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## Online Social Capital and Health What We Know, What We Need to Know

### To the Editor:

The COVID-19 has disrupted the way employees work and communicate. As workplaces shut down and employers encourage employees to work from home, the way employees build social connections with others is also changing. The workers, compared to pre-pandemic work circumstances, have become to rely on digital communication technologies to communicate with members of formal and informal groups working within an organization. Accordingly, the organization should focus on the online workplace structures and resources available to employees through social connections with co-workers and peers.

Workplace social capital is defined as "a resource reflecting the character of social relations within the organization, realized through members' levels of collective goal orientation and shared trust"<sup>1</sup> (p. 540). Whereas we know much about the role that (traditional) social capital in the workplace plays in health outcomes,<sup>2-5</sup> we know comparatively little about the online social capital. Traditional social capital, in the workplace health promotion, has long been claimed to be effective in enhancing health outcomes of employees.<sup>6</sup> Empirical studies published in the *Journal of Occupational and Environmental Medicine* in the past two decades also show that employees in an environment where social capital is formed and developed tend to have better health outcomes and less perceived stress than those who are not<sup>7-14</sup> (see Table 1); yet, none of these works explore the linkages between online social network and health outcomes. One explanation for the dearth of online social capital studies might be that perhaps there has been no need to build online social capital within the workplace. Given we are uncertain when the

TABLE 1. Review: Effects of Social Capital on Health Outcomes

| Study                               | Context/Study Type   | Forms of Social Capital  | Health Outcomes  | Major Findings   |
|-------------------------------------|--|--|--|--|
| Clausen et al <sup>7</sup>          | Dairy industry/Survey  | Bonding, bridging, and linking social capital  | Psychological well-being (WHO-5 well-being scale)                  | All forms of social capital employed are associated with psychological well-being of 538 employees in the Danish dairy industry  |
| Han et al <sup>8</sup>              | Public organization/Survey                                       | Horizontal and vertical distinction of social capital  | Self-rated health  | Both individual and organizational levels of vertical social capital positively affect self-rated health among Korean public employees ( <i>n</i> = 815)   |
| Jung et al <sup>9</sup>             | Information and communication technology companies/Online survey | Horizontal social capital  | Depressive symptoms (WHO-5 well-being scale)                       | German employees with low levels of social capital at work tend to experience depressive symptoms ( <i>n</i> = 328)  |
| Kwon and Marzec <sup>10</sup>       | Insurance organization/Online survey                             | Overall social capital   | Occupational stress and self-rated health                          | Korean workers of an insurance company with higher levels of social capital appear to buffer psychological distress and to enhance self-rated health when compared to those with lower levels of social capital ( <i>n</i> = 725)                          |
| Sapp et al <sup>11</sup>            | Manufacturing firms/Survey                                       | Overall social capital   | Job stress and health behavior (ie, smoking)                       | U.S. manufacturing employees (1740 workers and 288 managers in 26 firms) with active jobs in high social capital workplaces tend to smoke less and experience less stress in their workplaces than those with active jobs in low social capital workplaces |
| van Scheppingen et al <sup>12</sup> | Food and dairy company and motor vehicle authority/Online survey | Bonding, bridging, and linking social capital  | Self-rated health and emotional exhaustion (Utrecht burnout scale) | While bonding social capital is positively associated with perceived health and emotional exhaustion, linking social capital is only positively related to emotional exhaustion (718 employees in two Dutch companies)                                     |
| Zhu et al <sup>13</sup>             | N/A (but, workers in China)/Survey                               | Overall social capital   | Self-rated health and job stress                                   | Chinese workers in high social capital workplace are more likely to have better health behaviors and evaluate themselves healthier than those with low social capital workplaces ( <i>n</i> = 2380)  |
| Ziersch et al <sup>14</sup>         | Motoring manufacturer/Face-to-face and telephone survey          | Overall social capital (the social capital scale used in the study is not the workplace social capital; rather, it focuses on the social capital concept in communities and neighborhoods) | Mental health  | Social capital factors tend to buffer the mental health impacts of job loss among Australian workers experiencing job loss ( <i>n</i> = 300)   |

Given the broad definition of social capital, electronic databases (eg, ABI/INFORM, EBSCO, ISI Web of Knowledge, PsychoInfo, and Google Scholar) were searched for the years 2000–2020. The website of the *Journal of Environmental and Occupational Medicine* (JOEM) was used for double-checking. The following key terms were used: "social capital," "social connection," "social network," "bridging social capital," and "bonding social capital." I also used forward and backward citation analyses to identify articles and conducted an issue-by-issue search to find if there is a special issue on social capital. In the second phase, I limited articles for review by selecting only the studies investigating health outcomes associated with social capital. Limiting the review in this way provided a clear judgement to select social capital studies published in JOEM. Use of those filters resulted in eight articles in the final review. It is interesting to note that there is no study on social capital and health outcomes for the years 2000–2009.

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pandemic will end, workers will likely keep the online working environment. With so many unknowns about COVID-19, to enhance or at least maintain employee health during this outbreak, we must uncover the association between online social capital and health outcomes so employers can gain justification for developing a venue for online social capital formation and exchange.

Although the linkage between online social capital and health outcomes has not gained much attention in workplace health promotion, communication literature describes that an online network tool contributes to building social capital among peers.<sup>15,16</sup> More specifically, Ellison et al<sup>16</sup> report that the intensity of Facebook use is positively associated with two basic forms of social capital (ie, bonding and bridging), which subsequently leads to self-esteem and satisfaction with life. Bonding social capital indicates relationships between people in a certain group (homogenous group), whereas bridging social capital refers to connections between people with a different occupational or organizational background (heterogenous group). For instance, co-workers and peers in the same organization can build bonding social capital. If an employee meets someone working in a different industry in a business conference and maintains the relationship with him/her, such social connection can be characterized as bridging social capital. In workplace health promotion, several studies address that the two forms of social capital have a positive influence on employee health (for bonding social capital, see<sup>12,17</sup>; for bridging social capital, see<sup>18</sup>). Therefore, to spur future work, I propose the following research question and hypotheses:

**RQ:** In the COVID-19 outbreak, does online social capital positively influence employee health outcomes?

**H1:** Bonding social capital formed online will be positively associated with health outcomes.

**H2:** Bridging social capital formed online will be positively associated with health outcomes.

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