

1 Article

2 “I’ve only just heard about it”: Complementary and 3 Alternative Medicine Knowledge and Educational 4 Needs of Clinical Psychologists in Indonesia

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7 **Abstract:** *Background and objectives:* The inadequate knowledge of complementary and alternative
8 medicine (CAM) among health professionals may put their clients at risk because clients they then
9 would find information about CAM from unreliable sources. Clinical psychologists (CPs), as health
10 professionals, have also the opportunity to provide psychoeducation on the latest CAM scientific
11 research to their clients. The current study aimed to explore knowledge and educational needs of
12 CAM among CPs in Indonesia because previous studies on exploring CAM knowledge and
13 educational needs of CAM were primarily conducted in Western countries. *Materials and Methods:*
14 Data were collected through semi-structured face-to-face interviews with 43 CPs in public health
15 centers (PHCs) in Indonesia. Most interviews were conducted at the PHCs where the participants
16 worked, and lasted for 55 minutes on average. The interview recordings were transcribed and were
17 analyzed using deductive thematic analysis. *Results:* Five main themes emerged within participants’
18 responses regarding CAM knowledge and educational needs. First (CAM understanding),
19 participants’ responses ranged from those with little or no prior knowledge of CAM treatments and
20 uses, to those with much greater familiarity. Second (source of knowledge), participants’ access
21 ranged widely in terms of references, from popular to scientific literature. Third (why is it
22 important?), participants identified CAM essentially as part of Indonesian culture and it was
23 therefore crucial to have this cultural knowledge. Fourth (the challenges and what is needed?), the
24 challenges for improving participants’ knowledge came from personal and institutional levels.
25 Fifth (what and how to learn?), participants advised that only CAM treatments that fit in brief
26 psychotherapy sessions should be introduced in professional training. *Conclusions:* This qualitative
27 study discovered that CAM was neither well-known nor understood widely. Participants advised
28 that professional associations and health institutions should work together in enhancing
29 knowledge of CAM and incorporating CAM education into psychology education.

30 **Keywords:** complementary and alternative medicine; integrative medicine; knowledge; training
31 and education; psychology; mental health; qualitative
32

33

34 1. Introduction

35 The WHO defines complementary and alternative medicine (CAM) as “a broad set of health
36 care practices that are not part of that country’s own tradition or conventional medicine and are not
37 fully integrated into the dominant health-care system. They are used interchangeably with
38 traditional medicine in some countries” [1]. Systematic reviews of CAM efficacy and effectiveness on
39 mental disorders treatment have been conducted abundantly. For example, acupuncture,
40 hypnotherapy, and meditation showed good benefit for posttraumatic stress disorder [2]; and herbal
41 medicine, particularly St. John’s wort, was reported to ameliorate mild-to-moderate depressive
42 symptoms [3]. Moreover, the use of CAM treatments, particularly yoga and energy healing, in
43 palliative care significantly improved the quality of life of cancer survivors [4]. In addition,
44 yoga-based interventions are a promising non-pharmacological option for the management of
45 depression and anxiety symptoms amongst expectant mothers [5].

46 Despite a growing body of scientific evidence of CAM treatments for the management of
47 various medical conditions, systematic reviews still show methodological flaws and heterogeneity of
48 data [6, 7]. Furthermore, these reviews constrain their conclusions about the efficacy and safety of
49 CAM treatments. Therefore, it is anticipated that health professionals would report inadequate
50 knowledge about CAM treatments. For example, nurses in Australian hospitals reported that they
51 had very little or no knowledge of CAM [8]; and Indonesian provisional clinical psychologists
52 reported low knowledge of CAM and predominantly relied on their friends (without psychological
53 education background) and colleagues for learn about CAM [9]. In addition, various mental health
54 professionals in the USA (e.g. psychologists and psychiatrists) also reported a general lack of CAM
55 knowledge that hindered their decision in integrating CAM treatments into conventional
56 psychotherapy [10].

57 The inadequate knowledge of CAM among health professionals may put their clients in risky
58 situation because they then would find information about CAM from unreliable sources [11].
59 Moreover, a survey of CAM use in 25 countries found that up to 20% of people with severe mental
60 disorders only rely on CAM [12]. A study among American parents of children with Autism
61 Spectrum Disorder found that the participants did not disclose their use of CAM history with their
62 physicians because they believe that the physician is not-educated about CAM treatments [13].
63 Therefore, one of the recommendations in the White Paper of integrative mental health care is to
64 develop a comprehensive education by integrating CAM into conventional health education
65 curricula and training [14].

66 The CAM education and integration into the health education curriculum have been developed
67 in health sciences since the early 2000s under various names (e.g. integrative medicine, integral
68 medicine, and holistic health) [15-17]. This curriculum development particularly occurred in medical
69 schools in the USA where it was strongly supported by government through research and education
70 grants. For example, more than 60% of medical schools in the USA include courses in CAM after the
71 USA government funded educational projects to accelerate the integration of CAM education in
72 medical curricula [15, 18]. The emerge of CAM integration into medical education curricula,
73 especially in high and middle-economic countries, aligned with physicians’ and medical students’
74 positive attitude towards CAM education [19, 20]. Similar to this finding, Australian psychologists
75 also demonstrated their agreement towards the need for psychologists to be knowledgeable about
76 CAM treatments [21].

77 A systematic review examining the effectiveness of CAM education for physicians and medical
78 students found that education of CAM did not only improve the knowledge of CAM but also
79 participants’ communication skills and changed their attitudes towards CAM to be more positive
80 [22]. Moreover, behavioral changes appeared in the form of more CAM referrals, and
81 nonjudgmental discussions about CAM with clients as well as with participants’ peers. Similar
82 findings were also found in a retrospective evaluation survey of a unique elective course for
83 fourth-year medical students, Humanistic Elective in alternative medicine, Activism, and Reflective
84 Transformation (HEART) [23]. The evaluation survey was completed by 73% of 168 alumni of

85 HEART from the 2002 to 2009 cohorts from various states in the USA. Participants perceived that the
86 CAM knowledge that was given in the program had improved their communication skills with
87 clients and expanded their point of view. This study showed that CAM education may enhance
88 health professionals' sense of humanism through exploring the preferences of the client.

89 The arising of this CAM education integration tends to be more advanced in medical programs
90 compared to other health programs, including psychology. Clinical psychologists (CPs), as health
91 professionals, also have the opportunity to provide psychoeducation on the latest CAM scientific
92 research to their clients [24, 25]. CPs should be able to refer their clients to CAM practitioners,
93 especially for those who cannot use psychotic drugs or who reject conventional psychotherapies [24,
94 26, 27]. However, previous studies on exploring CAM knowledge and educational needs of CAM
95 were primarily conducted in WEIRD (Western, educated, industrial, rich, and democratic) countries
96 [28].

97 For instance, 9 of 22 studies in a critical review on medical students' knowledge of CAM were
98 conducted in the UK and USA [19]. Moreover, the amount of literature covering psychologists' CAM
99 knowledge and educational needs of CAM is very limited. Understanding these aspects is critical
100 because it can be considered as a reference for professional psychology associations, psychology
101 faculties, and the government to review their regulations and basic competency of CPs related to
102 CAM and in implementing integrative medicine services. Furthermore, recognizing the CPs'
103 knowledge and educational needs of CAM will enlighten the areas in need of attention within
104 education curricula and ongoing professional development training of CPs.

105 Therefore, the current study aimed to explore knowledge and educational needs of CAM
106 among CPs in Indonesia as a non-WEIRD country. Three research questions were addressed in this
107 qualitative study: (a) how do CPs explain their knowledge of CAM?, (b) how do CPs describe, if any,
108 their need of CAM education?; and (c) how do CPs describe knowledge of CAM influences, if any,
109 on their educational needs about CAM? This research may also be important for other Southeast
110 Asian countries because of their **proximity in terms of culture and psychology education history**
111 **with Indonesia** [29-31].

112 2. Materials and Methods

113 2.1. Study Design and Procedure

114 A qualitative method was used because this methodology facilitates the researcher to
115 profoundly investigate and comprehensively understand psychologists' knowledge and educational
116 needs of CAM [32, 33]. **The qualitative design of this current study was constructed based on**
117 **constructivist epistemology. This epistemological approach intended to explore the dynamic reality**
118 **of participants' knowledge and educational needs of CAM that constructed by society** [34]. There is
119 no absolute objectivity in this epistemology because researcher's and participant's values and
120 interests are entangling in the interpretation process [35].

121 Data were collected through semi-structured face-to-face interviews using an interview
122 schedule that will be explained in the Instruments section. All interviews were conducted by the
123 researcher between November 2016 and January 2017 in two areas of Special Region of Yogyakarta
124 Province, Indonesia. Prior to this fieldwork, the researcher obtained research permission from the
125 Indonesian Clinical Psychologist Association (IPK), which arranged for potential participants to be
126 mailed a posted letter containing an information sheet and endorsement letter from the IPK. In this
127 introduction letter, the researcher explained the aim of the study and asked whether the clinical
128 psychologists were willing to be interviewed. Also, they were informed that they may choose not to
129 participate without any consequences, however none of them sent an opt-out email to the
130 researcher. Before the face-to-face interview, each participant was given the chance to ask questions
131 related to the research and asked to sign the consent form. All participants voluntarily agreed to be
132 interviewed and were audio-recorded at their suggested time and place. They received a
133 compensation of Rp 100,000 (equal to AUD 10).

134 2.2. Participants

135 A purposive sampling method for maximum variation [36] was used to select all CPs in public
136 health centers (PHCs) in two areas of Special Region of Yogyakarta Province, Indonesia. A total of 43
137 participants were interviewed. Participants were aged from 25 to 42 years and they had been
138 practicing as psychologists for between 10 months and 18 years. There was only one male
139 participant and therefore the pronoun 'she' is used to discuss all interview responses in this thesis to
140 maintain participants' anonymity. Most interviews were conducted at the PHCs where participants
141 worked and interviews lasted for 55 minutes, on average.

142 2.3. Instruments

143 The interview schedule used in this qualitative study was part of a larger mixed-methods study
144 that aimed to investigate knowledge of, beliefs and attitudes toward, experience of, and educational
145 needs regarding CAM of CPs in Indonesia. Interview schedule was selected as a guideline (i.e.
146 semi-structured) because of its flexibility for the interviewer to re-arrange or explore beyond the
147 interview aspects based on a participant's responses [37]. Five aspects were explored within the
148 interview schedule. The first aspect was knowledge of CAM; questions included how they defined
149 CAM, and how it was different from conventional medicine. The second aspect was the participant's
150 experience, both in their personal and professional lives, in using CAM. The third aspect was
151 spiritual-religious therapy (SRT), including the participants' attitudes towards it and their
152 experience with clients using it. The fourth aspect concerned CAM integration into psychological
153 services, including regulation from government and professional associations, the best CAM
154 integration models, and the challenge to integrate CAM into psychological services and education.
155 The last aspect explored the participant's educational needs regarding CAM. However, this study
156 only discussed the findings from first and fifth aspects. Findings from the other aspects had been
157 reported separately [38] because of the diverse scope of analysis of these aspects. In addition, the
158 interview schedule had been piloted and the results of the pilot interviews had been reported
159 elsewhere [39].

160 2.4. Data Analysis

161 Data analysis was initiated by transcribing the interview audio-recordings. The first five
162 audio-recordings were initially transcribed by the researcher and given to the research assistant (RA)
163 as examples of the standards for all transcripts. Then, recordings six to ten were transcribed by the
164 RA and were evaluated for the standards assigned by the researcher before the RA transcribed the
165 eleventh interview recording. The researcher reviewed the transcriptions of all audio recordings for
166 accuracy by comparing the texts with the audio recording. This process also allowed the researcher
167 to develop familiarity with the data.

168 Afterwards, the interview transcripts were analyzed using deductive thematic analysis due to
169 its flexibility to both report and examine explicit and latent contents; and appropriate to explain
170 specific findings in the mixed-method study [40, 41]. Thematic analysis guidelines from previous
171 studies [40, 41] were followed, including 1) coding (e.g. *K* for knowledge and *E* for educational
172 need), 2) searching for themes (re-organization of the coded data/transcripts), and 3) analysis of the
173 re-organized data by considering the consistency of the coding, themes, and sub-themes.-

174 2.5. Ethics Statement

175 This research was conducted in accordance with the Declaration of Helsinki; and the protocol
176 was reviewed and granted ethics approval by the Ethics Committee of the School of Psychology at
177 the University of Queensland (16-PSYCH-PHD-08-JH). Prior to the interviews, all participants were
178 given a research information sheet and consent form. The consent forms were collected and stored
179 safely in a locked filing cabinet. In the interview transcripts, participants' personal identifiable
180 information was removed/deidentified from transcripts to protect participants' confidentiality.

181 **3. Results**

182 Five main themes emerged within participants' responses regarding CAM knowledge and
 183 educational needs: (a) CAM understanding, (b) source of knowledge, (c) why is it important?, (d) the
 184 challenges and what is needed?, and (e) what and how to learn? A summary of the themes and
 185 sub-themes is presented in Table 1. Participant's number is used in brackets to represent extracts and
 186 quotes. For example, (P6) represents a quote from Participant 6.

187 **Table 1.** Themes and sub-themes for CAM knowledge and educational needs.

Theme	Sub-theme
CAM understanding	"I've only just heard about it"
	Familiarity
	Outside of conventional medicine or psychotherapy
	Companion of conventional medicine or psychotherapy
	Psychological treatment considered as CAM
Source of knowledge	Less scientific
	Colleagues
	Family and friends
	Mass media
	Personal experience
	Popular reference
	Scientific reference
	Self-development activities
Why is it important?	University
	CAM is part of Indonesian culture
	Provide information and recommendation or referral
	Lifelong learning and certification
The challenges and what is needed?	Formulate CAM regulation and collaboration with CAM practitioners
	Costly registration fees
	Time constrains
What and how to learn?	Credible institutions and educators
	Support from institutions
	Brief and easy treatments
	Harmless and non-instrumental treatments
	Daily life and less stigmatized treatments
	Mind-body and scientific-based treatments
Comprehensive understanding	
	Experiential learning process

188 **3.1. CAM Understanding**

189 The first of the five themes was how participants understood the meaning of CAM. Responses
 190 ranged from those with little or no prior knowledge of CAM treatments and uses, to those with
 191 much greater familiarity. Also, participants defined CAM differently due to the wide range of
 192 understanding of CAM. Each sub-theme is presented in six paragraphs below.

193 Almost a third of participants expressed that they had never heard of CAM at all before, as
 194 exemplified, "I've only just heard about it. My colleagues were asking me about this [CAM], but I,
 195 myself, know nothing." (P6). Due to their lack of CAM knowledge, they were neither able to define
 196 nor mention an example of CAM treatments. Participants also felt unsure if some psychological
 197 techniques that they have combined into their practice were categorized as CAM or not. However,
 198 all participants could provide examples once they knew what the term meant.

199 *Alternative medicine* was perceived to be more familiar than *complementary medicine* among
 200 participants. They also mentioned certain CAM treatments perceived as alternative medicine, for
 201 example, "... alternative medicine that uses *jamu-jamuan* [traditional herbals medicine] ..." (P31).
 202 Participants said that the term alternative medicine is easily found in daily life and understood
 203 because many alternative medicine practitioners advertise their services in newspapers or distribute
 204 leaflets on the street.

205 CAM was understood as a treatment outside conventional psychotherapy or practiced
206 personally by clients in their homes. CAM was also defined as a psychological treatment performed
207 by a person without a psychology education background. Participants perceived that CAM includes
208 treatments that are not provided by a physician, as illustrated: "... from something to be consumed
209 like tonic, to some actions to be done like exorcism by *dukun* [shaman]." (P12).

210 Participants identified CAM as a treatment combined with conventional medicine or
211 psychotherapy, for example, pregnant clients with hypertension and anxiety used relaxation
212 techniques in conventional psychotherapy and joined yoga to manage blood pressure and anxiety
213 levels (P15). It was emphasized that clients usually proactively searched and used CAM based on
214 their own beliefs and culture. Participants also explained that CPs may integrate CAM into
215 conventional psychotherapy as a professional strategy for psychologists to be accepted by
216 Indonesian people. For example, "We use the basic of CBT [cognitive-behavioral therapy] but
217 inserted with religious teachings to adjust to what people understand and believe." (P30).

218 Three participants recognized psychological treatment, including psychotherapy and
219 counselling, as a part of CAM. They explained that this understanding was based on the
220 biomedicine paradigm and system in conventional health services where clients meet with a
221 physician on the first occasion and then are referred to a CP if needed. Therefore, participants
222 perceived that psychological treatment provided by a CP aims to complement physician's
223 intervention by supporting physical healing and creating holistic health for clients.

224 CAM was also understood as a non-(or less) scientific treatment. The main reason given was the
225 lack of systematic research or inadequate scientific evidence for CAM: "... either me who is not
226 following the trend or what. But I feel that I haven't found a lot research [report] about CAM." (P4).
227 Participants also highlighted that anyone can be a CAM practitioner without sufficient conventional
228 medical education. In addition, there is no single guideline on how to use CAM, so every
229 practitioner might have a different technique, compared to the strict directions for prescribing drugs
230 among physicians. Clients' beliefs and placebo effect were recognized by participants as two factors
231 why CAM appears effective.

232 3.2. Source of CAM Knowledge

233 Based on the interviews, eight sources (sub-themes) for gaining CAM knowledge were
234 identified (see Table 1). Participants access ranged widely in terms of references, from popular to
235 scientific literature. Also, participants' personal experiences of using CAM, relations with family and
236 friends, and discussions with colleagues contributed to the enhancement of their CAM knowledge.
237 Each source is presented in separate paragraphs below.

238 Participants enhanced their CAM knowledge through their colleagues, both other health
239 professionals and CPs. For example, some gained knowledge about dietary-supplements from
240 discussions with nutritionists at the public health centers (PHCs). But the knowledge they obtained
241 was very basic due to time constrains to talk with other health professionals. Provisional CPs
242 (psychologists completing a professional internship in clinical psychology under the supervision of
243 registered clinical psychologist) who did internships with the participants could also be a source of
244 CAM knowledge because they had more up-to-date information. Participants also gained CAM
245 knowledge through assisting their colleagues' research on specific CAM treatments, for example,
246 yoga and SRT. Participants also had discussions with senior CPs and strongly believed whatever
247 their seniors said, especially the executive members of professional associations. For example,
248 Participant 15 exemplified, "She said, 'Rather than listening to classical music, why we don't listen to
249 *gending* [traditional Javanese music instrument] or *tilawah* [Quran recitation].' I haven't read the
250 journal [articles] yet. But if she spoke like that, it must have a [scientific] basis." (P15).

251 Family members, including partners and parents, were the most influential persons to develop
252 CAM knowledge and behavior amongst participants. Parents-in-law could also be a source of CAM
253 knowledge for participants, as described by Participant 42, "...my husband's parents, in fact, prefer
254 [to use] herbal [medicine] and my husband as well. So we also try to [use this with] our children."
255 (P42). But not all participants believed strongly with their family, and rather had more trust in

256 conventional health professionals. Friends also acted as a CAM knowledge source. These friends
257 were not from psychology nor any health education background. They could be participants'
258 neighbors or members of the same group activity. For example, "I know that treatment [SRT] also
259 from friends. Sometimes we attend the same [religious] discussion forum." (P14).

260 Both printed and electronic mass media were used by participants to gain knowledge about
261 CAM. Sources included magazines, newspapers, radio, and television (TV). Four participants said
262 that they obtain basic information about *ruqyah* (exorcism in Islam) as part of SRT from religious
263 programs on TV, for example, "I haven't had clear [scientific] information about *ruqyah*. What I
264 know is just from what I have seen on the television." (P16). Participant 5 explained that the CAM
265 knowledge she received from the radio helped her to discuss it with her clients, particularly with
266 those from low socio-economic status (SES) backgrounds, because they also listened to the same
267 program.

268 Some participants knew particular CAM treatments from their own experience. For example,
269 Participant 10 and Participant 15 practice yoga and meditation so they can explain to clients what
270 they feel and the potential benefits of those treatments. In line with this, Participants 5 and 13 shared
271 their stories with clients about herbal medicine consumption, especially during their pregnancy and
272 when they were breastfeeding.

273 Numerous popular references were used by participants as their resource for CAM knowledge.
274 For example, Participant 16 illustrated her experience with exploring dietary-supplements benefits
275 for pregnant women through popular health articles on the internet. Search engines, such as Google,
276 were also used to find out about CAM's history or benefits. Five participants had looked for
277 information on social media, including YouTube: "... now there is a lot [of instrumental music] on
278 YouTube, sometimes I search for it there." (P22). Some popular books about CAM treatments, such
279 as music therapy and dietary-supplements, were also read to increase participants' knowledge of
280 CAM effectiveness.

281 Scientific journals and text books were used by some participants to find out about the
282 effectiveness of particular CAM treatments, such as SRT, yoga, and music therapy. Two of the
283 participants were also adjunct lecturers and they read articles about CAM reviewed by their
284 students. Participants also read journals and text books about CAM for their undergraduate or
285 master theses. However, participants disclosed that sometimes they did not have time to search or
286 could not find articles about CAM.

287 Participants increased their CAM knowledge by taking self-development activities, such as
288 attending seminars, training, and workshops. They joined the programs because of their interest in
289 the particular CAM treatment or specific developmental stage, for example, acupuncture for
290 children with autism. Information from self-development activities were seen as more valid than
291 popular sources or references from the internet: "... [information from] browsing sometimes is not
292 supported by robust study ... I am confident to discuss [with clients] if have joined a seminar and
293 obtained [more credible] information about it [CAM]." (P24).

294 "There was a course named Prophetic Counselling ... in that counselling and psychotherapy,
295 religious values were inserted." (P5). This example represented participants from Islamic
296 universities in several provinces who obtained their knowledge about CAM, particularly SRT, in
297 their lectures. However, some participants felt it difficult to understand the working mechanisms of
298 SRT. In contrast, participants from a non-religious university stated that they were taught nothing
299 about CAM knowledge in lectures. They indicated CAM was not discussed at all in the curriculum
300 due to the lack of scientific evidence to support it. Participants also gained CAM knowledge from
301 informal discussions or observing behaviors from their lecturers. For example, "Sometimes lecturers
302 in the class said, 'That's it, give a massage at here.' Then unconsciously, I try to apply this
303 [acupressure] to clients." (P8).

304 3.3. *Why is It Important?*

305 Four sub-themes, presented in four paragraphs below, were identified when participants
306 explained why CAM knowledge and education are important (see Table 1). Essentially, CAM was

307 identified as part of Indonesian culture and it was therefore crucial to have this cultural knowledge.
308 As health professionals, participants mentioned CAM knowledge and education were needed to
309 educate clients and as part of participants' professional development. Eventually, knowledge and
310 education of CAM were needed in drafting CAM integration regulations and designing
311 collaborative work with CAM practitioners in the future.

312 Participants perceived CAM as a part of Indonesian culture and daily life. Therefore, they
313 commented that CPs need to have cultural sensitivity, including knowledge of CAM so that they are
314 able to understand clients more, and give psychoeducation about various CAM treatments.
315 Additionally, participants acknowledged that conventional psychotherapy which they learnt and
316 practiced was rooted in Western perspectives that do not always culturally fit Indonesian people's
317 understandings:

318 "Our [psychotherapy] is oriented more to the West. So, is it culturally appropriate? Need
319 modification because [we] meet with clients at PHC from diverse cultures and who use CAM ...
320 Consequently, CPs need cultural sensitivity like CAM understanding to understand their clients
321 better and be able to answer questions about CAM." (P19).

322 Participants said that their clients still perceive CPs as having the same role as physicians. For
323 example, in palliative care such as part of cancer treatment, clients often asked participants' advice
324 in choosing chemotherapy or herbal medicine. Therefore, participants emphasized that CAM
325 knowledge and education is needed for CPs in providing information and safe recommendations or
326 referrals for clients. Participant 28 summarized why CAM knowledge is important:

327 "[Clinical] recommendations are expensive. It's OK if clients recover. But, if their condition
328 becomes worse, then it is dangerous ... when a client asks about CAM, the CP should be able to
329 answer even if only with a short explanation. If the CP's response is only 'I do not know' then it can
330 lessen the CP's credibility and trust from the client. Also, it will increase the risk of the client looking
331 up information from invalid [not credible] sources which, in the end, endangers the client." (P28).

332 Participants explained that their clients came from various backgrounds and with numerous
333 problems. Therefore, they need to keep up-to-date information and upgrade their knowledge and
334 skills, including about CAM. Thus, knowing and learning about CAM could be part of lifelong
335 learning, and CPs might specialize in one particular CAM treatment. In addition, participants
336 suggested that CAM education undertaken by CPs could be used as one requirement to renew their
337 registration. They also highlighted that CPs need to be certified before integrating CAM into their
338 practice. Participants suggested that their profession might learn from other health professions that
339 already integrate CAM into their practice, for example, "Like ob-gyns [obstetrics and gynecologists],
340 they can do hypnobirthing. That will make their services more optimal." (P39).

341 Participants mentioned that regulation is strongly needed if CAM is to be integrated into
342 psychological services. However, CPs must have the knowledge of CAM prior to formulating such
343 regulations. Therefore, CAM education is strongly recommended for CPs since, "Not all CPs have
344 [CAM] knowledge or have been taught about CAM so there is a need for CAM education." (P38).
345 Apart from regulation, CAM knowledge and education are essential for participants when planning
346 collaboration with CAM practitioners.

347 3.4. *The Challenges and What is Needed?*

348 Four sub-themes relating to challenges were identified from the interviews, which are
349 presented separately in four paragraphs below. The challenges for improving participants'
350 knowledge came from personal and institutional levels. Financial and time constrain issues hindered
351 participants to participate in CAM workshops. Additionally, participants expressed that the content
352 of CAM seminars was too basic and did not meet their needs in clinical practice. Approval from
353 participants' institutions to attend CAM self-development activities was another challenge faced.

354 Participants criticized the expensive cost to join CAM seminars, training, or workshops to
355 improve their knowledge and skills. Participants' income as a CP at a PHC, which is lower than
356 other health professionals, is insufficient to cover the registration fees. Additionally, participants

357 regretted that some high-cost training did not make them certified to do a particular treatments
358 hence they were not cost-effective.

359 Working at a PHC demands time and energy, said participants. Consequently, it is difficult for
360 participants to increase their knowledge by regularly joining CAM self-development activities.
361 When a particular training event is held in a different city and on a weekend, it is still hard to take
362 part if they have a child. Moreover, searching for and reading the latest journal articles were
363 considered time-consuming for some participants, so they would just practice what they learnt from
364 university.

365 Participants underlined that it is a challenge to find a trainer who is an expert in CAM as well as
366 understands psychology. Most CAM training facilitators were from non-psychology backgrounds,
367 so what they explained was too basic or irrelevant from what participants needed. Also, it is
368 important to know the competency of the educator in CAM, as Participant 12 criticized, "Who is
369 assessing their competence?" (P12). Furthermore, finding credible CAM education institutions that
370 are recognized by other health professionals is another issue to face. As an alternative solution,
371 participants suggested that professional associations might organize CAM training so that it is
372 perceived as more credible.

373 Participants explained that it is difficult to ask permission from their institutions to attend CAM
374 training and workshops that are held during the work week. Participants also perceived that their
375 institutions, PHCs and the Health Department, show less support by offering insufficient training
376 and funding. However, some institutions supported participants through providing facilities, for
377 instance, a computer and internet connection in the participant's room so they could search for CAM
378 references in a timely manner.

379 *3.5. What and How to Learn?*

380 This last theme presented some principles of CAM education needed by participants and is
381 merged into six sub-themes (Table 1) which are written in six paragraphs below. Participants
382 advised that only CAM treatments that fit in brief psychotherapy sessions should be introduced in
383 professional training. Since CAM was perceived as part of Indonesian culture, participants
384 suggested CPs should know about the CAM treatments commonly used in daily life. Regarding
385 their professionalism, participants emphasized only less harmful and scientific-based CAM
386 treatments should be included in psychology education. Lastly, participants recommended
387 comprehensive content and experiential learning strategies when teaching CAM for CPs.

388 Due to time constrains and pressures at PHCs, participants agreed that treatments should be
389 made easy to conduct during brief sessions and should be introduced as part of psychology
390 education. For example, music therapy should be taught because it can be used anywhere, as should
391 acupressure because of its simplicity. It was found that Neuro-Linguistic Programming (NLP) was
392 the most commonly endorsed treatment, followed by hypnotherapy, brain gym, and Eye Movement
393 Desensitization and Reprocessing (EMDR). Those treatments were favored because they produce
394 quick effects and clients like them.

395 Participants explained that stigma towards mental disorders still occurs in Indonesia and it
396 discourages people from visiting psychology services. Therefore, participants suggested that CPs
397 should learn and use treatments that become part of clients' everyday lives, for instance, massage
398 therapy and herbal medicine. By integrating these treatments, participants indicated that this would
399 encourage people to come to CPs and help reduce the stigma. Participants agreed that SRT should be
400 taught in professional programs because spirituality and religion are very important to Indonesian
401 people's lives: "Our people are relatively religious, whatever their religion. Thus, therapies with
402 spirituality and religious influences need to be taught." (P34).

403 Participants showed their concern regarding clients' safety when using CAM in psychological
404 practice. Therefore, they suggested CPs should only learn less harmful and non-instrumental
405 treatments such as acupressure and meditation. Acupuncture and herbal medicine were the least
406 recommended treatments because participants were not taught about them at university and they
407 did not have a license to practice them. However, participants suggested that CPs need to know

408 about herbal medicine, as exemplified: "CPs also need to know about pharmacology, and herbal
409 medicine can be inserted into that topic within lectures." (P12).

410 Mind-body treatments, such as yoga and meditation, were proposed by participants to be
411 included in psychology education because of the connection between physical and psychological
412 conditions. However, not all Islamic universities might want to teach it: "But about yoga and
413 meditation, Islamic universities tend to reject [to teach them] because they're basically from either
414 Buddhism or Hinduism." (P20). Participants also highlighted that the CAM treatments taught in
415 psychology programs have to be scientifically-based. Therefore, some participants doubted
416 hypnotherapy would be taught, as illustrated, "... not all CPs favor hypnotherapy because the
417 scientific evidence is still weak." (P23).

418 Participants disclosed that information about CAM is rare in psychology programs and
419 undervalued compared to conventional psychotherapy. Therefore, participants commented that
420 every aspect of CAM is important to be taught because this will make them more confident and
421 understand CAM more comprehensively. Basic information, such as CAM philosophy and history,
422 is essential in order to find common ground and avoid dissenting opinions among CPs. However,
423 some participants also emphasized that practical information, such as working mechanisms and side
424 effects, also need to be known.

425 Role-plays and visits to CAM practitioners or inviting CAM practitioners to the classroom were
426 the most recommended ways to learn about CAM for participants. These hands-on experiences and
427 learning strategies may enhance their knowledge and skills with CAM. Participants also suggested
428 that the educators should be able to teach CAM based on what CPs need in their practices, for
429 example, by using case studies.

430 4. Discussion

431 This current qualitative study aimed to explore Indonesian CPs' knowledge and educational
432 needs of CAM. Lack of CAM knowledge among participants in this study supports a similar finding
433 which was reported by Australian psychologists [42]. CAM, particularly complementary medicine,
434 is an unfamiliar term and was interpreted with various meanings. In line with previous studies in
435 the psychology community in Indonesia [43] and psychologists in Australia [44], participants in this
436 qualitative phase also perceived that CAM has inadequate scientific evidence to support it.

437 Time constrains and pressures in PHC discussed by participants might explain why only a few
438 of the participants read scientific journals as their references for CAM. But the difficulty in finding
439 research published on CAM in psychology journals might illustrate that the mainstream psychology
440 journals have a low acceptance rate for CAM studies, as was found in previous studies [24, 44, 45].
441 This phase also discovered that the actions and statements by lecturers and executive members of
442 professional associations may also be used as references, even when not supported by adequate
443 scientific evidence.

444 The interviews revealed three reasons for the importance of CAM knowledge and education for
445 participants. First, CAM was perceived as part of clients' culture and participants often received
446 questions from clients related to CAM treatments. Therefore, cultural sensitivity (i.e. non-prejudiced
447 attitude towards CAM treatments) to be able to answer clients' questions might be achieved by
448 learning more about CAM. Second, CAM knowledge was needed to provide psychoeducation on
449 the latest CAM scientific research to their clients as suggested in a previous study [24]. Moreover,
450 accurate information about CAM is essential to protect clients from the malpractice of CAM
451 practitioners as also mentioned by Australian psychologists [44]. Lastly, CAM education was
452 needed in order to formulate the regulation of CAM integration into psychological services, a view
453 which was also found in previous studies among health professionals in Australia and Bahrain [46,
454 47].

455 Participants mentioned several challenges in increasing their knowledge about CAM. The main
456 barriers included that to join self-development activities, such as training and workshops, is
457 financially expensive and that they had little time to do so. Another challenge was related to the
458 relatively low income in PHCs that was not enough for participants to update their knowledge and

459 skills about CAM. Some PHCs provide financial support for participants to join self-development
460 activities but in limited amount. Therefore, participants expected their institution to raise the budget
461 and professional associations to organize inexpensive CAM training and workshops. Working
462 pressure in PHCs also inhibited participants from upgrading their knowledge about CAM because
463 of the difficulty in getting permission from the institution to attend such workshops. Professional
464 associations were expected to supervise the credibility of CAM education institutions and the
465 trainers as well. This finding aligned with psychologists in Australia who also emphasized the
466 importance of professional associations' surveillance of CAM training and practice [42]. Participants
467 expected that professional associations would acknowledge the credits from CAM workshops as one
468 component of psychology practice-license renewal.

469 There was dissenting opinion among participants about which CAM treatments should be
470 learnt by CPs. Based on efficiencies demanded by PHCs, numerous participants recommended NLP
471 to be inserted into psychology education so they could use these in their practice. Conversely, some
472 participants discouraged CAM treatments with insufficient scientific evidence, including NLP, from
473 being taught by psychology faculties. Mind-body treatments, such as meditation, were perceived as
474 a safe CAM treatment that CPs may learn and practice. This finding supported the previous study
475 that found that psychologists in Australia showed positive attitudes towards meditation integration
476 into conventional psychotherapy [44]. However, in this qualitative phase, it was also explored that
477 Islamic universities might not teach meditation and yoga because these treatments are rooted in
478 different religions' teachings. As part of Indonesian peoples' everyday lives, participants suggested
479 that SRT should be taught in psychology education. This supports previous research where
480 physicians in Indonesia also showed positive acceptance towards SRT in conventional medicine [48].

481 Despite several procedures taken to support the trustworthiness of this qualitative study, there
482 were three limitations need to be considered. First, the sex proportion was imbalance where only one
483 male participant interviewed. The analysis might not accurately represent male clinical
484 psychologists' knowledge and educational needs of CAM. Therefore, the future study may
485 investigate knowledge and educational needs of CAM among males CPs. Second, all interviews
486 were conducted individually that had a disadvantage when participant shared very limited
487 responses due to his/her insufficient knowledge on the topic. Hence, individual interviews can be
488 enriched by combining it with focus group interviews where additional layer of data may be
489 obtained from interaction between participants. Third, psychological education in Indonesia may
490 share similarity with other Southeast Asian nations, however, findings from Indonesian CPs may
491 not be entirely able to be generalized in different cultural settings. Therefore, future study may be
492 conducted cross-culturally with other psychologists from different nations as participants to be
493 compared with the current findings.

494 5. Conclusions

495 This qualitative study with 43 clinical psychologists in Indonesia discovered that CAM was
496 neither well-known nor understood widely among participants. Participants explained reasons why
497 CAM knowledge and education were important for them. For example, having cultural sensitivity,
498 including knowledge of CAM, is essential to understand clients better. Therefore, participants
499 advised that professional associations and health institutions should work together in enhancing
500 knowledge of CAM and incorporating CAM education into psychology education.

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