Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Conclusion: The use of Genia over 6 months was feasible, acceptable, and significantly associated with improved quality of life, satisfaction with care, and shared decision-making despite the COVID-19 pandemic. Study results support wider use of Genia in clinical settings. A randomized controlled trial will access efficacy for clinical outcomes over 12 months.
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Effects of COVID-19 pandemic on adult cystic fibrosis patients' mental health

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Background: Research has shown that the psychological impact of quarantine is wide ranging and substantial and can be long lasting. Longer durations of quarantine were associated with poor mental health, posttraumatic symptoms, avoidance behaviors, and anger. This is relevant to those diagnosed with cystic fibrosis (CF) who have greater rates of depression and anxiety based on the International Depression and Anxiety Epidemiological Study [1]. This reinforces the importance of taking a closer look at the state of CF patients' mental health during the COVID-19 pandemic. This study aimed to understand the implications of the COVID-19 pandemic, including the effects of quarantine and social distancing on the mental health of people with CF.
Methods: We conducted a survey at the adult CF center of the University of Texas Southwestern in Dallas, Texas, from August 15, 2020, to March 15, 2021 (STU-2020-0473). CF patients were asked to complete 3 mental health screens (a REDCap survey, the Generalized Anxiety Disorder 7 (GAD7), and the Patient Health Questionnaire 9 (PHQ9)) in person or via telehealth appointments. Included participants were people with CF 18 years of age and older at the time of data collection. The survey asked questions regarding participants' comfort level in going different places ranging from clinic appointments to the airport. It also evaluated how COVID affects emotions ranging from anger to family unity. Individuals were able to select not at all, somewhat, neutral, moderately, and extremely. GAD7 scores range from 0 to 21 and PHQ9 scores from 0 to 27 (0–4 is no clinical concern, 5–9 is mild, 10–14 is moderate, ≥15 is severe). Using the Fisher exact test, the data were analyzed comparing GAD7 and PHQ9 scores (0–4 vs ≥5) with survey responses about impacts on psychological emotions (not at all, somewhat, neutral vs moderate, extreme).
Results: The survey was completed by 90 people with CF, but 23 were excluded because the GAD7 or PHQ9 was not completed within 1 week of taking the REDCap survey. Survey participants were primarily Caucasian (48; 72%), female (35; 52%), aged 19–40 (52; 78%), and on a CFTR modulator (52; 77%). There was no difference in average GAD7 and PHQ9 scores before and during the COVID-19 pandemic. People who had mild anxiety had higher levels of worry (7/15; 46.7% vs 7/52; 13.5%; $P = 0.03$) and fear (9/15; 60.0% vs 7/52; 13.5%; $P = 0.003$) than those who did not have anxiety. People with mild depression had greater levels of loneliness (4/12; 33.0% vs 6/55; 11.0%; $P = 0.03$) and had greater concerns regarding attending in-person doctor's visits (4/12; 33% vs 5/55; 9%; $P = 0.047$) than those who did not have depression.
Conclusion: People with CF who scored higher on the GAD7 and PHQ9 mental health screens during the COVID pandemic experienced greater levels of fear, worry, loneliness, and concern regarding attending in-person doctor's visits.

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Rasch analysis of the Caregiver Quality of Life Cystic Fibrosis Scale

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Background: The Caregiver Quality of Life Cystic Fibrosis (CQOLCF) is a quality-of-life measure for caregivers of patients with CF [1]. Since its development, the CQOLCF has been used in several studies and translated into several languages. Initial CQOLCF development generated a single summative score, and its construction did not involve factor analysis or item response theory. The primary goal of this study was to evaluate CQOLCF psychometrics. Aim One was to examine CQOLCF dimensionality. The researchers hypothesized that it would yield a multidimensional factor structure with several unidimensional subscales consistent with assumptions of Rasch scaling. Aim Two was to determine the degree to which potential subscales are consistent with assumptions of Rasch scaling. Scales meeting Rasch scaling assumptions have advantages over other scales in terms of comparative and longitudinal research, tailored testing, and scale expansion. The benefit of Rasch scaling has been recognized in CF literature [2].
Methods: Secondary CQOLCF data from 200 caregivers from 2 studies were submitted to orthogonal factor analysis and then to Rasch analysis to determine if each resulting subscale conformed to assumptions of Rasch scaling. Assumptions of Rasch scaling include unidimensionality of subscales, 10 responses per rating category, item and person fit with Rasch criteria, ordinality of category performance, targeting of item difficulty and person ability on a common scale, reliability of person and item performance, and invariance across groups.
Results: Factor analysis revealed that 7 factors (Existential Dread, Disruption, Strain, Support, Positivity, Finances, and Guilt subscales) from the 35 CQOLCF items (5 response categories) accounted for 51% of the variance. Several of these subscales are consistent with factor analysis–based subscale identification for a similar cancer scale [3]. Initial Rasch analyses confirmed unidimensionality of the subscales (based on principal component analysis of residuals). The Disruption subscale had several items with fewer than 10 responses per category, with evidence of disordinality in categories for many items across subscales. Therefore, in addition to analyzing fit to Rasch assumptions, data were also reanalyzed with 2 response categories collapsed. Item fit statistics were adequate for subscales. Targeting across subscales was good or acceptable based on criteria. Item reliability was acceptable (>0.85) for all scales except Finances. Person reliability was lower than desired for 5 of the 7 subscales, indicating that the subscale does not reliably distribute caregivers into distinct quality-of-life strata.
Conclusion: Findings of Rasch analysis support CQOLCF multidimensionality and adequacy of fit for most items with assumptions of the Rasch model. Using Rasch (logit) scores for 5 of the subscales after rescoring is recommended for research examining group differences and changes across time. Study findings also highlight the need to reexamine CQOLCF scoring categories and expand items within subscales to improve targeting, person separation, and measurement precision of caregiver quality of life.
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