# A literature review on the identification & detection of stress in social networks in daily lifestyle

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## ABSTRACT

Nowadays the Psychological stress is becoming a threat to people's health, as the time is moving stress level is increasing so quickly. With the rapid pace of life, more and more people are feeling stressed. In the proposed method, we will find the stress state of society very closely related to their relatives or friends in the social media and will give work to a large-scale dataset from the real-world social platform to study the correlation of users stress states and social interactions. As the peoples are sharing their day to day activities on social media platforms or the interaction between the peoples makes the social media so popular in these past few years. The social media platform makes it convenient to hold all the online social network data for stress detection, though the stress itself is a non-clinical and common in our day to day lifestyle. Excessive and chronic stress can be rather harmful to people's physical or mental health. With the development of social networks like twitter, WhatsApp and Facebook, more and more people are willing to share their daily activities and moods with friends through the social media platform. In this, we will first define a set of stress-related textual, visual, and social attributes from various aspects, and after that, we will propose a novel hybrid Model Stress Detection Model (SDM). This proposed hybrid model compression. In this by further analyzing the social interaction in the data, we will also discover the different several fascinating phenomena, i.e. the number of the social structures with no delta connections of the stressed users is around 38% higher than that of the non-stressed users, recommending that the social structure of the stressed users tends to be less connected and less complicated than that of the non-stressed users.

*Keywords*— *Stress detection, Healthcare, Social media, Twitter, Stress management, Quality of life, Self-esteem*

## 1. INTRODUCTION

Nowadays Psychological stress is becoming a serious problem affecting the professions, lifestyle, and the age group of the different peoples in the society. As the psychological stress is becoming the threat to the people's health, with the time as the time is moving so rapidly the stress level is also gradually moving up. As time is moving the numbers of people are increasing which are facing the problem of stress in their day to day lifestyle. In this paper, we will give work to a large scale dataset from the real-world social platform to study the correlation of users stress states and social interactions. The sharing of daily activities on social media platform or the interaction between the peoples makes the social media popular. The social media platform makes it convenient to hold all the online social network data for stress detection, through the stress in non-clinical and common in our day to day lifestyle. Different people may react differently to the same stressor. The stress response refers to body reactions, which can either be physiological, emotional or behavioral reactions to stimuli that cause stress.

We will find the users stress state is closely related to his/her friend in the social media and in this we will give the work to a large-scale dataset from the real-world social platform to study the correlation of users stress state and social interactions. The stress is considered to be a complex defensive-balancing mechanism of the body that develops in the two different stages: at the time of the first stage, the individual will access the stressor and the demands streaming from it, and during the second stages, they will evaluate whether or not they have enough resources to meet the stressor demands.

The ability to identify stress and relaxation is important in the health domain as a diagnostic tool for health-related disorders, for customers focused business to detect the unpleasant experiences and for the system that manages humans on a large scale.
Self-Esteem is a Psychological variable reflecting the person's general feelings for the self-worth across the different area of life. It also refers to the positive or negative way people feel about themselves as a whole, which is also often called global self-esteem or global self-worth. The high self-esteem is considered to be the fundamental aspect of personal well-being, happiness and adjustments. The individuals with the high self-esteem are considered to be more satisfied with their lives, have fewer

interpersonal problems, achieve at a higher and more consistent level, and are less susceptible to psychological problems and physical illness than those with lower self-esteem.

## 2. SOCIAL MEDIA
The term 'social media' refers to the various internet-based networks that enable users to interact with others, verbally and visually. According to the research of 2015, there are, at least 92% of teenagers are active on social media. According to the research of 2015, it is identified that the 13-17 age group as particularly heavy users of social media users, with 87% having access to a computer, and 58% to a tablet device. Almost three-quarters of adolescents aged 15-17 use smartphones, and 68% of those aged 13 and 14 (Lenhart, Smith, Anderson, Duggan and Perrin, 2015).The friends on social media such as Facebook can be a great source of comfort during the periods of stress. However, if they don't receive any support offline, stressed users are at the high risk of developing a pathological dependence on the social networking sites- the so-called Facebook, Instagram addiction (Ruhr University Bochum, 2019). the social media site, Facebook, can be an effective tool for connecting with the new and old friends. However, some users may find themselves spending quite a bit of time viewing Facebook and may inevitably begin comparing what's happening in their lives to the activities and accomplishments of their friends (University of Houston, 2015). The ubiquity of social media makes it potential tools for behavioral and mental health evaluation. Analysis of internet usage pattern and Facebook status updates have been established as unconventional, innovative methods to identify the people at risk of depression. (University of Wolverhampton,2018). Prof. Monideepa Tarafdar added: "The idea of using the same environment that is causing the stress as means of coping with that stress is novel. It is an interesting phenomenon that seems distinctive to technostress from social media" (Lancaster University, 2019).

## 3. IMPACT ON THE MENTAL HEALTH
Understanding the impact of social media on adolescents' well-being has become a priority due to a simultaneous increase in mental health problems (Kim, 2017). Studies support that those with low social support are more likely to suffer from mental health problems (e.g. depression, anxiety and psychological distress) compared to those with high social support from family, friends and neighbors (Klineberg, et.al, 2006; Maulik, Eaton, & Bradshaw, 2011).
As explained by social comparison theory (Festinger, 1954), people tend to compare themselves to others to assess their opinion and abilities. Interestingly, such behaviour is more common in adolescents than in younger children and adults (Krayer, Ingledew, & Iphofen, 2008; Myers & Crowther, 2009).

The link between social media and mental health problems is not straightforward, with various contributory factors. A report by the Royal Society for public health, & Young Health Movement (2017) suggested impaired sleep as a mechanism. Internet use is sedentary behavior, which in access raises the risk of health problem (Iannotti at al., 2009)

## 4. STRESS
"Our findings have shown that there is a positive relationship between the severity of daily stress, the intensity of Facebook engagement, and the tendency to develop a pathological addiction to the social networking site," (Julia Braiovskaia). Stress is defined by Professor G. Chrousos as "the threat or perceived threat condition of homeostasis, which is established through a complex web of behavioural and physiological responses of the body to adapt" (Chrousos, 2009) as "the result of interaction between the individual and the environment. When persons feel that they cannot cope with the number of abilities and skills in environmental requirements, is experiencing stress" (Berjot & Gillet, 2011). According to Lazarus R.S. and Folkman S. the estimation of a stressful event and in continue the evaluation as a threat or not by the individual, are included in the psychological approach of stress. The person considers a stressful event as a threat, when his ability to deal with it, is assessed as less than the requirements of the event. Perceived stress is defined especially after having studied the interaction between the individual and the environment, psychological stress includes the interpretation of the adequacy of management methods and based on the notion that stress results from the subjective assessment of the individual in his relationship with the environment (Lazarus & Folkman, 1984).

A study on PSS telephone survey was conducted on the base of sex by Kessler & McLeod (1984) overall women experience more stress then men the average American adults scored 10.20 out of 30 on the PSS scale. One of the starkest contrasts in a survey was between the level of reported stress experienced by men and women. On average women report experiencing significantly higher stress of men. In a survey respondent were asked about their use of social networking sites asked the people about the frequency with which they used different social media platforms, such as Facebook (used 71%) Twitter (used 18%), Instagram (used 17%) and LinkedIn (used 22%).

## 5. STRESS, SELF-ESTEEM AND DEPRESSION
Lots of researches have been shown that low self-esteem and stress are associated with mood disorders and depression. In particular, in a study of Jocelyn Smith Carter and Judy Garber, low self-esteem and low self-stress and worth are associated with the stress and depression. Both of them constitute the risk factors for the appearance of depression, as people cannot manage and cope with stressful life events (Carter & Garber, 2011). Indeed, individuals who experience stress over a long period of time are susceptible to increased anxiety and depression and high self-esteem seems to buffer against anxiety and depression. So, self-esteem contributes only indirectly via the experienced level of stress to explain the variation in depression, for example, stress affects depression on the basis of 'its own power' and explains the much more of the variation in depressive experiences than self-esteem (Nima, Rosenberg, Archer & Garcia, 2013 ). When participants appraised their most important stressful event of the day as more threatening, those with high self-esteem tended to experience lower subsequent negative affect than those with low self-esteem (Lee-Flynn et al, 2015). Finally, stress negatively affects self-esteem, regardless of whether a person has depression.

Conversely, low self-esteem makes individual prone to in experiencing stressful events through an indirect effect via depression (Orth & Luciano, 2015).

## 6. TECHNIQUE OF STRESS MANAGEMENT & SELF-ESTEEM
Several studies show that stress management techniques in addition to reducing stress, improve self-esteem. Firstly, transcendental meditation reduces stress and improves attention resulting in enhanced academic performance. Stress has an implication for low self-esteem in students and it was reported that regular practice of yoga by medical students for the longer periods may possibly result in improved management of their daily stress. Several studies have been published analyzing the effect of different aspects of yoga including cleansing techniques, breathing practices, psychical posture, relaxation techniques and meditation on attention, and self-esteem (Sethi, Nagandra & Ganpat, 2013).

## 7. CONCLUSION
In this literature review, several studies are presented that show the relationship between stress, social stress &mental health at multiple levels. Moreover, studies show that self-esteem is associated directly and indirectly to the development of depression. Especially, low self-esteem combined with the stress is risk factors for developing depression. The higher occupational stress workers have the lower self-esteem they have and thus have a strong possibility many stress management techniques that improve people's self-esteem, for example, yoga, meditation. The impact of social media uses on the incidence of depression, anxiety and psychological distress among adolescents, as examined by this relationship. It is fair to say that there is an 'association' between social media use and mental health problems. Key findings of included studies were classified into four categories of exposure to social media: time spent; activity; investment; and addiction. All these categories were found as correlated with depression, anxiety and psychological distress, with an acknowledgement for the complexity of these relationships. Therefore, we conclude that techniques of stress management can improve people's self-esteem, which can be as a buffer against the psychological disorder plus improving both personal and professional quality of life

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