

MilTeenChat™ App to Promote Coping Resilience in Military Youth

K Puskar, R Sun, A Gleeson, T Lampi, D Nichols, N Khan

Abstract

Military adolescents face unique challenges in military families including frequent relocations and parental deployment. Around 30% of military adolescents report feeling sad or hopeless, and one in four has considered suicide. There are limited resources available for military adolescents coping with stresses. Our study aims to understand stresses faced by adolescents in military life, to obtain input from military adolescents, and to develop a mobile app to help youth cope with stresses. A qualitative study using focus groups with 31 military adolescents was applied. Adolescents ages 12 to 18 were recruited in the Pittsburgh and San Diego USA communities in collaboration with the Military Children's Collaborative Group (MCCG). Four focus groups were held at designated community sites. Themes generated from the focus groups sessions were used to develop the MilTeenChat™ App design. Common stresses were loneliness, frequent relocation, missing special events in life, feeling isolated, and difficulty communicating with peers and teachers. The MilTeenChat™ App was created to empower the adolescents with educational information, encourage mutual learning about coping with stresses, and promote resilience in the military adolescents.

Keywords: military deployment, military reintegration, military transitioning, mobile technology, adolescents, eHealth, telehealth

Introduction

Since 2001, over two million American children have had a parent deployed at least once in the United States.¹ Data have shown that 42.1% of military personnel had children in 2014, nearly 24% between 12 and 18 years of age.² Adolescents have experienced the longest and highest number of wartime deployments in the U.S. history.³ (p5) Deployment is not new to military families. Some parents have been deployed on multiple tours to combat zones for months or more at a time. Separation has become a way of life for these families, which increases the burden on children who frequently face the strain of a parent's absence. Mental health issues are more prevalent among adolescents in military families compared to non-military peers. Around 34% of adolescents with military connections report feeling sad or hopeless for over two weeks during the past year, compared to 31% of teens with non-military-connected peers.⁴ Similarly, approximately 25% of military-connected adolescents reported having considered suicide, compared to 19.1% in non-military-connected adolescents.⁴ However, according to the U.S. Department of Defense (2010), this population has not been the primary subject of assessment or research.⁵ (p2)

Teaching Kids to Cope (TKC) is a government-reviewed educational program for adolescents ages 12–18 for the purpose of increasing their ability to cope by using strategies that address self-esteem, stress, negative thinking, healthy coping, and support resources. TKC was originally developed at the University of Pittsburgh School of Nursing;⁶ it has been rigorously reviewed and selected by a panel of experts for inclusion in the prestigious governmental National Registry of Evidence-based Programs and Practices (NREPP) at the Department of Health and Human Services, Substance Abuse Mental Health Services Administration (SAMHSA). Since its development in the early 1990s, TKC has been widely disseminated as an evidence-based practice tool throughout the United States, where it has reached over 2,000 youths, and internationally in Jordan. TKC has been successfully adapted to help youth cope with the specific stresses of several particular contexts, including geographic mobility and relocation. In this study, we have adapted the original TKC program to meet the unique needs of military adolescents and support coping resilience among military adolescents when their parents are deployed. The purposes of this study were 1) to adapt the original TKC program and use it to support

coping resilience among military adolescents, 2) to understand the stresses experienced by military adolescents when parents are deployed, and 3) to describe designs for a mobile app that will meet the needs of military adolescents.

Methods

Data for this study was collected qualitatively using focus groups. Adolescents were recruited both in the Pittsburgh community, as well as in San Diego, California in collaboration with the Military Children's collaborative Group (MCCG). Adolescents were recruited using multiple approaches, including distributing the study information to organisations that serve military families and sending out flyers to potential military families. Eligible adolescents were those between ages 12 and 18, having parents who were deployed at least once in the past.

Focus groups were conducted between May and October in 2016. Each focus group session followed a one-hour schedule led by the research team. To facilitate the discussion, we prepared several guiding questions regarding the stresses adolescents encountered in military life, successful or unsuccessful coping strategies they have used, and how the app design based on the TKC model would be useful to them and their military peers. Each adolescent was encouraged to participate in the discussion. Notes were taken during the focus groups by members of the research team and were reviewed for accuracy after each session. Follow-up individual interviews with three to five adolescents were performed to present to them the strategies we identified from all focus groups. Recruitment was stopped when saturation was reached.⁷ Approval for this study was received from the University of Pittsburgh Institutional Review Board, and written parent consent and child assent were obtained before conducting each focus group. The mobile app design was informed based on the themes generated from the focus group.

Findings

A convenience sample of 31 military adolescents from two cities representative of the east and west coast of US were recruited with 16 from San Diego, California and 17 from Pittsburgh, Pennsylvania. Adolescents were averaged 14.58 ± 1.65 years old with 45.2% female. The number of parent deployments adolescents experienced ranged from one to seven times, with the majority between one to three times. Two focus groups were held at each site. Themes identified from the session are described below.

Stresses in military life

Focus group adolescents were asked to identify two significant stresses they encountered during parent deployment. Adolescents described that they felt lonely, worried, and anxious when parents went away. When a parent was deployed, they were always fearful of the uncertainty about whether parents will come back. One participant mentioned, "I worried that he wouldn't be able to come see me because he was injured. Also, the other girls at school would visit their dads every other weekend and complained about it, it stressed me out because I wished I could see mine." A potential outlet for these feelings is to misbehave for attention since there may be no parents or guardians at home to give them the attention they need. One adolescent said: "I was acting out to get grandma's attention in bad ways."

Another commonly mentioned theme in the focus groups was the difficulty in communication, not only with the parent, but also with classmates and teachers. An adolescent stated that, "I was not able to talk to dad, I just want to talk to him and know he is ok." The majority of the participants in this study are in high school; adolescents expressed that classmates did not understand what deployment means to them and teachers provided little help to address their concerns. Some classmates would continually tease and demean military children for being different. Other classmates don't understand that these kids' parents left for positive reasons. They only see military children as teens with no parents which becomes especially hurtful when classmates prey on the negative idea of having a father who abandoned his family. Adolescents mentioned that discussing their feelings with someone who has had the same or similar experiences would be very helpful since there would be an increased level of understanding and empathy.

Three teens said that their stress came from constant moving during the school year, as they must continuously cope with relationships due to the multiple school transitions. One adolescent said, "I lack friends and neighbours since we moved a lot." Another said: "we have to move every 3 years to a new place, and leave friends/school and go to a new school." Parents also struggle to deal with moving homes frequently just as much as their children, which can cause additional tension within the family.

Family events become struggles with the children feeling scared or alone and unable to really participate. Twelve teens reported feelings of sadness and disappointment that their parents missed special events in their lives. Just like one said, "he missed some social events such as birthdays or holidays."

Adolescents expressed that they would like to have their parents on their side and share all the cheerful moments with parents in their life. Although they feel worried or anxious when parents are gone, they know parents are serving the country and they feel very proud of their family service. They understand that they are heroes of the country.

Suggestions for mobile app design

Adolescents were asked about their thoughts on the development of an app to support them through military life. Common expectations for the app allowed us to draw themes that the program should be user-friendly, easy to use, and most importantly, fun. All of these criteria were deemed to be vital when developing the mobile app as a helpful and desirable support platform. Six teens stated that they want the app to be colourful, bright, and vibrant to be attractive. They expressed that 'the TKC brochure is like a textbook, it is boring to look at it.' Fifteen adolescents said that developers should make the app more appealing, and include a game with rewards or a story book. Strategies to promote engagement need to be applied using different approaches. Setting goals before they begin and earning quick rewards would make the app fun and attractive.

Most importantly, subjects requested that the app allow them help their peers build their own extended support systems. The adolescents would like to tell their own stories and listen to others' stories on the app. "I would like to communicate with other military kids who experience the same things as we are, and asking them how they are doing." By sharing their documents with teachers and school counsellors, they can better understand what these adolescents have been going through and to provide encouragement for them.

Dealing with the multiple deployments of parents is not easy for children. Teens experienced negative emotions, so the app should also provide information and skills to help cope in healthy ways with their negative feelings and emotions related to a military deployment. A wide variety of education resources should be available to adolescents who are at a different phase of deployment including pre-deployment, deployment, and post-deployment. The app should be able to answer questions from adolescents, such as "how to speak with my grandparents about how I am feeling sad, or how to talk about the military in class".

MilTeenChat™ Mobile App

The app was created to help teens with parents in the military to create a community, where teens

with similar experiences can provide support to each other and share knowledge. Support is also provided through professional support tools. Regular interactions in the app are rewarded in order to motivate children to interact with the app, and as a result other children can contribute their thoughts. The app has six components: 1) newsfeed, 2) chat with peers, 3) resources/articles library, 4) reward bank, 5) notification, and 6) profile. The Flow Chart of the MilTeenChat™ App is presented in Figure 1. Screen shots of the app can be found in Figure 2. An associated website for the MilTeenChat™ App was developed, which is available at: <https://www.milteenchat.com/>.

Newsfeed Newsfeed allows children to share stories, 'Like' posts, and upload pictures. The Newsfeed will also have a pop-up of a 'Featured Profile' that will allow other children to see other users' profiles and connect with them. The Featured Profile will display information about the user's experience and background, creating a bond with other children.

Chat with peers The app allows teens to send messages to other children and groups of children. A secure messaging system is used to support direct user-to-user communication and community. The user composes a message on the phone that is sent to another users' phone.

Resources/articles library Professional resources will be available in three categories: Family, Friends and School. The users can search the categories and 'Like' articles, creating a scoring system of most useful article and tools.

Reward bank An algorithm in the system will release a coin as a reward for interacting with the app. When a user posts and likes articles the algorithm is triggered. This bank can be viewed by accessing 'Coins' in the Profile page.

Notification Notifications prompt users when their articles are liked and when they receive a message.

Profile The profile page allows users to personalise their account. They can upload a picture and add or modify the following: posts, coins, heroes, locations, favorites, challenges, tips, featured profile, military branch, deployments in the last year, and lifetime deployments.

Admin portal

The admin portal is a secure Website that can be accessed from a computer, tablet, or smartphone. Administrators can use the portal to add/delete/modify articles/documents and to view data from the

app. The admin portal also collects user-generated data, and the administrator is able to access this data for academic research.

Ensuring a positive online community

An algorithm to identify certain languages that may indicate possible suicidal thoughts, bullying, or sexting among teens was developed. These negative phrases were determined based on the literature and consultation with psychologists for assessing adolescents at risk for suicidal behaviours. Phrases included are “I want to cut myself”, “I feel life is not worth living”, “I have a plan to hurt myself”, “I feel like hurting myself”, “I feel hopeless”, “I feel that no one cares about me”, and “I feel I am no good”. Abbreviations, phrases and negative emojis related to bullying and sexting are also integrated into the algorithm. Once these predetermined languages are used by adolescents, parents are notified automatically via an email and if needed, a national suicide lifeline number will be provided via the app in order for the teens to seek immediate assistance.

Discussion

Adolescents in military families are a unique group of people who must cope with the developmental milestones of adolescence, such as establishing a sense of identity or development of autonomy, while they also adjust to the challenges of military life during the wartime, including relocation and the deployment of a family member.⁸ The need to teach coping resilience and recovery in military adolescents is timely and essential. This study provides insights into what military adolescents are suffering from and which strategies can be employed to support military teens through a mobile application.

The MilTeenChat™ app has been developed with a focus on communication and relationship building. Children from military families often have difficulty finding others who can relate to their experience and provide support. The app will function as a resource to bring these children together and foster a sense of community among its users. Creating the app as a platform for communication between teens in military families is a start, but it does not directly address the issue that some of these children may perceive there aren't others in positions like themselves. The MilTeenChat™ app allows teens to share stories of themselves and their families and to respond to others with how they cope with their own stresses. Furthermore, adding the option to include photos will add a more personal flair to their stories and reinforce to the kids that they are not alone.

Teens can also access educational resources provided through the app regarding coping with challenges unique to military everyday life, such as how to speak with parents about how they are feeling, or how to deal with changes in life when a family member is deployed. Additional resources to support military youth are provided in the resources section (see Table 1).

In order to make the MilTeenChat™ app appealing and engaging, coins were designed as a tangible reward system for performing certain tasks in the app, similar to military challenge coins in recognition of special achievements. Teens will receive a coin when they post a story, share coping tip to others, or update profiles.

Conclusion

TKC-Military will provide a mobile app that is focused on coping and resilience among military adolescents to enable them to decrease negative coping and forge positive and healthy futures. The MilTeenChat™ app was created and will be disseminated to military community groups as a free platform that will teach coping, resilience, recovery skills to enhance mental health of adolescents in military families.

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Declaration of conflicting interests

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References

1. Aranda MC, Middleton LS, Flake E et al.. Psychosocial screening in children with wartime-deployed parents. *Mil Med.* 2011;176(4):402–407. doi:10.7205/MILMED-D-10-00202.
2. Defense Manpower Data Center. *2014 Demographics: Profile of the Military Community.* Washington, DC; 2014. <http://www.militaryhomefront.dod.mil>.
3. Tanielian TL, Jaycox L. *Invisible wounds of war: psychological and cognitive injuries, their consequences, and services to assist recovery.* Santa Monica, CA : RAND; 2008.
4. Cederbaum JA, Gilreath TD, Benbenishty R.. Well-being and suicidal ideation of secondary school students from military families. *JAdolescHeal.* 2014;54(6):672–677. doi:10.1016/j.jadohealth.2013.09.006.
5. Department of Defense. *Report on the Impact of Deployment of Members of the Armed Forces on Their Dependent Children.*; 2010.
6. Puskar KR, Lamb J, Tusaie-mumford K. Teaching Kids to Cope: A Preventive Mental Health Nursing Strategy for Adolescents. *JChildAdolescPsychiatrNurs.* 1997;10(3):18–28. doi:10.1111/j.1744-6171.1997.tb00410.x.
7. Krueger RA, Casey MA. Focus groups: a practical guide for applied research. *Thousand Oaks CA Sage.* 2000.
8. Milburn NG, Lightfoot M. Adolescents in Wartime U.S. Military Families: A Developmental Perspective on Challenges and Resources. *Clin Child Fam Psychol Rev.* 2013;16(3):266–277. doi:10.1016/j.immuni.2010.12.017.Two-stage.