


CAN SOCIAL MEDIA PREDICT FUTURE MENTAL HEALTH PROBLEMS?



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 LOOKED AT WHETHER PEOPLE'S SOCIAL MEDIA LANGUAGE CONTAINED SIGNS THAT PREDICT FUTURE MENTAL HEALTH PROBLEMS

DATA DRAWN FROM USER-CREATED DISCUSSION GROUPS
'SUBREDDITS'

r/ADHD
r/Anxiety
r/Bipolar
r/Depression

HOW?
BIG DATA ANALYTICS
MACHINE-LEARNING
NATURAL LANGUAGE PROCESSING

THESE TOOLS HELP **EXTRACT** INDICATORS OF MENTAL ILLNESS


WORD CHOICE
I.E. MISERABLE, LONELY, PAIN, DROWNING, DIE
ON REDDIT.COM

3 STUDIES

- 1** CAN A MODEL BE TRAINED TO IDENTIFY THE MENTAL HEALTH CONDITION IN A CLINICAL POST? *yes*
- 2** CAN A MENTAL HEALTH CONDITION BE IDENTIFIED IN A NON-CLINICAL POST? *yes*
- 3** CAN LANGUAGE BE USED TO PREDICT FUTURE OCCURENCES OF MENTAL HEALTH CONDITIONS? *yes*



FOUND PEOPLE'S LANGUAGE ON REDDIT.COM IS PREDICTIVE OF INFORMATION ABOUT MENTAL HEALTH CONDITIONS

PEOPLE'S LANGUAGE IN CLINICAL POSTS IS HIGHLY PREDICTIVE OF THE MENTAL HEALTH CONDITION THEY ARE WRITING ABOUT.


r/Depression
numb, bed, sad, crushed, rejected, harm, pointless

WHILE EVERYDAY LANGUAGE CAN CERTAINLY PREDICT CURRENT, AND (PROBABLY) FUTURE MENTAL ILLNESS, THE ACCURACY RATES ARE MUCH MORE MODEST IN STUDIES 2-3 THAN IN STUDY 1.

GOING FORWARD

 **BIG DATA**
CAN BE USED TO PROVIDE INSIGHT INTO CLINICAL PSYCHOLOGICAL DISORDERS

IMPLICATIONS
ADDITIONAL SCREENING METHOD
LANGUAGE PROCESSORS CAN BE USED TO IDENTIFY INDICATOR WORDS IN SOCIAL MEDIA THAT POINT TO A MENTAL HEALTH CONDITION.

⚠️ LIMITATION

THERE'S AN INFERENCE THAT BECAUSE A PERSON WRITES ON A PARTICULAR SUBREDDIT (E.G. R/ANXIETY), THEY HAVE THE ASSOCIATED MENTAL DISORDER. IT'S A REASONABLE ASSUMPTION BUT CAN'T BE SURE OF ITS VALIDITY.

Thorstad, R., and Wolff, P. (2019). Predicting future mental illness from social media: A big-data approach. Behavior Research Methods. 51:1586-1600. <https://doi.org/10.3758/s13428-019-01235-z>