

GeniAuti: Toward Data-Driven Interventions to Challenging Behaviors of Autistic Children through Caregivers' Tracking

EUNKYUNG JO, University of California, Irvine, USA

SEORA PARK, Seoul National University, Republic of Korea

HYEONSEOK BANG, Yonsei University, Republic of Korea

YOUNGEUN HONG, National Center for Mental Health, Republic of Korea

YENI KIM, Dongguk International Hospital, Republic of Korea

JUNGWON CHOI, National Center for Mental Health, Republic of Korea

BUNG NYUN KIM, Seoul National University Hospital, Republic of Korea

DANIEL A. EPSTEIN, University of California, Irvine, USA

HWAJUNG HONG, KAIST, Republic of Korea

Challenging behaviors significantly impact learning and socialization of autistic children and can stress and burden their caregivers. Documentation of challenging behaviors is fundamental for identifying what environmental factors influence them, such as how others respond to a child's such behaviors. Caregiver-tracked data on their child's challenging behaviors can help clinical experts make informed recommendations about how to manage such behaviors. To support caregivers in recording their children's challenging behaviors, we developed GeniAuti, a mobile-based data-collection tool built upon a clinical data collection form to document challenging behaviors and other clinically relevant contextual information such as place, duration, intensity, and what triggers such behaviors. Through an open-ended deployment with 19 parent-child pairs and three expert collaborators, caregivers found GeniAuti valuable for (1) becoming more attentive and reflective to behavioral contexts, including their own response strategies, (2) discovering positive aspects of their children's behaviors, and (3) promoting collaboration with clinical experts around the caregiver-tracked data to develop tailored intervention strategies for their children. However, participant experiences surface challenges of logging behaviors in social circumstances, conflicting views between caregivers and clinical experts around the structured recording process, and emotional struggles resulting from recording and reflecting on intensely negative experiences. Considering the complex nature of caregiver-based health tracking and caregiver-clinician collaboration, we suggest design opportunities for facilitating negotiations between caregivers and clinicians and accounting for caregivers' emotional needs.

The full paper has been published at PACM HCI and was presented at CSCW 2022. This one-page summary is a research highlight submitted to WISH 2023. The authors would like the highlight to be considered for either oral presentation or poster presentation. The first author will attend WISH 2023 in person to present this work on behalf of the co-authors.

Authors' addresses: Eunkyung Jo, University of California, Irvine, Irvine, USA, eunkyu@uci.edu; Seora Park, Seoul National University, Seoul, Republic of Korea, annieseora96@snu.ac.kr; Hyeonseok Bang, Yonsei University, Seoul, Republic of Korea, hsbang@yonsei.ac.kr; Youngeun Hong, National Center for Mental Health, Seoul, Republic of Korea, hye1503@naver.com; Yeni Kim, Dongguk International Hospital, Goyang, Republic of Korea, yeni1004@gmail.com; Jungwon Choi, National Center for Mental Health, Seoul, Republic of Korea, alzza55@gmail.com; Bung Nyun Kim, Seoul National University Hospital, Seoul, Republic of Korea, kbn1@snu.ac.kr; Daniel A. Epstein, University of California, Irvine, Irvine, USA, epstein@ics.uci.edu; Hwajung Hong, KAIST, Daejeon, Republic of Korea, hwajung@kaist.ac.kr.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from permissions@acm.org.

© 2022 Association for Computing Machinery.

2573-0142/2022/4-ART92

<https://doi.org/10.1145/3512939>