Social Network Analysis of a Meditation Community
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Introduction
In this exploratory study, we sought to determine whether characteristics of meditators are distributed non-randomly within a meditation community social network. For example, do individuals at the center of the social network exhibit different qualities than those in the periphery? This research marks the beginning of a larger project examining how relationships influence the effects of meditation.

Method
Forty members and affiliates of the Milwaukee Shambhala Center in Wisconsin volunteered to take part in this study. Data from 4 participants were omitted because there were more missing than present data points. Participants anonymously completed an online Qualtrics survey containing four validated scales: the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), Positive Affect Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), Five Facet Mindfulness Questionnaire (Baer et al., 2006), and the Self-Compassion Scale (Neff, 2003). To map the community social network, we asked each individual to rate using a Likert scale how frequently they interacted with each of the other study participants (from daily to annually). Scores between pairs of participants were averaged together to yield the undirected weighted network in Figure 1. Finally, we also asked several questions about the frequency and duration of a meditator’s practice. To preserve anonymity, demographic data was not collected.

Results
Meditation frequency was positively correlated with life satisfaction ($r = .317, p = .006, 1$-tailed), self-kindness ($r = .306, p = .035, 1$-tailed), while negatively correlated with feelings of isolation ($r = -.315, p = .031, 1$-tailed). Lifetime meditation span was positively associated with feelings of common humanity ($r = .317, p = .03, 1$-tailed), self-kindness ($r = .417, p = .006, 1$-tailed), self-compassion ($r = .367, p = .014, 1$-tailed), observation ($r = .234, p = .041, 1$-tailed), acting with awareness ($r = .415, p = .006, 1$-tailed), non-judging ($r = .305, p = .035, 1$-tailed) and mindfulness ($r = .397, p = .008, 1$-tailed) and negatively associated with negative affect ($r = -.367, p = .014, 1$-tailed) and mental fixation (over-identified; $r = -.284, p = .046, 1$-tailed),

Frequency of attending the meditation center was correlated with negative affect ($r = .351, p = .018, 2$-tailed) but was not related to meditation frequency or lifetime meditation. The partial correlation between meditation center attendance frequency and negative affect, controlling for meditation frequency and lifetime meditation was $- .055 (p = .003)$. Those with higher negative affect were likely to spend more time at the meditation center.

All 36 participants indicated that meditation had positively impacted their relationships. The average degree of influence on a 4-point scale was 3.83 (SD = .378), falling closer to “Highly Positive” than “Somewhat Positive”.

Life satisfaction marginally correlated with positive affect ($r = .257, p = .063, 1$-tailed), and significantly correlated with self-kindness ($r = .476, p = .002, 1$-tailed), self-compassion ($r = .517, p = .01, 1$-tailed), acting with awareness ($r = .367, p = .014, 1$-tailed), non-judging ($r = .330, p = .025, 1$-tailed), non-reactivity ($r = .448, p = .003, 1$-tailed), and mindfulness ($r = .365, p = .014, 1$-tailed). Life satisfaction was negatively correlated with negative affect ($r = -.377, p = .012, 1$-tailed), self-judgment ($r = -.38, p = .011, 1$-tailed), mental fixation (over-identified; $r = -.43, p = .004, 1$-tailed), and feelings of isolation ($r = -.561, p < .001, 1$-tailed). Positive affect exhibited the same pattern of positive and negative correlations as life satisfaction, with the addition of a positive correlation with observing ($r = .581, p < .001, 1$-tailed) and describing ($r = .41, p = .006, 1$-tailed).

The strongest relationship found in our sample was between self-compassion and mindfulness ($r = .818, p < .001, 1$-tailed; Figure 2).

There were no significant correlations among study variables and social network measures of centrality, betweenness, clustering, or degree, with the exception of negative affect, which was marginally associated with both centrality ($r = .24, p = .07$) and node degree ($r = .23, p = .07$).

Conclusions
This research contributes to the mounting evidence for the salutary effects of meditation practice. Perhaps most notable is the significant association between self-compassion and mindfulness.

We did not find much evidence for the clustering of traits in this meditation community. Only negative affect was distributed non-randomly. Those practitioners who experienced higher average negative affect tended to be more central in the network and spend more time at the meditation center. This may be explained if we assume that a meditation center tends to draw those in distress looking for relief from their suffering. This in turn raises the question as to whether those who find relief then drift to the periphery of the network. This may have important implications for the culture of a meditation community and is an important area for future research.

References