The Field of Computing Needs to Take Care of Its Mental Health

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Introduction

Most people tend to shy away from conversations around mental health. This is due to the stigma that is rooted in the long mistreatment of people with mental illness. In this article, I aim to bring conversations about mental health to the forefront and advocate for a change in culture so that the field of computing better supports the mental health of the community and is more inclusive of people with mental illness.

Mental Health vs. Mental Illness

Before we can talk about mental health from the computing perspective, we need to define some terms. *Mental health* is defined here as the state of mental and emotional well-being of a person. Everyone has mental health just like every person has physical health, and it exists on a continuum from "good" to "poor." Various factors affect mental health, as discussed in the following section.

Mental illnesses are diagnosable conditions that affect thoughts and behaviors. Mental illnesses include conditions like depression, anxiety, and bipolar disorder. Like mental health, mental illness exists on a continuum, from "no mental illness" on one end to "severe mental illness" on the other. The causes of mental illness are complex and involve biological, psychological, and environmental factors.

If we plot mental health against mental illness (Fig. 1), we can see clearly that every person, regardless of mental illness status, can have good or poor mental health. Thus, the conversation around mental health centers on the whole community, not just those who have a mental illness. In other words, a person can have poor mental health and not meet the criteria for having a diagnosable mental illness. Poor mental health can have serious effects in the long-term if not properly taken care of.

**Good Mental
Health**

Good Mental
Health with
Mental Illness

Good Mental
Health without
Mental Illness

**Severe
Mental
Illness**

**No
Mental
Illness**

Poor Mental
Health with
Mental Illness

Poor Mental
Health without
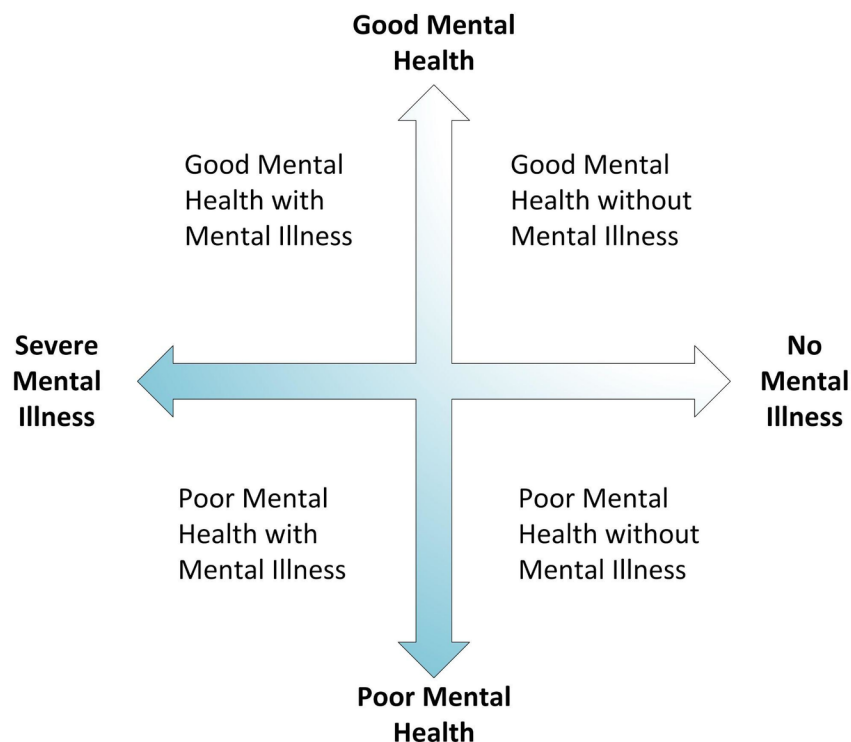Mental Illness

**Poor Mental
Health**

Fig. 1: Relationship between mental health and mental illness (adapted from [1])

Factors Affecting Mental Health

Mental health is affected by a number of factors, including stress, diet, sleep, and exercise. While stress in small doses can actually improve workplace performance, severe or prolonged stress can have significant negative effects. A paper by Park [2] states that significant workplace stress affects mental and physical health and also leads to workers being unhealthy, unmotivated, less productive, and less safe at work. From a mental health standpoint, severe stress can negatively impact personal relationships and leads to irritability, sleep disruptions, and concentration difficulties. In some circumstances, high-stress levels are even linked to an individual developing a diagnosable mental illness [3].

It should be noted that there is a whole body of literature showing that healthy behaviors (e.g., exercise, meditation, a healthy diet, and better sleep quality) positively affect mental health. While I agree that healthy behaviors should be promoted, employers are often too quick to push a yoga class on their employees rather than address the *systemic issues* causing poor mental health in the workplace. Admittedly, there is no quick fix that can solve a toxic work environment. In this article, I will focus on the workplace policies and culture that negatively impact mental health (e.g., that are sources of workplace stress) and offer suggestions on how these issues can be overcome.

The Role of the Pandemic

I would be remiss if I didn't address the ongoing COVID-19 pandemic, which has brought discussions about mental health to the forefront. The literature is swelling with studies on the myriad ways the pandemic has

affected mental health. Indeed, the pandemic created an ever-changing sea of uncertainty, and people had to react quickly to lockdowns, working from home, social distancing, masking and other new personal hygiene routines, loss of childcare/virtual schooling for children, supply shortages, and so on. An epidemiological review by Hossain et al. [4], for example, showed that mental health conditions, like depression and anxiety, were reported at a higher rate during the pandemic compared to pre-pandemic levels. Other research is finding that people experiencing the pandemic may exhibit traumatic stress reactions like "intrusive re-experiencing" and "heightened arousal" [5].

While those of us with serious mental illness[1] have known for a long time about the importance of mental health, the many who are newly impacted by the pandemic are realizing the challenges of living in an environment that harms mental health. These individuals have amplified our sentiments about needing change that promotes positive mental health, making this an opportune time to have a conversation about mental health in the field of computing.

Mental health in STEM fields

STEM professions are known for cultivating high-stress environments. Often, employees work long hours, face deadlines, and deal with scientific explorations that have high potential for failure. The reigning pressure to publish isn't helped by metrics that measure journal impact and citations, while publications still dominate the list of criteria for promotion and merit raises. The process of peer review can be brutal, and funding is scarce, meaning that rejection is common. It goes without saying that the STEM workforce is also susceptible to problems found in *any* workplace, like bullying, poor management, interpersonal conflict, and turnover. These stressors negatively affect mental health overall.

Moreover, in addition to the nature of the work, those who are underrepresented (e.g., women [6], persons excluded from science for ethnicity and race [7], LGBTQ individuals [8]) face overt discrimination, harassment, and microaggressions at alarming rates. Such toxic work environment leads to burnout over time, resulting in the loss of exceptional contributors to the STEM discipline.

Workplace policies that support mental health and create a culture of inclusion

Regardless of where an individual sits in the chart of Fig. 1, I'd like to ask that we all work together to come up with solutions to make the workplace less toxic and more supportive of positive mental health. I promise that doing so will create an environment that is more inclusive, meaning that those who have been traditionally marginalized by having mental illness (and especially those with intersecting identities in terms of race, gender, and so on) will be able to have a seat at the table. I'm not advocating for drastic changes in the workplace; small changes can go a long way toward promoting the good mental health of the members of an organization.

Note also that I am primarily speaking to the leadership of organizations. These individuals generally have the power to make changes to workplace policies and are generally responsible for resolving conflict. These individuals have a lot to gain by promoting positive mental health because a healthy workplace is more likely to be productive, innovative, and collaborative, meaning that the organization will thrive under these conditions.

The following recommendations are based largely on my personal experience as a faculty member at the University of Michigan. While my experience is limited to academia, you can see that my recommendations can apply to nearly any work environment.

- **Change what defines success.** Understand that success can look different for different people and that all members of the organization have something to contribute. Service should be based on the hours put in and the outcomes. It should not be viewed as secondary (or supplementary) to research.
- **Be flexible with in-person attendance requirements when possible.** One thing we've learned during the pandemic is that people can successfully carry on with most business from the comforts of their homes. This is a game-changer from a mental health standpoint because it allows people to have greater control over their work environment and they can put the time they'd normally spend on commuting toward self-care, whether that means an extra thirty minutes of sleep or the freedom to dress down for a day.
- **Respect weekends and vacation time.** Employees need time off from work to recover and come back with fresh ideas and perspective. Allow employees to have a break from phone calls and emails when possible so that time away from work is really a break.
- **Be flexible with what constitutes the work day.** In the U.S., 8am to 5pm Monday through Friday is the standard work week, but those hours are not optimal for everyone. Giving the flexibility for an employee to start later (e.g., 10am to 7pm) or shorten the work week to four days can allow that individual to balance their personal life better, which will lead to positive mental health outcomes.
- **Address toxic work environments.** If bullying, harassment, discrimination, or conflict arise, deal with them immediately. Seek outside help if necessary. Allowing a toxic environment to persist will negatively impact the mental health of everyone in the organization.
- **Create a culture that values diversity and promotes equity and inclusion.** A workplace that values diversity, equity, and inclusion (DEI) may focus on supporting those who are traditionally underrepresented but benefits the workplace as a whole.

By creating flexibility, the workplace automatically becomes more accommodating to people who are struggling with mental health, especially those with mental illness. This is because it allows these individuals to structure their work week around their optimal times for productivity. Many people don't realize that people with mental illness often have to take medications that are sedating, or their sleep is regularly disrupted. Sometimes that hour saved on the commute can mean the difference between a good day and a bad day.

Conclusions

One good thing that has come about since the pandemic is the increased attention that is being paid to the topic of mental health. The field of computing should capitalize on this opportunity to address workplace conditions that are detrimental from a mental health perspective. Building on the flexibility that was needed during the ever-changing conditions of the pandemic, I advocate for added flexibility for workers in terms of what constitutes the workday. We also need to rethink what is meant by "success" in our discipline and allow for the adoption of other models of success that may focus more on service and outreach. Toxic work environments need urgent attention as well because they lead to poor mental health outcomes. Lastly, a focus on DEI will benefit all in the workplace, especially those who are traditionally underrepresented. By making these changes, employers can expect the well-being of their employees to improve.

Footnote

[1] The author of this article has a diagnosis of bipolar disorder.

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