AN EXAMINATION OF DOCTORS' ATTITUDE TOWARD MEDICAL AI: TURKEY SAMPLE

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Extended Abstract

Over the past years with the rise and pervasiveness of technology, the emerging field of AI (Artificial Intelligence) and especially deep learning have attracted a great deal of attention in medicine. The fields such as radiology or pathology, which are mainly techniques such as deep learning and machine learning, have been employed for visual tasks such as the classification of images or automated segmentation of regions of interest in an image (Santos, Giese, Brodehl, Chon, Staab, Kleinrt, Maintz and BaeBler, 2019: 1640; Lakhani and Sundaram, 2017: 575). But, doctors from other fields have various concerns about technology that reduce their authority or take their job. In the future, the pervasiveness and integration of Medical AI doctors will have additional concerns such as malpractice cases or limits and tasks of Medical AI. The most important issue is AI's skill of diagnoses. In literature all those concerns still remain unclear. The aim of this project is to assess doctors' attitudes and concerns towards AI in terms of their technological engagement.

The healthcare industry has been forthcoming and quick in embracing novel diagnostic technologies. The primary difference of AI, however, is its potential to become the "diagnoser" rather than simply a diagnostic tool. Given the high success rate of AI, particularly in diagnoses requiring pattern recognition, how would doctors react when AI conflicts with their diagnosis? How would a doctor perceive technology that may overrule their authority to diagnose, and as a result, treat their patients? Given these questions, it is crucial to investigate how doctors will perceive the introduction of AI in healthcare setting.

Methods
The preliminary study comprised qualitative interviews with 20 medical doctors. Semi-structured interviews were performed with participants. The data collection took 5 months (between July and November) and was undergone using Braun and Clarke's (2006) inductive thematic analysis. Four themes (Risk of Misuse of AI; Authority and Responsibility of AI; Limits and Task Descriptions of AI; Future of AI in Medicine) were identified in relation to the attitudes and perceptions of medical doctors toward Medical AI.

Results
Findings showed that doctors mostly agree with the idea that Medical AI should be designed as an assistant for doctors but, the final authority should be the doctor's. For malpractice cases doctors believe that it totally depends on the limits and tasks of AI. If doctors are not final authority so they should not be responsible for malpractice cases and manufacturers, policy makers should be held responsible. For the future of AI, all doctors accept that Medical AI and robots could be an important part of medicine. If engineers that design AI or policy makers give their opinion to doctors it would be better. If not, doctors

do not want to integrate Medical AI as if part of their job. Although doctors believed that for diagnoses Medical AI would be much more successful than doctors but, it should not be the sole diagnoser.

Conclusions:
Although doctors have positive attitudes towards Medical AI due to conditions in Turkey (Violence towards doctors, job security, dehumanization towards doctors in Turkey etc.) they have some concern about Medical AI. Nearly all of the participants underlined the importance of awareness about Medical AI amongst doctors. They advised beginning from college years doctors should be informed about risks and benefits of AI. Future research is needed to understand if integration of Medical AI courses in Medicine Faculty would be beneficial for doctors.