Ahmad Azwar Habibi\textsuperscript{1}; Jurnalis Uddin\textsuperscript{2}; Nizmah\textsuperscript{1}

\textsuperscript{1} Faculty of Medicine and Health Sciences, UIN Syarif Hidayatullah Jakarta
\textsuperscript{2} Faculty of Medicine, YARSI University, Jakarta
Brain activity (activated neurons and synapses in human cortex) recordable with specific electrode represent in Electroencephalogram (EEG).

Basic groups of brain pattern:

- Awake with mental activity
- Beta 14-30 Hz
- Awake and resting
- Alpha 8-13 Hz
- Sleeping
- Theta 4-7 Hz
- Deep sleep
- Delta <3.5 Hz
- **Alpha wave (8-13 Hz)**
  - Closed eye
  - Awake condition, resting, relax
  - Meditation, listening music, listening/reciting Quran (Kamal, 2013; Sekha 2013; Vaghefi 2015)

- **During salat,**:
  - suggested to relax, focus and meditate on God
  - reciting and listening specific dua and dhikr.
  - should be on awake condition and suggest the eyes are still open
Objective

- To determine brain waves of subjects that listen to the reciting of dua and dhikr during salat with the eyes open.
- 30 subjects, 18-19 years
- Lay awake, 20 electrode of EEG to record brainwave, 3 activity
1st activity:
Open – close eye (@30’)

2nd activity:
Listening recitation salat with open eye (281’)

3rd activity:
Open – close eye (@30’)

All subjects had normal basic rhythm of EEG (posterior dominant rhythm),
- frequency 8-13 Hz during relaxation awake with closed eye
- predominantly originate from the occipital lobe.
- It has a mild amplitude (20-70 μV)
- symmetrical
At the time of opening the eye, alpha wave attenuation.
When tape recorder is played and the subject listens the recitation of salat (still in open eye condition), the EEG shows some of alpha wave frequency range (9-11 Hz to 11-12 Hz).

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Closed eye</th>
<th>Opened eye</th>
<th>Opened eye with listen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>8-10</td>
<td>10-11</td>
<td>9-11</td>
</tr>
<tr>
<td>Max</td>
<td>11-12</td>
<td>11-12</td>
<td>11-12</td>
</tr>
</tbody>
</table>
Alpha waves in 3 conditions:

- Closed eye: 83%
- Opened eye: 14%
- Opened eye with listen: 32%
Alpha activity is induced by closing the eyes and by relaxation, and abolished by eye opening or alerting by any mechanism (i.e. thinking). (Iza, 2014; Rahman, 2012)

During shalat:
- reciting and listening to the dua/dhikr constrain the prayer in mindfulness condition.
- Open eyes condition to ensure awake and not sleepy.
- These conditions have showed that inducible alpha activity.
Relaxation is a skill. This means that relaxation is something that can be learned and practiced.

Each person has the ability to learn how to relax, but not everyone will relax the same way.

There are many factors to achieve a state of relaxation during salat. Further research should be done to assess these factors.
Listening to the recitation dua/dhikr of shalat with open eyes can induced alpha waves that lead to a state of relaxation, peace and tranquility.