## Meeting the Health Needs of Adolescents and Young Adults: Developing and Evaluating an Electronic Questionnaire and Health Report Form, for the Health Assessment at Youth Health Clinics - A Mixed Methods Project

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Abstract: Adolescents are vulnerable in healthcare settings. Early detection of poor health in young people is important to support a good quality of life and adult social functioning. Youth Health Clinics (YHCs) in Sweden provide healthcare for young people ages 13-25 years old. Using an overall mixed methods approach, the project's main objective was to develop and evaluate an electronic health system, including a health questionnaire, a case report form, and an evaluation questionnaire to assess young people's health risks in early stages, increase health, and quality of life. In total, 72 young people, 16-23 years old, eleven healthcare professionals and eight researchers participated in the three project studies. Results from interviews with fifteen young people gave that an electronic health questionnaire should include questions about physical-, mental-, sexual health and social support. It should specifically include questions about self-harm and suicide risk. The young people said that the questionnaire should be appealing, based on young people's needs and be user-friendly. It was important that young people felt safe when responding to the questions, both physically and electronically. Also, they found that it had the potential to support the face-to face-meeting between young people and healthcare professionals. The electronic health report system was developed by the researchers, performing a structured development of the electronic health questionnaire, construction of a case report form to present the results from the health questions, along with an electronic evaluation questionnaire. An Information Technology company finalized the development by digitalizing the electronic health system. Four young people, three healthcare professionals and seven researchers evaluated the usability using interviews and a usability questionnaire. The electronic health questionnaire was found usable for YHCs but needed some clarifications. Essentially, the system succeeded in capturing the overall health of young people; it should be able to keep the interest of young people and have the potential to contribute to health assessment planning and young people's self-reflection, sharing vulnerable feelings with healthcare professionals. In advance of effect studies, a feasibility study was performed by collecting electronic questionnaire data from 54 young people and interview data from eight healthcare professionals to assess the feasibility of the use of the electronic evaluation questionnaire, the case report form, and the planned recruitment method. When merging the results, the research group found that the evaluation questionnaire and the health report were feasible for future research. However, the COVID-19 pandemic, commitment challenges and drop-outs affected the recruitment of young people. Also, some healthcare professionals felt insecure about using computers and electronic devices and worried that their workload would increase. This project contributes knowledge about the development and use of electronic health tools for young people. Before implementation, clinical routines need for using the health report system need to be considered.

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