

Choosing The Right Treatment for Patients



How do researchers conclude that a treatment can help someone struggling with mental health issues? Occasionally, we encounter blog entries of how a person tried something that worked wonders for him or her. Although we might be tempted to draw conclusions from these (often impressive) stories, medical research is far more rigorous, requiring many more participants and a careful research design.

A recent study by the Institute of Mental Health Department of Child and Adolescent Psychiatry illustrates just how thorough this research process is. The team wanted to assess whether fish oil supplements could help children with disruptive behavior disorders (such as Attention Deficit Hyperactivity Disorder) manage their behaviors. To achieve this goal, they recruited 131 child participants and randomly assigned them to receive either 6 months of fish oil supplements or 6 months of a placebo (where participants ate capsules designed to look like the fish oil but contained no active ingredients). Even with this design, however, the researchers wanted to ensure that participants truly could not discern which supplement they were taking – after all, fish oil has a strong odor! If participants could guess what group they were in, that information alone might have changed their behaviors.

Thankfully, the research team found that neither child participants nor their parents could guess which supplement the children had received. It did not matter: how confident participants (or their parents) were, what reasons they cited for their guess, or any changes they had perceived (or thought they should notice); participants' accuracy was no better than chance.

Taken together, the study results are good news for the research team. They can now compare the fish oil and placebo groups to explore whether the children differed in disruptive behaviors. If benefits of fish oil are found, these cannot be attributed to psychological factors, and are likely to have arisen from the pharmaceutical actions of fish oil. Although the process seems onerous and technical, we hope this behind-the-scenes perspective gives you confidence in the conclusions drawn from medical trials!

Contributed by:
Dr Jean Liu, Lead Author
Asst Prof, Yale-NUS College, email: jeanliu@yale-nus.edu.sg

Study Reference:
An analysis of blinding success in a randomised controlled trial of fish oil omega-3 fatty acids (Liu, JCJ; Raine, A; Ang, RP, & Fung, DSS; Ann Acad Med Singapore 2015)

Note: Dr Jean Liu was a Research Assistant at the Institute of Mental Health (IMH) when the study was conducted. She has since taken up an academic position with the Yale-NUS College

Shrinking of a brain region, the hippocampus, as schizophrenia progresses

People afflicted with schizophrenia consistently show abnormalities in a part of the brain called the hippocampus. The hippocampus is found to be smaller in schizophrenia patients than in people unaffected by mental illnesses. This volume reduction of the hippocampus may underlie some of the symptoms observed in schizophrenia. However, the time course of the hippocampus in schizophrenia is not clear: Is the hippocampus already smaller in individuals before the start of the illness? Or does the hippocampus shrink during the course of the illness?

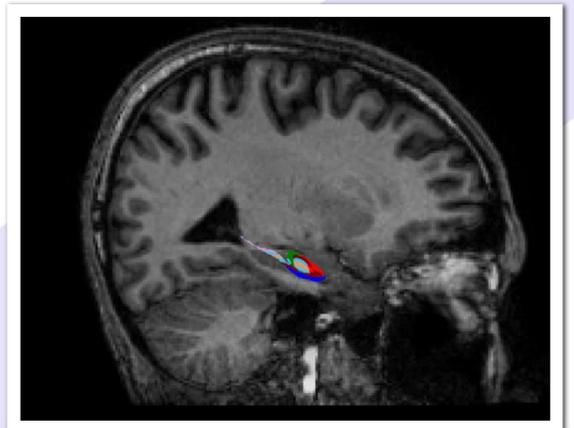
To answer the question, we used magnetic resonance imaging (MRI), which is a safe, non-invasive way of viewing the human brain live. We captured images of the hippocampus from individuals with and without schizophrenia. A specific part of the hippocampus, called the CA1, was observed to be smaller in patients in the earlier stages of the schizophrenia. The CA1 as well as the other parts of the hippocampus gradually shrink as the illness progresses. The shrinking of the hippocampus was associated with worsening symptoms in the schizophrenia patients.

As the hippocampus is a brain region responsible for many vital processes of memory and emotion, findings from this study may have implications for future trials on potential interventions aimed at restoring or preserving the hippocampus in schizophrenia.

For more information on the study, you may refer to <http://www.nature.com/mp/journal/vaop/ncurrent/full/mp20164a.html>

Contributed by:
Dr Ho New Fei, Lead Author

Study Reference:
Progression from selective to general involvement of hippocampal subfields in schizophrenia N F Ho, J E Iglesias, M Y Sum, C N Kuswanto, Y Y Sitoh, J De Souza, Z Hong, B Fischl, J L Roffman, J Zhou, K Sim and D J Holt



Providing Care to Relatives with Mental Illness: Reactions and Distress among Primary Informal Caregivers



"Doctors diagnose, nurses heal, and caregivers make sense of it all." Brett H. Lewis, author of Family Caregiving

For that someone who makes sense of the situation and brings order into the life of a patient, it often slips the mind that they too need to be cared for and supported. While some caregivers have tight-knit family to share the responsibilities of care, others shoulder the burden in solitude. In both cases, these primary informal caregivers face a certain amount of stress that can take a toll on their mental health.

To better understand the distress faced by caregivers of mentally ill patients and their experiences of caregiving, a research study was conducted among 350 primary informal caregivers of outpatients at the Institute of Mental Health. Caregivers completed questionnaires that assessed their level of distress and experiences of caregiving. The Caregiver Reaction Assessment – a locally validated instrument – examined the experiences of caregiving in four domains: impact of caregiving on finance, impact on health and schedule, the lack of family support, and caregiver's esteem.

The study found that distress among caregivers was associated with all of four aspects of caregiving. Caregivers who faced disruption in their schedule and health, felt financially strained, and those with a lack of family support tend to report higher levels of distress; caregivers with a higher level of caregiver esteem reported being less distressed.

In addition to bringing evidence of what we already know in that caregivers face distress, this study revealed specific domains that may have been the source of this distress. Initiatives for caregivers on effective time and health management, ideally with involvement from family members, may be useful in alleviating distress. Showing appreciation and publicly recognizing the efforts of caregivers can possibly serve to boost their esteem, and in turn reduce the level of distress. With the aging population and the associated health complications, it likely that more of us will become a caregiver in one way or another. It is therefore relevant for us to be aware of the needs of caregivers. Increasing public awareness of these needs can provide an impetus for more to be done at the community and society level. Such collective effort, hopefully, may in return bring sense and meaning to lives of those who cared.

If you wish to know more about the study and its findings, the open-accessed article can be found at:
<http://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-016-0786-9>

Contributed by:
Sherilyn Chang
Lead Author, BMC Psychiatry, 2016; 16:80.

