
Loving-kindness Meditation: Empathy And Structural Changes In The Brain

Mindfulness begins to get more attention in the field of psychology. From the beginning, mindfulness comes from Eastern traditions and this type of mindfulness is frequently connected with the practice of mindfulness meditation (Shapiro, Carlson, Astin, & Freedman, 2006). According to Brown and Ryan (2003), mindfulness describes being a state of consciousness which includes being attentive to one's surroundings and experience. However, mindless is not being present or aware of the present moment and to be in that state all the time can be chronic for some people. Thus, the importance of mindfulness for people to get distance from irrelevant thoughts, lifestyles, and unsound behavior patterns seem to be important in the regulation of an individual's behavior.

Loving-kindness meditation (LKM) is related and includes the practice, of mindfulness. The central idea of LKM is to elaborate a state of feeling unconditional love for all beings. LKM is flexible in which it can be done at any time in different positions (Hofmann, Grossman, & Hinton, 2011). In LKM, its central aim is to point compassion and to wish other beings well in life. It has shown that LKM can make changes in behavior. This, in turn can promote positive feelings and how people treat themselves and other people (Hutcherson, Seppala, & Gross, 2008). LKM makes people more attentive, improve positive emotions, and reduces negative emotional states (Hofmann et al., 2011).

According to Wispé (1986), empathy has been described as in taking another person's perspective. Empathy also describes as "to know what it would be like if I were the other person is empathy" (p. 318). The central idea of empathy is to understand the other person (Wispé, 1986). There have been done several neuroimaging studies on empathy. When seeing or visualize a person's emotional state the same brain areas get activated. These brain areas get activated as if the person who watched or visualized the person also experienced the same emotions (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008). Empathy is based on another person's feeling which can function as triggers of empathy. However, it has been suggested that emotional feelings that are shared can be identified with mirror neurons (Schulte-Rüther, Markowitsch, Fink, & Piefke, 2007).

In a study, both women and men with experience of the practice of LKM the last 5 years were studied and compared with beginners of LKM. The study results showed long-term meditators of LKM had more gray matter volume in the right angular and posterior parahippocampal gyri compared to the beginners of LKM. The right angular and posterior parahippocampal gyri are especially significant in affective regulation that is connected with an empathic response, mood, and anxiety (Leung et al., 2012). In another study, they examined if long-term meditators in loving-kindness and compassion would react differently to emotional and neutral sound during the meditation compared to a state of rest. This, in turn, was compared to meditation beginners. When negative sounds were presented greater activity showed in the insula in expert meditators compared to beginners. These results have been suggested to the importance of the limbic system plays in emotion sharing. This study also indicated in that all participants showed greater responses to all emotional sounds in anterior cingulate cortex (ACC) and anterior insula (AI) under the state of loving-kindness and compassion meditation than in a state of rest (Lutz

et al., 2008).

There is still little empirical research that has been done on LKM and the effects of it have not received much attention (Hutcherson et al., 2008). It has not been stated before in relation to meditation, that right angular gyrus has structural changes (Leung et al., 2012). It needs to get more attention to see if there are some structural changes in the brain that is unique to LKM. The main focus in this literature review will be a focus on what effects LKM have on empathy, but also how LKM influences different brain structures.

First, I will search with keywords such as “empathy”, “loving-kindness”, “meditation”, “mindfulness”, “neuro correlation”, “structures” and which will be searching in different databases such as Web of Science, Google Scholar, and Scopus. Then I will sort the articles and make a list with the most relevant articles found.

Second, I will sort the most relevant articles, through examining relevant experimental designs that are used that is suitable to investigate the research question stated. Further, I will look more closely of analyses of the results and look more closely on effect sizes and p-values. After that is done, at last, I will take the remaining articles, and compare them with each other, in order to examine if all articles pointing out a similar (or the same) conclusion, or if there are big differences between the results.

References

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