

**Supplementary file 1** Details of the electroacupuncture (EA) and sham EA treatments based on the Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) checklist

Item	Detail	Description
<b>1. Acupuncture rationale</b>	1a) Style of acupuncture	Electroacupuncture based on traditional Korean acupuncture
	1b) Reasoning for treatment provided, based on historical context, literature sources, and/or consensus methods, with references where appropriate	Related papers <sup>15-20,25-29,31-34</sup> and expert (doctors of Korean medicine) consensus
	1c) Extent to which treatment was varied	Standardized treatment (option: up to 2 bilateral acupoints can be added according to the chief complaints of the participants)
<b>2. Details of needling</b>	2a) Number of needle insertions per subject per session	Standardized regimen: 10 (10 to 14, when considering addition of optional acupoints)
	2b) Names of points used	GV 20, EX-HN-3, bilateral HT7, PC6, BL63, KI4
	2c) Depth of insertion, based on a specified unit of measurement, or on a particular tissue level	0.6 – 4.5 cm
	2d) Response sought	Acupuncture: <i>de qi</i> (sense of soreness, numbness, heaviness, or distension) EA: cognition of stimulation and comfortable feeling
	2e) Needle stimulation	Manual stimulation: twisting-needling 3-5 times Electrical stimulation: 4 Hz
	2f) Needle retention time	30 minutes
	2g) Needle type (diameter, length, and manufacturer or material)	Acupuncture (diameter: 0.25 mm, length: 25 mm, manufacturer: Asiamed GmbH & Co., material: sterilized stainless steel)
<b>3. Treatment regimen</b>	3a) Number of treatment sessions	10
	3b) Frequency and duration of treatment sessions	10 sessions for 4 weeks (average 2.5 times per week)
<b>4. Other components of treatment</b>	4a) Details of other interventions administered to the acupuncture group	<ul style="list-style-type: none"> <li>- All the three groups will be educated with a brochure about the management of sleep disorder</li> <li>- No additional Korean traditional medical treatment regarding insomnia is allowed except for what is given for the study</li> <li>- The interventions other than Korean traditional medical treatment to manage insomnia that have been steadily received for more than 4 weeks before the screening visit are allowed to continue during the study, but no additional treatment is allowed after the beginning of the trial (even sleeping pills are allowed)</li> </ul>
	4b) Setting and context of treatment, including instructions to practitioners, and information and explanations to patients	<ul style="list-style-type: none"> <li>- Setting: clinical trial centers in university hospitals</li> <li>- Unnecessary conversation will be limited between the acupuncturists and patients during the treatment.</li> </ul>
<b>5. Practitioner background</b>	5) Description of participating acupuncturists (qualification or professional affiliation, years in acupuncture practice, other relevant experience)	Licensed Korean medical doctors with at least 2 years of clinical experience
<b>6. Control or comparator interventions</b>	6a) Rationale for the control or comparator in the context of the research question, with sources that justify this choice	Sham acupuncture: previous researches validating the nonpenetrating sham acupuncture device, Streitberger acupuncture needle <sup>52</sup> Mock electroacupuncture: previous researches with control intervention with no electrical stimulation with beeping sound and lighting <sup>29,32-34,49</sup>

	<p>6b) Precise description of the control or comparator. If sham acupuncture or any other type of acupuncture-like control is used, provide details as for Items 1 to 3 above.</p>	<p>1. rationale of sham acupuncture Use non-penetrating Streitberger acupuncture needles at 10 non-acupoints and connect electrostimulator in switch-off state on to the needles</p> <p>2. points used for sham EA</p> <ul style="list-style-type: none"> <li>- Upper limb 1: 1 cm lateral and 5 cm proximal points from cubital creases of bilateral arms</li> <li>- Upper limb 2: 2 cm above the upper limb 1 point</li> <li>- Lower limb 1: 1.5 cm above the depression at the midpoint of the upper border of the bilateral patella</li> <li>- Lower limb 2: area 1/3 above the medial part of the bilateral tibia</li> <li>- Lower limb 3: 1.5 cm above the lower limb 2 point</li> </ul> <p>3. number of needle insertions per subject per session: 10</p> <p>4. needle type Sham acupuncture (Streitberger needle, Asiamed GmbH &amp; Co., sterilized stainless steel)</p> <p>5. Treatment duration, frequency, period: the same as the treatment group</p>
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