EPP0137

Motibot: the Virtual Coach for healthy coping intervention in diabetes

G. Bassi[1,2]*, C. Giuliano[2], A. Perinelli[2], S. Forti[2], S. Gabrielli[2], E. Mancinelli[1,2] and S. Salcuni[1]

[1]University of Padova, Department Of Developmental And Socialization Psychology, Padova, Italy and [2]Fondazione Bruno Kessler, Digital Health Lab, Trento, Italy
*Corresponding author.
doi: 10.1192/j.eurpsy.2022.453

Introduction: Virtual coaches (VCs) can support people with Diabetes Mellitus (DM) by motivating them to better manage their health. Few VCs were aimed at providing psychosocial support. In this regard, motivation is a pivotal construct in diabetes self-management as it allows adults with DM to adhere to the clinical recommendations.
Objectives: The present study aimed to develop a VC able to motivate adults with DM to adopt and acquire healthier coping strategies, to decrease symptoms of depression, anxiety, perceived stress, and diabetes-related emotional distress, while also improving their well-being.
Methods: A total of 12 adults with DM (M=27.91 years; SD=9.82) interacted with a VC, called Motibot using Telegram for an overall duration of 12 sessions. Participants completed a battery of instruments at pre-, post-intervention and follow-up.
Results: highlighted a decrease in anxiety, and depression symptoms between pre-, post-intervention and follow-up, as also showed by the results that emerged through the text mining. Motibot was perceived as motivating and encouraging in the adoption of appropriate coping strategies, such as mindfulness practices. Motibot was also perceived as trustworthy, reflective, and stimulating in its dialogical interaction. Indeed, adults felt involved in the interaction with Motibot, thereby showing an overall perception of a better quality of life, in the absence of diabetes distress.
Conclusions: This study sheds light on the importance of VCs in health care for people with DM for psychosocial support. This is the first experimental study on the matter, and thus, further iterations of the intervention are needed using a larger sample size.

Disclosure: No significant relationships.
Keywords: virtual coach; healthy coping; diabetes mellitus; diabetes distress

EPP0136

A case study for assessing the utility of a decision tree based learning algorithm in mental health inpatient care quality management

R. Wernigg[1,2]* and M. Wernigg[3]

[1]National Hospital Directorate-General, Department Of System Analysis And International Affairs, Directorate Of Quality Improvement, Budapest, Hungary; [2]National Institute of Mental Health, Neurosurgery and Neurology, A, Budapest, Hungary and [3]Budapest Technical University, Faculty Of It Engineering, Budapest, Hungary
*Corresponding author.
doi: 10.1192/j.eurpsy.2022.454

Introduction: There is limited knowledge about the potential role of machine learning (ML) in quality improvement of psychiatric care.
Objectives: Our case study was to determine whether ML decision trees used on patient databases are suitable for focussing on specific patient population samples of mental healthcare quality audits. Populations were identified by patient and care provider variables, and the time of treatment. Outcomes were defined as hospital mortality, over-long hospitalization (over average +1SD or +2SD); and short hospitalization (under average -1SD; under 3 days).
Methods: We conducted a Split Train Test in Python for our outcomes on national mental health inpatient turnover data (2010 through 2018 for training and 2019 for testing). A well-fitting decision tree had the area under the curve (AUC) of the receiver operating characteristic (ROC) >= 0.7, and specificity >= 0.9. Performing qualitative analyses of decision trees, we rejected the ones with little clinical relevance.
Results: Decision trees fit well (AUC = 0.7 to 0.9; specificity = 0.7 to 1.0; sensitivity = 0 to 0.69). For hospital death cases, the decision tree had AUC = 0.86, no difference after controlling for the types of hospital units, and was clinically relevant. Models predicting over-long hospitalization fit well (AUC=0,9); however, controlling for care pathways, good fit and sensitivity both vanished. No valid models emerged for undertime discharges. The decision trees revealed unique combinations of variables.
Conclusions: Our ML decision trees used on healthcare databases proved promising for focussing quality audit efforts. Narrative analysis for the clinical contexts of the decision trees is indispensable.

Disclosure: No significant relationships.
Keywords: Quality management; healthcare indicators; Big Data; machine learning

Old Age Psychiatry 01

EPP0137

Is frailty a predictor of mortality in late-life depression?

M. Arts

GGZWNB, Psychiatry, Halsteren, Netherlands
doi: 10.1192/j.eurpsy.2022.455

Introduction: Frailty is a clinical phenotype that predicts negative health outcomes including mortality. Similar to frailty, late-life depression is also associated with increased mortality rates.
Objectives: Our objective was to examine whether frailty and frailty related biomarkers predict mortality among depressed older patients.
Methods: Among 378 older patients (≥60 years) with a depressive disorder (DSM-IV criteria) we examined whether frailty predicts time-to-death during a six-year follow-up using Cox-regression analyses adjusted for confounders. Baseline data were collected between 2007 and September 2010. Frailty was defined according to Fried's criteria (muscle weakness, slowness, exhaustion, low activity level, unintended weight loss). Similarly, we examined the predictive value of three inflammatory markers, vitamin D level, and leucocyte telomere length, and whether these effects were independent of the frailty phenotype.