone is receiving and throwing the ball. Therefore, the rule in the first round was to throw to someone who has not received the ball. Group leaders use humorous self-deprecation to partially bridge hierarchical gaps. The program is introduced (No. of sessions, time, session structure and content) in order to generate a sense of predictability and commitment on our behalf. Last, the group is invited to discuss their hopes and wishes, the group rules, and any problems that needed solving (e.g., letter to schools). The participative approach promotes an initial sense of social connectedness, independence, control and self-agency from the start. The ending introduced a group ritual (repeated each session) with everyone sharing with the group what was important to them, how they were feeling ‘now’ and a statement of gratitude to begin a process of refocusing on resources (7).

Session one is held with support workers/carers. It establishes a basic vocabulary and mode of communication of emotions, using emojis drawn on post-it notes and labelled in the host-country’s language and a traffic light system (green, yellow, red) for distress. This principle is used at the beginning of each session, where each participant is asked to draw the emoji on a post-it note, expressing his current state to stick on the traffic light flip-chart while talking about the good or bad experiences during the week. This method also allowed to track changes in emotions during the session. The purpose of the first session is to facilitate both, permission to talk about difficult thought/memory content but also to empower to the UASC to feel that they can deal with difficult emotions and distress. Many UASC were unable to access the cognitive resource of imagining a comfortable or safe space as proposed in the TRT. Instead, the program therefore uses a 3-step process: Psycho-education is presented via a simple two part story as in TRT, however using simple (stick people) story board, drawn during narration of a young person witnessing a human rights violation (HRV) (part 1) and experiencing post traumatic symptoms (part 2). The emotional reaction of the group is noted, acknowledged and validated. In part 1 the fact of Human rights violation (HRV) is clearly named. In part 2 symptoms as common reaction to a terrible event are acknowledged. Participants are invited to raise their hand to examples of traumatic experiences (collated from case histories for relevance) and the post traumatic symptoms allowing them to normalize both having been subject to HRV as shared experience within the group, and commonality of distressing symptoms. A decrease in arousal often already occurs at this stage and is again acknowledged and reflected on (What has helped you feeling better now?). Following the story and discussion the group is invited to a game which usually results in a clear drop of arousal levels. The participants are asked to figure out how the game helped them to feel better (e.g. being active, doing something together, laughing, concentrating on something else etc.) and then brainstorm about transfer of these concepts to possible ideas of things that they might try at home (going for a walk, meeting up with friends, playing football). All ideas are drawn on the white board in simple icons of which participants are invited to take a photo. Carers/support workers are asked to plan positive activities on a pre-printed timetable handed out at the last part of the session. Participants take-home experience from the first session are the permission to talk about difficult experiences and that it is possible to manage distress.

Module 2:

Dealing with stress and arousal

The essential idea of TRT of needing content in relation to distress management was retained yet moved to the beginning and expanded to 3-4 sessions. Visual explanatory flash card type materials were added, enactment was developed to present concepts and a visual reminder card of what is helpful and when was produced. Specifically, an understanding of physical reactions of stress and fear as well as the stress curve is taught through a game using the metaphor of a horse and a lion. Participants learn to recognize different levels of stress, and associated body sensations and cognitions, that the group works out together on a drawing of a person (ideally A0 sheet of paper) identifying body sensations of calm and arousal states. They identify possible strategies for arousal management at different levels of stress (including breathing and relaxation techniques and imagining a safe place). Cut out pictures are provided to allow them to generate their own coping skill lists, which they then try at home. It can also be used as a ‘passport’ for communication about ‘what helps’ in homes, families and hospitals. Simple relaxation techniques are taught in the module. Mindfulness and grounding skills (using senses to stay in the ‘here and now’) are taught via games, as well as strategies for extreme stress and an emergency plan/passport. A first differentiation between intrusions from the ‘past’ and ‘here and now’ is introduced via a mindfulness game. An initial eco-map of support is drafted.

Module 3:

Dealing with worries & problem solving

The basic idea of TRT is retained yet expanded with adapted visual materials and problem solving strategies. In addition, problem solving principles are practiced during the initial ‘reflection of the week’ at the beginning of each session. This session is run with support workers and foster parents, to equip them with a tool to deal with the overwhelming day-to-day worries and tasks faced by the UASC. Worries of the group are collected e.g., on post-it notes (including careers). It is visually aided by a figure drawn on the whiteboard with all the post-it notes (worries) stuck in his head. The group reflects whether the participants can relate to the figure in terms of whether this is how their ‘head is feeling inside’. Worries (post-its) are then successively sorted into three boxes: 1) I can change this 2) I can change this with help (referring to the eco-map) 3) I can’t do anything about it. Examples of worries of in the category of ‘I can change this’ are discussed with a plan of what to do. However, more time is spent on ‘I can’t do anything about it’ and possible strategies as elicited from the group, including acceptance. Having worked out a constructive strategy for worries, a strategy for thought stop-step back/problem-solve or defer is also established using simple cartoon drawings and demonstration. Living with uncertainty and aspects of grief are addressed in this module. Dealing with worries is a complex skill. This is practiced over and over again, when participants bring their worries and problems to the first part of the session.

Module 4

Managing intrusions and nightmares.

The basic idea of TRT to teach skills managing intrusions are retained. However, participants struggled with permission to change imagery in relation to memories. Participants also struggled to cope with this content early in the program. Therefore, this was moved to a later part of the program. In addition, the initial part of the session explores the nature of memory as ‘image’ (like a photo) of the past over which we have control. It also expands on the differentiation between past and present. Some first symptomatic relief is achieved by using distancing/imagery techniques. The participants are encouraged to work out that intrusions are images (like photos or films) of the past and learn to contrast this with the here and now. The metaphor of a photo that reflects a past reality but can be manipulated as a picture is used to introduce and give permission for imagery techniques and nightmare re-scripting. The differentiation between present and past is firmly established using maps, time labels, establishing the concept of ‘Here and now’. Trauma triggers are discussed. A plan to graded exposure is drawn up where needed.

Trauma narratives and exposure

This session uses an entirely different tool to TRT. In view of the multiple traumas, initial exposure is achieved generating a resource-oriented narrative that places each event in context of a lifeline that begins at birth and ends ‘today’ using a technique from Narrative exposure therapy (NET)(8). Each event is given a symbolic representation (flower/stone). Positive events are explored for their meaning about the self and others. Traumatic events are labelled as chapter heading. The participant and group are given space to reflect on the journey of the individual. Participants are encouraged to write, draw or record their stories.

In the following session exposure can be consolidated through an EMDR group protocol, that allows each participant process traumatic events without the requirement of a detailed narrative. This has several advantages. First, no detailed writing or talking is needed, where literacy skills may be little or language barriers may impede the narration. Second it prevents other group members being exposed to traumatic detail. Last, the risk of dissociation is reduced through the dual attention technique. The dual attention technique (butterfly taps) can be transferred to -and practiced at home.

Module 5

My future and my network

This content was added to the original content. During the last module future outlook is discussed including dealing with the worst-case scenario of deportation. Here both the plan of staying (Plan A) and a plan for the scenario of deportation (Plan B) are explored. The difference of fleeing the home country and a potential planned return is reflected in terms of acquired skills, older age, potential resources. Relevant contact points, agencies and Apps are provided. In the second part of the final module, participants complete a visual eco-network map with their carers, including friends, carers, family, school, doctors, lawyers and other agencies. In the final session participants reflect on what has been achieved, coping thoughts. Here the group writes a letter (as peer experts), to the boy in the story from session one with their best advice.

Use of games

Games are used throughout. These have multiple purposes. In the first instance they are used to promote informal humorous and light-hearted connection and increase social amenability with little need for verbal communication. As the group develops, participants are encouraged to choose, agree on- and/or bring games. This increases the sense of positive contribution and agency in the group. It also allows for appreciation of- and lighthearted conversations about games from their childhood and/or their own cultures, as such developing curiosity about each other’s background. Some games are also designed as inductive learning tools to playfully relay- and explore new concepts. Further, games are used in transition between different parts of the session e.g., reflection of the week to new content. As such it introduces a pendular motion between focus on serious content and release, contraction and expansion, and thus an repeated in vivo demonstration/experience of being able to manage difficult emotions, thoughts and conversations.

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