

Shivay Parihar

Research idea presentation

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Email : shivayp03@gmail.com

TITLE

*Finding the use of placebos in geriatric population
and utilizing its psycho-physiological effects.*

RESEARCH QUESTION:

Can the effects of Placebo be used clinically amongst the elderly and can factors like assurance , conditioning and expectations enhance its effects ?

HYPOTHESIS: *Placebo use produces analgesic effects , changes in anxiety , depression and Parkinson's disease. Patient assurance , conditioning and increased expectations lead to enhanced effects of placebos. Placebo use can prevent adverse drug side effects and multidrug interactions.*

JUSTIFICATION AND REVIEW OF LITERATURE

1. There is activation of endogenous opioid mechanism via descending pain modulating pathways in placebo produced analgesia and it reduces pain inducing brain activity.

Reference:

- Eippert F, Bingel U, Schoell ED, Yacubian J, Klinger R, Lorenz J, Buchel C. Activation of the opioidergic descending pain control system underlies placebo analgesia. *Neuron*. 2009;63:533–543
- Placebo analgesia is accompanied by large reductions in pain-related brain activity in irritable bowel syndrome patients. *Price DD, Craggs J, Verne GN, Perlstein WM, Robinson ME Pain*. 2007 Jan; 127(1-2):63-72

2. Placebo treatment produces changes in brain function in anxiety and depression patients.

Reference:

- Furmark T, Appel L, Henningsson S, Ahs F, Faria V, Linnman C, Pissiota A, Frans O, Bani M, Bettica P, Pich EM, Jacobsson E, Wahlstedt K, Orelund L, Langstrom B, Eriksson E, Fredrikson M. A link between serotonin-related gene polymorphisms, amygdala activity, and placebo-induced relief from social anxiety. *J Neurosci*. 2008;28:13066–13074
- Biological, clinical, and ethical advances of placebo effects. *Finniss DG, Kaptchuk TJ, Miller F, Benedetti F Lancet*. 2010 Feb 20; 375(9715):686-95

3. Placebos produced increased release of endogenous dopamine in basal ganglia of parkinson's patients.

Reference:

- Expectation and dopamine release: mechanism of the placebo effect in Parkinson's disease. *de la Fuente-Fernández R, Ruth TJ, Sossi V, Schulzer M, Calne DB, Stoessl AJ Science*. 2001 Aug 10; 293(5532):1164-6.

OBJECTIVES

- *To utilize the effects of placebos clinically and reduce the adverse side effects and effects of drug interactions in the elderly.*
- *To enhance the effects by increased verbal assurance , proper conditioning and increasing expectations of results by utilizing the doctor patient interaction.*

EXPECTED OUTCOME

- *Pain reduction or Analgesia in old age patients , effect more pronounced when expectation of treatment success increased.*
- *Improvements observed in anxiety , depression and Parkinson's patients ,including changes in brain activity*
- *Drug interactions reduced , along with lesser side effects from multiple drugs.*