

# **EMPOWERING ADOLESCENTS IN FAMILY TRANSITIONS: A DIGITAL MEDIA STRATEGY**

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## **ABSTRACT**

This study explores the development and validation of a digital media solution designed to support adolescents in Switzerland facing mental health challenges due to parental separation and divorce. With the rising prevalence of mental health issues among youth, exacerbated by the COVID-19 pandemic, and a notable gap in accessible mental health services, this research employs the Design Science Research methodology to create a concept for a mobile application tailored to the unique needs of adolescents aged 15-21. The app integrates features like immediate access to support, personalized coping strategies, interactive elements for peer engagement, and the creation of trust figures in the form of avatars, aiming to address the adolescents' need for accessibility, personalization, privacy, and engagement. Validation through focus groups highlighted the app's success in meeting adolescents' requirements for accessibility, personalization, and privacy, while also revealing the need for further adaptation and exploration in future iterations. The study contributes to understanding how digital platforms can offer more effective, engaging, and empathetic mental health support for adolescents, suggesting a significant step forward in bridging the current service gap.

## **KEYWORDS**

Divorce and Separation, Adolescent Mental Health, Digital Mental Health Services, Digital Counseling

## **1. INTRODUCTION**

The contemporary landscape in Switzerland presents a concerning trajectory, underscored by a sharp increase in the number of young people struggling with mental health problems (Public Health Schweiz et al., 2023). This trend is further exacerbated by the C-19 pandemic (Schuler et al., 2022). Regrettably, these struggling adolescents often find themselves isolated, dealing with their challenges in solitude. Only a fraction actively seeks external help and takes advantage of mental health care services (Barense-Dias et al., 2021). At the same time, there exists an evident undersupply of essential services for these adolescents in Switzerland (von Wyl et al., 2020). This also applies to adolescents suffering from separation and divorce

situations. For these young people, access to appropriate therapeutic interventions remains a challenge. Such complications not only exacerbate the individuals' distress, but also impact their immediate environment. Considering a rising divorce prevalence in the country (Bundesamt für Statistik, 2022) and the attendant conflicts, increasing costs for the health sector are expected (Public Health Schweiz et al., 2023).

Addressing such issues is imperative. Current interventions in Switzerland range from helplines, chat-based counseling, to physical counseling centers (Musliu and Edthofer, 2021). Additionally, there have been endeavors to communicate assistance through text-centric media such as brochures or flyers (ZHAW Zürcher Hochschule für Angewandte Wissenschaften, 2021). However, media consumption trends amongst this age bracket in Switzerland suggest a diminishing affinity for text-centered journalistic media (Waller et al., 2021). In contrast, adolescents prefer smartphones and online formats for obtaining information (Külling et al., 2022). This scenario presents a compelling challenge: to design and develop a media offering that the affected young people would genuinely be engaged with and that positively impacts their mental health in a sustainable manner.

## 2. RESEARCH OBJECTIVES

The research presented in this paper aims to tackle the following question: *What emergent characteristics should a medium exhibit so that adolescents perceive it as a useful and supportive resource in situations of parental separation and divorce?* The media design is aimed at young people aged 15-21. This age group is in the middle to late adolescence, which is characterized by a striving for greater independence from parents and an increasing emphasis on relationships with peers (Kessels, 2013). At this stage of development, the need for independent support services is particularly high.

The goal of this research extends to testing the following assumptions (hypotheses), which are crucial for the development of a medium that aligns with the needs and preferences of adolescents:

**Immediate Availability of Support and Coping Strategies:** It is assumed that assistance and coping mechanisms must be readily and directly accessible to adolescents. This immediacy is essential given the urgent nature of support needed in situations of parental separation.

**Relevance and Customization of Support:** The presumption posits that support offerings become relevant and engaging for adolescents when they are individually tailored to their unique situations. Personalization is key in ensuring that the support is perceived as meaningful and effective.

**Peer Interaction in Difficult Situations:** The assumption is that adolescents seek to engage with their peers when faced with challenging circumstances. Peer support is thus a critical component of the medium's design.

**Trust Figures Within the Medium:** The hypothesis is that adolescents require a trust figure within the medium, one that is emotionally resonant and capable of fostering engagement. This figure should provide a sense of reliability and emotional connection.

### 3. RELATED WORK

In recent years, alongside traditional sources like close acquaintances and professional services, there has been an increase in adolescents seeking support from online platforms (Kupfer and Mayer, 2019). This is since there are more barriers to overcome when seeking help offline than when seeking help online (Pretorius et al., 2019). The widespread ownership and use of cell phones for various communication among adolescents (Külling et al., 2022) further underscores this trend. Contemporary studies indicate that adolescents are effectively engaged through a blend of social media and physical interactions supplemented by digital tools (Amstad et al., 2022). Consequently, digital health and counseling services emerge as promising possibilities to reach more young people and tailor the services to the target group (Jesser et al., 2021).

For online counseling, various channels are used, such as chats, apps, emails, or forums. Platforms like OPEN enable young people between the ages of 14 and 21 to contact so-called peer mentors. It is intended to enable adolescents to talk openly about their problems (Jesser et al., 2021). The Innowell Platform is a configurable digital tool designed to support personalized and measurement-based care in mental health services, facilitating collaboration among youth, clinicians, and supportive others through the collection and analysis of personal and health information (Iorfino et al., 2019). In Switzerland, platforms like “häschiit” (Verein #häschiit, 2023) or “ciao.ch” (Association romande CIAO, 2023) facilitate anonymous yet trustworthy exchanges for young people and adults. These platforms differ in their approach; some provide peer-to-peer support while others connect users with specialists. A recent initiative, termed “Mobile Intervention for Youth Crises“, has been launched in the canton of Zurich (Britsko, 2024). This complimentary counseling service is designed to expedite assistance for children and adolescents experiencing psychological issues through mobile access. For acute situations, personal counseling sessions are conducted in a mobile format, enabling swift and flexible support. Another example for a created artifact in online services is the iFightDepression tool (Arensman et al., 2015). iFightDepression is an internet-based self-management tool for mild to moderate depression cases for young adults. Additionally, mobile applications such as “Wie geht’s dir?” (Trägerschaft Wie geht’s dir-Kampagne, 2023), “Heavy Mental” (Zürcher Hochschule der Künste & Stiftung Sanitas Krankenversicherung, 2023), and “Eda” (Moltrecht et al., 2022) focus on emotional regulation and self-awareness. “Wie geht’s dir?” offers a variety of resources, including an emotional ABC to understand and name emotions, self-check quizzes to assess one's mental state, and practical tips for engaging in supportive conversations, aimed at both individuals and professionals seeking to foster mental well-being. “Heavy Mental” enables users to artistically express and visualize emotions, using “Mood Images“ to encapsulate feelings with dynamic shapes, colors, and movements, thus deepening emotional comprehension and expression. Meanwhile, “Eda” offers a specialized, transdiagnostic emotion regulation platform for children, focusing on their unique developmental needs with insights from the app’s development and application highlighted.

However, the long-term use of mobile applications often falls short of expectations and despite the advancement in digital mental health services, several requirements from adolescents remain unfulfilled. Research highlights, that adolescents seek services that are interactive and engaging, empathetic to their unique experiences and life stages, as well as easily accessible and flexible (Gibson, 2021). Many existing services offer a one-size-fits-all approach, lacking the personalized care and attention that adolescents require. Additionally, some digital services may

not fully leverage interactive elements. Moreover, services often miss out on fully understanding the unique contexts and experiences of adolescents, leading to a gap in empathy and connection.

Research has been carried out to understand, how user empowerment is facilitated and constrained by the design of online counseling services (Lundmark and Evaldsson, 2017). The results show that factors such as user interface design, modes of interaction, and overall user experience play a crucial role in promoting young users' engagement and empowerment. Furthermore, the analysis underlines the importance of integrating digital tools with human elements for more effective digital advice. This is in line with other research findings that suggest that guided online services are generally more effective than their non-guided counterparts (Arensman et al., 2015).

This research aims to build on previous research projects by moving beyond current digital mental health services and focusing on long-term effectiveness and usefulness for adolescents, particularly in the context of parental separation and divorce. It emphasizes the need for services that combine digital accessibility with deep empathy, interactivity, and a high degree of personalization, tailored to the unique circumstances of each adolescent. With this, and the goal of combining digital tools with human elements, the study aims to create a more effective digital support system for adolescents facing the complex issues of their parents' separation and divorce, thereby making a significant contribution to the field of adolescent mental health.

#### 4. METHODOLOGY AND APPROACH

This research is anchored in the Design Science Research (DSR) framework. DSR emphasizes both rigor and relevance, operating in a cyclic process of three research cycles to ensure both the scientific validity and practical applicability of its results (Hevner, 2007). The development and validation of the research artifact were guided by the Design Science Research Methodology according to Peffers et al. (2007), involving the following steps:

**Problem Identification and Requirement Elicitation** was instrumental in formulating the assumptions (hypotheses). To understand the unique challenges and needs of adolescents impacted by parental separation or divorce, qualitative data collection was essential. Semi-structured interviews were conducted with adults (n=7) who had experienced parental separation or divorce in their youth, seeking to gain insights into their behavior and what forms of support could have potentially benefitted them. Additionally, interviews with professionals (n=6) who regularly interact with affected adolescents offered perspectives on the challenges this group faces.

Systematic content analysis (Mayring, 2016) was conducted on these dialogues, leading to the documentation of requirements for the intended media. A literature review complemented this stage to cross-verify the requirements for the media design.

**The Design of the Artifact** led to the development of concrete solutions in form of mockups addressing the hypotheses. Using the gathered requirements, a media solution in the form of an app was conceptualized. An iterative design process was employed to ensure usability and effectiveness. Mockups of the app were reviewed by both affected adolescents (n=5) and professionals (n=6), whose feedback informed continuous refinements in the app's design.

**The Artifact Validation** was carried out through focus groups comprising 9 participants (5 females, 4 males; ages 13-20, average age 16.5; German-speaking Switzerland). Due to the sensitive nature of the topic and partially limited availability of affected individuals, the focus

groups were not exclusively composed of affected adolescents. Though the intention was to immerse participants in relevant scenarios.

A first focus group intervention (n=6) was conducted, where discussions were structured into two parts: the first part sought to understand general behaviors and needs of adolescents during challenging situations with parents; the second part involved discussing the proposed solutions using the app artifact. Special attention was given to assessing the established hypotheses. In cases where responses and opinions were not uniform, a second, smaller focus group session with other participants (n=3) provided additional insights, aiming to minimize the influence of specific group dynamics on the outcomes.

Data from the focus groups such as audio recordings, transcripts and flipchart documentations were analyzed using Descriptive Coding (Saldaña, 2013).

## **5. DESIGN OF THE MEDIA**

The aim of the design is to genuinely engage adolescents and to positively impact their mental health in a sustainable manner. As outlined in the methodology section, the foundation of the design is formed by feedback from professionals and adolescents impacted by parental separation or divorce, supplemented by extensive literature research. Adapted on the media conception of Döring & Ingerl (2008), this research focuses on the aspects *Why*, *What* and *How*. The artifact is the synthesis of these aspects and visualizes the design in form of mockups.

### **5.1 Why**

This section explores the rationale behind the design of the medium: the intended effects and the impact it should have on the target audience.

In the context of parental separation and divorce, adolescents face numerous challenges and questions. They often withdraw and seek distraction or interaction with people who are not involved in the events. They are also confronted with many uncertainties, such as specific questions about personal rights or the general challenge of future steps. Feelings of guilt, conflicts of loyalty, new responsibilities, and harmful role changes are common.

This research highlights the critical need for a dedicated space focused on the adolescents themselves – a place of trust, personal comfort, and security. This space should enable them to address insecurities and discomforts, ensuring a supportive environment where they can communicate freely, whether with peers or specialists. The intended outcome of the developed artifact is to provide support at crucial moments.

### **5.2 What**

This aspect delves into the content and functionality of the medium.

The design aims to provide relevant, engaging, and practical resources tailored to the unique needs of adolescents during parental separation or divorce. The content and functionality are designed to be adaptable, evolving with the changing needs and feedback of the adolescent users, ensuring ongoing relevance and effectiveness:

### **Educational Support and Guidance**

The medium offers clear, concise information on rights, procedures, and coping strategies to help demystify the complexities associated with parental separation. It incorporates educational material addressing common misconceptions, provides insights into emotional responses, and offers advice on handling new responsibilities and possible role changes. This approach aims to empower adolescents with knowledge and understanding, enabling them to navigate their situations more effectively.

### **Personalized Support**

The support offered within the medium is customized to the individual user. To achieve this, the app gathers information about the situation and needs of the adolescent. Users can select from a range of support options to tailor the app to their specific needs, creating a space that is solely focused on them and aligns with their personal circumstances. An innovative feature is the ability for users to create their own personal avatar, which accompanies and motivates them throughout their journey in the medium. This personalized avatar adds a unique, engaging touch to the experience.

### **Interactive Features**

The medium incorporates interactive elements to foster active participation and engagement. Conversations with the avatar encourage users to reflect on their situation and needs. The inclusion of community elements, including chat capabilities and options to establish or participate in groups, facilitates interaction and external assistance, fostering a community spirit. The medium integrates coping mechanisms with tangible exercises, like relaxation techniques and reflective writing, offering pragmatic approaches for emotional regulation and stress management. These features collectively aim to provide a dynamic and supportive experience for the users.

## **5.3 How**

This section of the conceptual framework outlines the implementation and operational features of the medium, explaining the specific choices made in its design.

Opting for a mobile application is a strategic decision, recognizing that smartphones are central to adolescents' lives (Külling et al., 2022). This choice ensures the help offered is always within reach, providing round-the-clock accessibility. The decision is further supported by the Media Richness Theory, which posits that richer media formats are superior in complex communication scenarios (Daft & Lengel, 1986). An app, with its multimedia capabilities and interactive features, provides the necessary richness and immediacy for effective communication and engagement. A distinctive aspect of the app is its integration of a multimedia mix, encompassing not only digital content but also real-life references, including peers and professionals. This blend offers a more relatable and engaging user experience, connecting digital interactions with real-world contexts (Amstad et al., 2022). A crucial aspect is that the app is conceptualized as an all-in-one platform, eliminating the need for users to navigate away from the system to access different types of support. This unified approach ensures a seamless user experience and simplifies access to various resources. The app also emphasizes the importance of professionalism in its content and interactions while maintaining user anonymity, ensuring that adolescents can seek help and engage with the app without concerns about privacy or judgment. Professionalism in content and guidance provides reliability and trustworthiness, essential factors for effective support.

## 5.4 Artifact

The artifact in form of mockups of a mobile application (Gomringer and Moser, 2023) represents the synthesis of the *Why*, *What* and *How* aspects. During the design development phase, the four hypotheses served as the primary guide. Specific solutions were developed and visualized in mockups to address them. The mockups then served as a basis for discussion for input and feedback from adolescents and professionals.

### 1. Immediate Availability of Support and Coping Strategies

The hypothesis suggests that for adolescents facing the stress of parental separation, support and coping strategies should be readily accessible without delay. The app responds to this need by offering a selection of tools, assistance, and information, along with coping strategies that are immediately accessible, for instance through the home screen (see Figure 1). It functions as an all-in-one platform, offering resources directly within the app, allowing for private, anytime access without the need for external input or adherence to service hours.

### 2. Relevance and Customization of Support

The app employs a tailored approach to support, aligning with the hypothesis that relevance and personalization are key for engaging adolescents. Through an initial assessment, the app discerns each user's specific situation and needs. Based on their responses, the app suggests customized support and coping strategies. This process is powered by a learning algorithm working in the background, while the user interacts with a friendly avatar for a personalized experience, as shown in Figure 2. Additionally, users have the flexibility to update their profiles to reflect any changes in their personal circumstances, ensuring the assistance they receive remains pertinent and effective.

### 3. Peer Interaction in Difficult Situations

The app supports the hypothesis that adolescents seek peer connections during tough times by incorporating community features. Users can join existing groups or create new communities, fostering valuable exchanges. There is also a functionality to add peers as friends for more direct interaction, as seen in Figure 3, underlining the app's role in facilitating and encouraging peer support.

### 4. Trust Figures Within the Medium

The app integrates the concept of a trusted figure by allowing users to create a personalized avatar (see Figure 4). The avatar, which users can customize down to name, outfit, hairstyle, and facial features, acts as a constant, comforting presence within the app. It accompanies the user through various functionalities, offering advice and support, thereby triggering engagement through its emotive and relatable design. This personalized avatar becomes a digital confidant, fostering a unique relationship that combines reliability with emotional resonance.

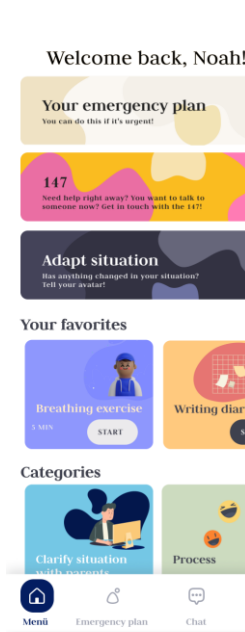


Figure 1. Accessible tools and information



Figure 2. Assessment of personal situation

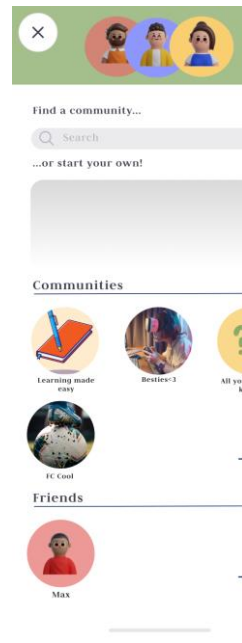


Figure 3. Exchange through communities and friends



Figure 4. Creating a personal avatar

## 6. RESULTS

The research went through a first iteration of a design science cycle by using focus groups for validation. This phase was crucial for assessing the feasibility of the developed design and the circumstances under which young people would use the media. The findings allowed for an evaluation of the hypotheses.

### 6.1 Immediate Availability of Support and Coping Strategies

Results from the focus groups indicate that the young participants greatly valued the direct access to support provided by the mobile application. All participants appreciated the inclusion of specific self-help exercises, such as meditation and diary writing, which they could undertake independently. Equally important to them was the ability to reach out for external support, such as contacting specialists or utilizing emergency numbers, directly through the app. The emergency number 147 was specifically mentioned as an important resource by three participants. They emphasized its importance as an easily accessible option for those who do not know where to turn for a listening ear or immediate assistance. The app's feature of helping users locate nearby specialists was also well received, highlighting the adolescents' desire for



accessible professional help within their local context. This local assistance aspect was seen as an extension of the app's comprehensive support network.

Four participants expressed their appreciation for the app's all-in-one platform design, which allowed them to access various services without the need to switch between different apps or websites, enhancing the sense of a secure and integrated support environment. Moreover, the platform was praised by all participants for providing a safe space, which is paramount for young people dealing with sensitive issues.

However, the feedback on the selection of options within the app varied. Just as adolescents have diverse interests and personalities, their preferences for the exercises and content offered by the app differed. Some found certain activities more helpful or appealing than others, reflecting the individualized approach the app strives to offer. This diversity in preferences underscores the need for a wide range of options to accommodate the varied coping mechanisms of different individuals.

## **6.2 Relevance and Customization of Support**

The results underscore the importance of the app being personalized to the unique circumstances of the adolescents. The participants were not explicitly aware of the learning algorithm's role in tailoring their experience, but all of them valued the guided assessment provided as a form of support, aiding in their engagement with the app. Moreover, the feedback of two adolescents highlighted the preference for a concise questionnaire, noting that extensive queries could deter continued engagement.

The option to choose from a curated set of activities was welcomed by seven participants, preventing the feeling of being overwhelmed. However, there was also a desire for the ability to view all available options, rather than being limited to a few suggestions, to allow for informed decision-making. In addition, one participant expressed the need for a personal dashboard to track the progress and to reflect on the personal journey.

However, the aspect of customization extended beyond the functional; it was equally important for all adolescents to personalize the app's look and feel, such as changing the background color, selecting a profile image, or designing their avatar, making the app not just a tool, but a reflection of their identity.

## **6.3 Peer Interaction in Difficult Situations**

The results reveal nuanced insights into the adolescents' communication preferences during difficult situations. While typically reserved about discussing personal struggles openly and personally with friends, the largest part of the group responded positively to the concept of online possibilities such as communities for sharing experiences with others in similar situations. They emphasized the value of authentic peer exchanges in these online spaces, finding comfort in the realization that they are not alone and that their feelings are shared by others. The importance of interacting with real individuals, as opposed to digital entities like bots, was highlighted by two participants, with a preference for peers of similar age to foster a sense of belonging. Furthermore, safety within these communities emerged as a non-negotiable condition for all the adolescents. Privacy and respectful interaction were paramount for them to create an environment where they felt secure to share and interact.

However, opinions diverged on the scope of discussions within these communities. Four participants believed that conversations should focus solely on navigating the challenges directly related to their situation, such as adapting to new family dynamics. In contrast, the five others advocated for the inclusion of diverse topics, like hobbies, to provide a welcome distraction and broader support. Despite varied opinions on content focus within the communities, all the participants concurred that while these online spaces provide a fitting platform for dialogue, engaging actively often involves overcoming personal reservations and the challenge of revealing one's vulnerabilities.

#### **6.4 Trust Figures Within the Medium**

The focus group results shed light on the participants' attitudes toward the use of avatars within the app, underscoring their preference for personalization in the digital experience. The ability to customize their avatars was particularly well-received by all the participants, allowing them to infuse their personal identity into the app. Most participants were in favor of the avatar being a human figure. In addition, the idea of an animal, e.g. a pet dog, as a neutral figure detached from family conflicts was also appealing for two adolescents. However, the consensus tended towards a human figure as the avatar.

While the avatar added a personal touch to the app, two of the participants did not see it as necessary for it to be present in all functionalities. They see its most effective use in areas involving personal interactions. For six adolescents, the avatar functioned as a virtual confidant, creating a sense of talking to someone and thereby enhancing the engagement with the app. For them, it provided a feeling of constant companionship, mitigating feelings of isolation. However, there was recognition of three of the participants that the avatar, despite its personal touch, remained a digital figure. This led to expressing the need for human elements within the app, highlighting a desire for a balance between digital interaction and human connection.

#### **6.5 Essential Criteria for Comfort and Usability**

The focus group participants articulated several key factors necessary for the app to be considered helpful and comfortable.

A significant emphasis was placed on security, with all the adolescents expressing a strong desire for anonymity and data privacy. The platform being a safe space where they can freely express feelings and be taken seriously was highlighted as crucial. They underscored the importance of creating an environment where they feel protected from any potential harm.

Personalization emerged as another key requirement. Six adolescents showed a keen interest in customizing the platform to reflect their personal tastes and preferences, aspiring to transform the app into a space that feels uniquely theirs. This desire for personalization extended to the functionality and aesthetics of the app, underscoring their need for a deeply individualized experience.

Another feature that five participants found appealing was the idea of a reminder function or regular personalized messages. They liked the notion of the avatar interacting within the app, providing encouragement or suggestions. Outside the app, push notifications could prompt them to re-engage with the app or to complete certain exercises. However, they stressed that the frequency and nature of these reminders should be adjustable to avoid becoming intrusive or overwhelming.

## **7. KEY FACTORS FOR IMPLEMENTATION**

To transfer the design concept into the real world, a few steps still need to be taken. Above all, various factors need to be taken into account for successful realization. This research takes a closer look at three such factors and identifies good practices and/or considerations in the respective areas.

### **7.1 Design and Development**

The media concept presented envisages the development of a mobile application. User-Centered Design (UCD) principles can be used as a guide. UCD is an iterative design process that focuses on the users and their needs in each phase of the design process (Vredenburg et al., 2002). It involves users throughout the development process via a variety of research and design techniques, ensuring that the product is tailored to meet their needs and is usable in real-world scenarios. For the foreseen application, this means engaging adolescents, mental health professionals, and educators in the development process to gather insights, validate assumptions, and refine prototypes. This can build on the knowledge that this research has already gained in earlier steps. In addition, techniques such as Human-Computer Interaction (HCI) analysis and User Experience (UX) design are integral, focusing on creating an interface that is intuitive and responsive to the user's emotional states and needs.

A critical aspect of a future application is confidentiality and security. When dealing with mental health data, especially of adolescents, the application must adhere to the highest standards of data protection and privacy laws, such as the General Data Protection Regulation (GDPR) in Europe or the Federal Act on Data Protection (FADP) in Switzerland. Online security involves implementing robust security measures, such as end-to-end encryption for data transmission, secure data storage solutions, and strict access controls to ensure that user data is protected from unauthorized access or breaches (Olf, 2015). These security protocols are essential not only for compliance with legal standards but also for building trust with users, who must feel confident that their personal information and mental health data are treated with the utmost respect and confidentiality. Anonymity within the app is another critical feature, enabling adolescents to explore and utilize the app's resources without the fear of stigma or breach of privacy. This feature encourages open and honest engagement with the app, allowing users to seek the support they need in a safe and secure environment.

### **7.2 Distribution and Use**

As the media concept for supporting adolescents through parental separation and divorce transitions into reality, determining the context in which the app becomes available to the targeted youth is crucial. Accessibility is not just about making the app available for download from standard app stores; it involves a deeper understanding of how to ensure the app reaches those who need it most while maintaining the integrity of confidentiality and security.

A universal download option from app stores could provide easy access, but it also necessitates stringent measures to safeguard against unauthorized access, particularly to sensitive areas like community forums. To mitigate risks associated with fake accounts and impersonation, the implementation of access codes distributed through certified bodies such as counseling centers or organizations like "Pro Juventute" (Pro Juventute, n.d.) could be

considered. This method ensures that only legitimate users, who can benefit from the app's support, gain access, fostering a safe and supportive online environment. The successful rollout of this app hinges on close collaboration with educational institutions, mental health organizations, and potentially even government agencies. These partnerships are vital for both disseminating access codes and ensuring the app is integrated into a broader support system for adolescents. Working with these bodies can also facilitate feedback loops for continuous improvement of the app based on real-world usage and needs.

The deployment of such an app raises significant questions that could require national-level responses. Key among these is funding for the operation and maintenance of the app. If the app is to be privately funded, regulatory questions emerge, as do concerns about the app's ability to achieve the intended impact without sufficient oversight or integration into existing mental health support frameworks. Ensuring compliance with national regulations and securing sustainable funding are intertwined challenges. Public-private partnerships offer a potential solution, blending private innovation and flexibility with public accountability and reach. Such collaborations could also facilitate the app's alignment with national mental health strategies and education policies, enhancing its efficacy and relevance.

Overall, making the app accessible and useful to adolescents facing the challenges of parental separation and divorce requires a multifaceted approach. It involves careful consideration of distribution methods, collaboration with key stakeholders, adherence to regulatory requirements, secure funding, and continuous engagement with users. By addressing these aspects thoughtfully, the app can become a valuable tool in the support ecosystem for adolescents, providing them with the resources and community they need during a challenging period of their lives.

### **7.3 Engagement and Personalization**

To elevate user engagement and ensure the app's effectiveness for adolescents navigating parental separation and divorce, a nuanced approach to personalization is paramount. This strategy is vital within eHealth tools aimed at youth mental healthcare, where customization to individual needs enhances both engagement and therapeutic outcomes (van Dooren et al., 2019; Borghouts et al., 2021). Insights gleaned from this study, particularly feedback from focus group participants, emphasize the multifaceted nature of personalization, ranging from aesthetic modifications to adapting interventions based on each user's unique context.

Aesthetic personalization emerged as an initial point of engagement, with users expressing a desire to tailor the app's appearance to their liking, such as changing color schemes and selecting personal profile pictures. Further personalization extends to the functionality of the app, with the inclusion of a dashboard that visualizes the user's progress and personal journey. The deepest layer of personalization involves tailoring the app's support mechanisms to the unique context of each user's life. This requires sophisticated data analysis to adjust support offerings based on a holistic understanding of individual needs, preferences, and emotional states. Such personalization should acknowledge the importance of factors such as gender, age, user preferences, and subjective behavior (Ropero et al., 2023). For instance, content and interventions might be adjusted to reflect the user's gender, addressing gender-specific concerns and perspectives. Age considerations ensure that the app's content and usability are appropriate, making it more accessible and relevant. Moreover, incorporating user preferences about content type and interaction styles, along with adapting to observed behaviors allows the app to provide timely and relevant support.

## 8. CONCLUSIONS

The research conducted within the DSR framework has yielded valuable insights into the media design aimed at supporting adolescents, particularly in situations of parental separation and divorce. However, these results should be viewed in light of certain limitations. Not all participants of the focus groups were directly affected by parental separation, potentially influencing the findings. Additionally, the mixed age composition of the groups makes it difficult to draw definitive conclusions about the app's effectiveness across different adolescent age groups. Moreover, the small number of participants emphasizes the qualitative focus of the study, limiting the scope for broad quantitative conclusions.

Despite these limitations, the results from the focus groups indicate that the hypotheses played a crucial and constructive role in the design process. This has led to the successful functioning of the media design concept, aligning closely with the initial intentions. Particularly, the implementation and operational features outlined in the *How* section emerged as critical components for any future application. This includes the creation of an all-in-one platform, ensuring anonymity, and integrating a media mix that combines digital spaces with human interactions. However, the findings under the *What* section call for a more nuanced approach. The diverse reactions to specific exercises highlight the importance of personalization, allowing adolescents to choose what resonates with them. Similarly, offering flexible use of communities is essential to cater to varied preferences and needs. On this premise, the conclusion of this study acknowledges both the potential and the challenges of implementing a digital media solution for adolescents undergoing parental separation and divorce. The implications of design, development, distribution, use, engagement, and personalization highlight critical pathways and considerations for transforming the media design concept into a tangible and effective application.

A general cognition from the validation process was the difference in perceptions and priorities between adolescents and professionals. The adolescents seemed to underemphasize aspects like educational material and the need for professionalism, possibly perceiving these as basic expectations rather than notable features. This suggests that while these elements are essential, they might not be the primary factors that draw adolescents to the app.

In summary, the implementation of this media design holds the potential to fill a significant gap in current adolescent mental health support. It offers a novel, user-centric approach that blends technological innovation with empathetic human interaction, aiming to engage and support adolescents in a way that traditional methods may not. Future steps, including experimental testing and addressing the key factors for implementation, are crucial in refining the concept for optimal impact.

## REFERENCES

- Amstad, F. et al., 2022. *Gesundheitsförderung für und mit Jugendlichen und jungen Erwachsenen — Wissenschaftliche Erkenntnisse und Empfehlungen für die Praxis* (9, p. 118). Gesundheitsförderung Schweiz. [https://promozionesalute.ch/sites/default/files/2022-11/Bericht\\_009\\_GFCH\\_2022-11\\_-\\_Gesundheitsf%C3%B6rderung%20f%C3%BCr%20und%20mit%20Jugendlichen%20und%20jungen%20Erwachsenen.pdf](https://promozionesalute.ch/sites/default/files/2022-11/Bericht_009_GFCH_2022-11_-_Gesundheitsf%C3%B6rderung%20f%C3%BCr%20und%20mit%20Jugendlichen%20und%20jungen%20Erwachsenen.pdf)

EMPOWERING ADOLESCENTS IN FAMILY TRANSITIONS:  
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- Arensman, E. et al., 2015. Depression Awareness and Self-Management Through the Internet: Protocol for an Internationally Standardized Approach. *JMIR Research Protocols*, Vol. 4, No. 3, e4358. <https://doi.org/10.2196/resprot.4358>
- Association romande CIAO, 2023. *Ciao.ch*. <https://www.ciao.ch/>
- Barense-Dias, Y., Chok, L. and Suris, J.-C., 2021. *A picture of the mental health of adolescents in Switzerland and Liechtenstein*. Lausanne, Unisanté – Centre universitaire de médecine générale et santé publique. <https://doi.org/10.16908/issn.1660-7104/323>
- Borghouts, J. et al., 2021. Barriers to and Facilitators of User Engagement With Digital Mental Health Interventions: Systematic Review. *Journal of Medical Internet Research*, Vol. 23, No. 3, e24387. <https://doi.org/10.2196/24387>
- Britsko, S., 2024. Jugendliche in der Krise erhalten Hilfe per Handy. *Landbote*. <https://www.landbote.ch/zuerich-neues-angebot-fuer-jugendliche-in-der-krise-247465190899>
- Bundesamt für Statistik, 2022. *Internetnutzung*. <https://www.bfs.admin.ch/asset/de/23588807>
- Döring, N. and Ingerl, A., 2008. 'Medienkonzeption', in B. Batinic and M. Appel (Eds.), *Medienpsychologie*. Berlin Heidelberg: Springer, pp. 403-424. [https://doi.org/10.1007/978-3-540-46899-8\\_17](https://doi.org/10.1007/978-3-540-46899-8_17)
- Gibson, K., 2021. *What Young People Want from Mental Health Services: A Youth Informed Approach for the Digital Age*. Routledge, London, UK. <https://doi.org/10.4324/9780429322457>
- Gomringer, S. and Moser, M., 2023. *Media design for adolescents in separation and divorce situations*. <https://osf.io/anj97/>
- Hevner, A. R., 2007. A Three Cycle View of Design Science Research. *Scandinavian Journal of Information Systems*, Vol. 19, No. 2.
- Iorfino, F. et al., 2019. A Digital Platform Designed for Youth Mental Health Services to Deliver Personalized and Measurement-Based Care. *Frontiers in Psychiatry*, No. 10. <https://doi.org/10.3389/fpsy.2019.00595>
- Jesser, A. et al., 2021. Chancen niederschwelliger online Peer-to-Peer Begleitung für Jugendliche am Beispiel der Online-Plattform OPEN. *Psychotherapie Forum*, Vol. 25, No. 3, pp. 154-160. <https://doi.org/10.1007/s00729-021-00188-z>
- Kessels, U., 2013. Jugend. in S. Andresen, C. Hunner-Kreisel and S. Fries (Eds.), *Erziehung: Ein interdisziplinäres Handbuch*. J.B. Metzler, pp. 39-44. [https://doi.org/10.1007/978-3-476-05023-6\\_6](https://doi.org/10.1007/978-3-476-05023-6_6)
- Külling, C. et al., 2022. *JAMES Jugend | Aktivitäten | Medien – Erhebung Schweiz (Studie 7)*. ZHAW Zürcher Hochschule für Angewandte Wissenschaften. <https://www.zhaw.ch/de/psychologie/forschung/medienpsychologie/mediennutzung/james/>
- Kupfer, A. and Mayer, M., 2019. Digitalisierung der Beratung. Onlineberatung für Kinder und Jugendliche und die Frage nach Möglichkeiten des Blended Counseling in der Kinder- und Jugendhilfe. *Soziale Passagen*, Vol. 11, No. 2, pp. 243-265. <https://doi.org/10.1007/s12592-019-00333-1>
- Lundmark, S. and Evaldsson, A.-C., 2017. Click-guides and panic buttons: Designed possibilities for youth agency and user empowerment in online youth counselling services. *Childhood*, Vol. 24, No. 2, pp. 260-278. <https://doi.org/10.1177/0907568216656761>
- Mayring, P., 2016. *Einführung in die qualitative Sozialforschung: Eine Anleitung zu qualitativem Denken* (6., überarbeitete Auflage). Beltz.
- Moltrecht, B. et al., 2022. A Transdiagnostic, Emotion Regulation App (Eda) for Children: Design, Development, and Lessons Learned. *JMIR Formative Research*, Vol. 6, No. 1, e28300. <https://doi.org/10.2196/28300>
- Musliu, L. and Edthofer, S., 2021. *Jahresbericht 2021* (p. 28). Stiftung Pro Juventute. [https://www.projuventute.ch/sites/default/files/2022-05/DT\\_Jahresbericht\\_2021\\_0.pdf](https://www.projuventute.ch/sites/default/files/2022-05/DT_Jahresbericht_2021_0.pdf)
- Oloff, M., 2015. Mobile mental health: A challenging research agenda. *European Journal of Psychotraumatology*, Vol. 6, No. 1, 27882. <https://doi.org/10.3402/ejpt.v6.27882>

- Peffers, K. et al., 2007. A Design Science Research Methodology for Information Systems Research. *Journal of Management Information Systems*, Vol. 24, No. 3, pp. 45-77. <https://doi.org/10.2753/MIS0742-1222240302>
- Pretorius, C., Chambers, D. and Coyle, D., 2019. Young People's Online Help-Seeking and Mental Health Difficulties: Systematic Narrative Review. *Journal of Medical Internet Research*, Vol. 21, No. 11, e13873. <https://doi.org/10.2196/13873>
- Pro Juventute, n.d. *Erfahren Sie mehr über Pro Juventute*. Retrieved March 28, 2024, from <https://www.projuventute.ch/de/stiftung/wer-wir-sind>
- Public Health Schweiz, Pro Juventute, SAJV, Ciao.ch and Unicef, 2023. *Tagungswebseite – 24. Mai 2023 – Psychische Gesundheit junger Menschen*. <https://tagu.ng/>
- Ropero, J., Denecke, K., Rivera, O. and Gabarron, E., 2023. 'Personalized Digital Solutions for Mental Health', in *Studies in health technology and informatics*, Vol. 309, pp. 282-286. <https://doi.org/10.3233/SHTI230797>
- Saldaña, J., 2013. *The coding manual for qualitative researchers* (2nd ed). SAGE.
- Schuler, D. et al., 2022. *Psychische Gesundheit—Kennzahlen mit Fokus Covid-19*. Schweizerisches Gesundheitsobservatorium.
- Trägerschaft Wie geht's dir-Kampagne, 2023. *Wie geht's dir?* <https://www.wie-gehts-dir.ch/>
- van Dooren, M. M. M. et al., 2019. Reflections on the design, implementation, and adoption of a gamified eHealth application in youth mental healthcare. *Entertainment Computing*, Vol. 31, 100305. <https://doi.org/10.1016/j.entcom.2019.100305>
- Verein #häschziit, 2023. *Häsch Ziit?* <https://haeschziit.ch/>
- von Wyl, A. et al., 2020. *Stationäre und tagesklinische Angebote der psychiatrischen Gesundheitsversorgung an der Schnittstelle des Jugend- und Erwachsenenalters in der Schweiz. Eine Bestandesaufnahme bestehender Angebote im Auftrag des BAG*. Zürcher Hochschule für Angewandte Wissenschaften.
- Vredenburg, K., Mao, J.-Y., Smith, P. and Carey, T., 2002. 'A survey of user-centered design practice', in *CHI '02: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. pp. 471-478. <https://doi.org/10.1145/503457.503460>
- Waller, G. et al., 2021. *JAMESfocus—Rückblick auf ein Jahrzehnt Jugendmedienforschung*. Zürich: ZHAW Zürcher Hochschule für Angewandte Wissenschaften. [https://www.zhaw.ch/storage/psychologie/upload/forschung/medienpsychologie/james/jamesfocus/2022/JAMESfocus\\_Jugendmedienforschung\\_DE.pdf](https://www.zhaw.ch/storage/psychologie/upload/forschung/medienpsychologie/james/jamesfocus/2022/JAMESfocus_Jugendmedienforschung_DE.pdf)
- ZHAW Zürcher Hochschule für Angewandte Wissenschaften, 2021. *Heb der Sorg! Ein Werkzeugkasten für Jugendliche, die aktiv mit Herausforderungen umgehen wollen*.
- Zürcher Hochschule der Künste & Stiftung Sanitas Krankenversicherung, 2023. *Heavy Mental*. <https://www.heavy-mental.ch/>