

7-27-2018

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### Recommended Citation

Arjadi, R., Nauta, M. H., Suryani, A. O., & Bockting, C. L. (2018). Guided Act and Feel Indonesia – Internet-based Behavioral Activation Intervention for Depression in Indonesia: A Systematic Cultural Adaptation. *Makara Human Behavior Studies in Asia*, 22(1), 3-11. <https://doi.org/10.7454/hubs.asia.2050418>

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## **Guided Act and Feel Indonesia – Internet-based Behavioral Activation Intervention for Depression in Indonesia: A Systematic Cultural Adaptation**

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### **Abstract**

Depression is one of the leading causes of the global disease burden, affecting millions of people worldwide. The availability of mental health treatment, however, remains very limited in many low-middle income countries, including Indonesia. Internet-based interventions are known to have the potential to deliver mental health treatment economically and appropriately according to numerous studies conducted in high-income countries. In the current study, we describe a systematic cultural adaptation of an internet-based behavioral activation intervention for depression in Indonesia, named Guided Act and Feel Indonesia. During the adaptation, relevant stakeholders were involved, including licensed clinical psychologists, mental health communities, lay counselors, and patients. The adaptation used the formative method for adapting psychotherapy (FMAP) to adapt eight important cultural elements (language, persons, metaphors, content, concepts, goals, methods, and context). The intervention was adapted from the original Dutch version called Doe en Voel, consisting of 8 structured modules that are offered in a secure online environment. The adapted version is being delivered during an ongoing randomized controlled trial with non-face-to-face support from lay counselors who work under the supervision of licensed clinical psychologists. The challenges that were faced during the cultural adaptation are discussed.

### ***Guided Act and Feel Indonesia—Intervensi Aktivasi Perilaku Berbasis Internet untuk Depresi di Indonesia: Adaptasi Budaya yang Sistematis***

#### **Abstrak**

Depresi adalah salah satu penyebab utama beban penyakit global yang mempengaruhi jutaan orang di seluruh dunia. Namun, ketersediaan perawatan kesehatan mental masih sangat terbatas di negara-negara yang berpenghasilan rendah termasuk Indonesia. Kemudian, intervensi depresi berbasis internet telah diketahui memiliki potensi untuk memberikan perawatan kesehatan mental secara ekonomis dan tepat sesuai dengan berbagai penelitian yang dilakukan di negara-negara berpenghasilan tinggi. Pada studi ini, peneliti mendeskripsikan adaptasi budaya secara sistematis dari intervensi aktivasi perilaku berbasis internet untuk depresi di Indonesia, bernama Guided Act and Feel Indonesia. Selama proses adaptasi, para pemangku kepentingan yang relevan dilibatkan, termasuk psikolog klinis berlisensi, komunitas kesehatan mental, konselor, dan pasien. Adaptasi menggunakan metode formatif untuk adaptasi psikoterapi (FMAP) untuk mengadaptasi delapan elemen adaptasi budaya penting (bahasa, orang, metafora, konten, konsep, tujuan, metode, dan konteks). Intervensi ini diadaptasi dari versi asli Belanda yakni Doe en Voel, yang terdiri dari 8 modul terstruktur yang ditawarkan pada lingkungan online yang aman. Versi yang disesuaikan kemudian disampaikan selama percobaan terkontrol secara acak yang berlangsung tanpa tatap muka dari konselor yang bekerja di bawah pengawasan psikolog klinis berlisensi. Tantangan yang dihadapi selama adaptasi budaya juga dibahas dalam penelitian ini.

*Keywords: behavioral activation, cultural adaptation, depression, internet-based intervention, lay counselor*

#### **Citation:**

Arjadi, R., Nauta, M. H., Suryani, A. O., & Bockting, C. L. H. (2018). Guided act and feel Indonesia—internet-based behavioral activation intervention for depression in Indonesia: A systematic cultural adaptation. *Makara Human Behavior Studies in Asia*, 22(1), 3-11. doi: 10.7454/hubs.asia.2050418

## 1. Introduction

Depression is one of the leading causes of the global disease burden (Vos et al., 2012), affecting millions of people worldwide, with around 4.4% mean population point prevalence (Ferrari et al., 2013). In low-middle income countries (LMICs), managing mental health problems like depression can be very challenging since the availability of mental health treatment remains highly limited, known as the mental health gap (World Health Organization, 2008). Indonesia is one of many LMICs listed for intensified support on the mental health gap action program (mhGAP) by the World Health Organization (World Health Organization, 2008). Indonesia has approximately a 5% prevalence of depression, but less than five mental health professionals per 100,000 people (Ferrari et al., 2013).

The World Health Organization encourages the use of low-cost and easily distributed mental health treatments to increase access to support in such countries. One potential strategy is to utilize the internet. Numerous studies conducted in high-income countries have demonstrated the effectiveness of internet-based interventions for various mental health problems (e.g., Andersson et al., 2005; Andersson, 2012; Christensen, Griffiths, Mackinnon, & Brittliffe, 2006; Christensen, Griffiths, & Jorm, 2004; Hedman et al., 2011). Unfortunately, research investigating internet-based intervention for mental health problems in LMICs remains very limited (Arjadi, Nauta, Chowdhary, & Bockting, 2015), and no study has been conducted in Indonesia.

Currently, we are conducting a randomized controlled clinical trial of an internet-based behavioral activation intervention for depression in Indonesia. The trial design protocol is publicly available (Arjadi et al., 2016). Behavioral activation is a treatment that uses behavioral strategies like scheduling activities and re-engagement in pleasurable activities to increase positive mood (Lewinsohn, 1985; Martell, Dimidjian, & Herman-Dunn, 2010). It has been proven to be effective and is used widely over a broad demographic range (Kanter et al., 2015; Lazzari, Egan, & Rees, 2011; Wallis, Roeger, Milan, Walmsley, & Allison, 2012), including one LMIC, India (Chowdhary et al., 2016). The internet-based behavioral activation intervention we used in our trial was adapted from the original Dutch version called “Doe en Voel” or in English “Act and Feel,” developed by a Dutch professor in clinical psychology together with another clinical psychologist (Bockting & van Valen, 2015). We then named it “Guided Act and Feel Indonesia (GAF-ID)” as the intervention delivery is guided by lay counselors who offer support via the internet and phone calls (non-face-to-face). A lay counselor is a non-professional counselor who follows a structured training provided by professionals to be able to deliver a treatment. Previous

studies in India have shown that lay counselors can successfully deliver face-to-face behavioral activation interventions for depression (Chowdhary et al., 2016). The use of lay counselors to support the delivery of psychological treatments in LMICs that have a limited number of mental health professionals is also a part of the adaptation.

During this study, we used a systematic stage-by-stage approach (Hwang, 2009) that takes participants’ cultural backgrounds into account. The adaptation was conducted to ensure that participants from different cultural backgrounds benefit from the treatment (Bernal, Bonilla, & Bellido, 1995; Hwang, 2009). This is especially relevant for the current study because Dutch culture and Indonesian culture are very different. Dutch people are very individualistic whereas Indonesians are more collectivistic (Hofstede, 2001). Previous studies about the implementation of psychological interventions in LMICs have also demonstrated the importance of delivering a culturally adapted version of the intervention. A study in India (Chowdhary et al., 2016) developed a behavioral activation treatment that emphasized problem solving and the activation of social networks that were culturally sensitive to the needs of the local population. They devised a systematic adaptation method based upon findings from their systematic review (Chowdhary et al., 2014). For example, during the treatment, they used more general terms that align with local health beliefs, because most patients did not regard their symptoms as related to “mental disorder” (Chowdhary et al., 2016). A study in Kenya (Papas et al., 2010) adapted cognitive behavioral therapy to be more culturally sensitive to Kenyan culture by using Bernal and colleagues’ eight cultural elements (Bernal et al., 1995). For example, they used local idioms of important terms and activities during the treatment, and recruited counselors from various ethnic backgrounds, since the patients came from different cultural backgrounds across Kenya (Papas et al., 2010). Another study in Nepal adapted a dialectical behavior therapy intervention using a tri-phasic approach, with qualitative interviews, an adaptation workshop, and a small-scale treatment pilot test with patients (Ramaiya, Fiorillo, Regmi, Robins, & Kohrt, 2017). The adaptation included the use of role play with examples that are consonant with the local culture of Nepal (Ramaiya et al., 2017).

To the best of our knowledge, our study is the first to adapt an internet-based intervention for delivery in the Indonesian culture. During this paper, we describe our systematic cultural adaptation of the behavioral activation content and present the internet-based intervention which resulted in the GAF-ID program. The main focal points of the current paper are the systematic approach to the adaptation and the cultural dimensions that were addressed during the adaptation process. This study addresses the cultural dimensions of the adaptation that attempt to make it relevant to the Indonesian population.

## 2. Methods

The adaptation of the behavioral activation intervention for this study involved a staged systematic process over a 1 year and 4 month-period which began in April 2015 and was completed in August 2016. The adaptation focused on two different but related components: the behavioral activation content and the internet-based intervention program presentation. We used the formative method for adapting psychotherapy (FMAP) approach (Hwang, 2009) to adapt both components. The FMAP approach is a community-based bottom-up approach for culturally adapting psychotherapy interventions, where the adaptation aligns the approach with the cultural values of consumers (therapists, patients, and other stakeholders) rather than remaining theory driven only (Hwang, 2009). It consists of 5 phases: (a) generating knowledge and collaborating with stakeholders, (b) integrating the information generated with theory, and empirical and clinical knowledge, (c) reviewing the initial culturally adapted clinical intervention with stakeholders and revising the culturally adapted intervention, (d) testing the culturally adapted intervention, and (e) finalizing the culturally adapted intervention (Hwang, 2009).

Furthermore, we attended to the eight culturally sensitive elements necessary for cultural adaptation of a psychosocial treatment: language, persons, metaphors, content, concepts, goals, methods, and context (Bernal et al., 1995). In the results section, we describe how we tailored each phase of the FMAP during our current study and how we adapted the eight cultural elements in both the behavioral activation content, and the internet-based intervention program presentation, to ensure the intervention became appropriate for those from an Indonesian cultural background.

This study involved the following stakeholders: licensed clinical psychologists as mental health agencies and mental health care providers, mental health related communities (e.g. suicide prevention community), lay counselors as a community-based organization and agency, and patients as users. The data collected for adaptation by the FMAP (Hwang, 2009), and the elements for cultural adaptation (Bernal et al., 1995) were analyzed using a qualitative approach.

## 3. Results and Discussion

### ***Formative method for adapting psychotherapy (FMAP).***

The systematic cultural adaptation of the GAF-ID from the original Dutch version was conducted according to the FMAP approach which consists of five systematic phases (Hwang, 2009). The detail of each phase was tailored to meet the needs of the current project.

***Phase 1: Generating Knowledge and Collaborating with Stakeholders.*** During this phase, we needed to de-

cide which stakeholders should be involved and when to involve them. The six recommended stakeholders included mainstream health and mental health agencies, mainstream health and mental health care providers, community-based organizations and agencies, traditional and indigenous healers, spiritual and religious organizations, and patients (Hwang, 2009).

During our study, we involved the following stakeholders: 3 licensed clinical psychologists as mental health agencies and mental health care providers, 2 representatives of mental health related communities and 12 of our lay counselors as a community-based organization and agency, and 6 patients as service users. We did not involve traditional and spiritual or religious stakeholders in this current adaptation because there are various cultural ethnicities and religions in Indonesia. Therefore, as a starting point, we aimed to make a more general adaptation that we hope could be used by the Indonesian population in general regardless of their ethnic or religious background.

At first, the written module of the original Dutch version of the intervention was sent to an official Dutch-English translator to be translated into English. The English version was reviewed again by the author of the intervention (the principal investigator of this study and the last author of this paper: CLHB) who is fluent in both Dutch and English. After the correct English translation was ensured, our first author (RA), who is an Indonesian licensed clinical psychologist, and fluent in English and Bahasa Indonesia, translated the content into Bahasa Indonesia with the help of one research assistant, who also has formal educational background in psychology. Following the completion of the written modules of the Indonesian version, the first author (RA) uploaded it to an online platform ([www.actandfeelindonesia.com](http://www.actandfeelindonesia.com)) where it became available as an internet-based intervention program.

The first draft of the Indonesian version of the intervention was presented on the first day of lay counselor and clinical psychologist training in the form of a printed module and an internet-based intervention program ([www.actandfeelindonesia.com](http://www.actandfeelindonesia.com)). We also sent the printed module and the login code for the internet-based intervention program to two founders of different mental health related communities (e.g. suicide prevention community), and asked for their feedback on the behavioral activation content. Finally, we also asked six individuals with a diagnosis of depression who were patients of our fellow clinical psychologists in Indonesia to review the behavioral activation module, and internet-based intervention program, and offer feedback. Valuable feedback was provided by the stakeholders about the behavioral activation content, i.e., expressions of pleasurable activities and relevant case examples. They also provided feedback on the presentation of the internet-

based intervention program, i.e., a recommendation to use less text and more illustrations, and suggestions for themes for illustrations.

Phase 1 of the process took around 3 months. Information and suggestions from all stakeholders were compiled by the first author to be used in phase 2.

**Phase 2: Integrating Generated Information with Theory and Empirical and Clinical Knowledge.** This was the phase where we synthesized information generated from stakeholders together with the theory, empirical supported therapy literature, and clinical knowledge gained from our previous experience of conducting therapy and clinical practice (Hwang, 2009). All adaptations were discussed within the research group and with one independent clinical psychologist who was consulted to maintain objectivity. When all aspects of the adaptation were agreed, the first author created an adapted manual. Phase 2 of the process took around 2 months. Details of the adaptations made are presented below in Table 1 (See Appendix).

**Phase 3: Review of Culturally Adapted Clinical Intervention by Stakeholders and Further Revision.** During this phase, the culturally adapted manual had been written and given to the stakeholders to collect feedback to suggest improvements and further revision. We conducted minor revisions based on the feedback here, related to word choice and unclear instructions. After revising the written manual, we started to revise it on the online platform ([www.actandfeelindonesia.com](http://www.actandfeelindonesia.com)) with the assistance from our online program developer (Therapieland). Simultaneously, we also wrote manuals for lay counselors and clinical psychologists. Phase 3 of the process took around 5 months.

**Phase 4: Testing the Culturally Adapted Intervention** After all the revisions have been integrated on the online platform ([www.actandfeelindonesia.com](http://www.actandfeelindonesia.com)), we conducted a pilot test with various participants, including: 10 depressed individuals (patients of our fellow clinical psychologists in Indonesia), 16 non-depressed individuals with from different educational backgrounds, age groups, and genders, and 5 clinical psychologists.

Ideally, the pilot test should deliver the intervention to participants followed by a series of comprehensive assessments to test the efficacy of the intervention by measuring symptom reduction (Hwang, 2009). However, in this study, the pilot test focused on usability. Another study to test the effectiveness of the intervention will be conducted in a separate randomized controlled trial (Arjadi et al., 2016). All pilot participants were asked to access the internet-based intervention program, page by page, and provide necessary feedback for each page by clicking on the button “feedback” which was made available on each page. There was no restriction on the

amount or type of feedback required from the pilot participants, but we provided them with a list of questions for guidance. The questions were: (a) “Can you understand the content of each page? If not, please tell us which part of the page is unclear or needs improvement? Please suggest an improvement and give an example when necessary.” (b) “How is the length of each module? Please let us know if it is too short or too long, and which part should be revised.” (c) “How difficult is it to access the online program? Are there any buttons that are not functioning? Please let us know if there are any technical difficulties you encounter when accessing the online program.”

The pilot test generated feedback about ambiguous text, unclear instructions, pages that contained too much text or information, as well as links and buttons that were not functioning properly on the internet-based intervention program. Phase 4 of the process took around 4 months.

**Phase 5: Synthesizing Stakeholder Feedback and Finalizing the Culturally Adapted Intervention.** During this phase, feedback from the pilot test was used to conduct a final revision. We revised the ambiguous text and unclear instructions on the internet-based intervention program. We also revised the length of several pages on the program. Six pages that were considered too long by the pilot test participants were separated into two sequential pages. Our pilot test participants offered feedback about some technical issues, such as some links and buttons that were not functioning properly on the internet-based intervention program. We then fixed the problem with the help of our developer.

The internet-based intervention program was finalized by the first author and checked for the last time before it was ready for the randomized controlled trial. It took around 2 months to complete phase 5.

**Cultural Elements.** Eight important cultural elements are recommended for examination during the adaptation of a psychological intervention as follows: language, persons, metaphors, content, concepts, goals, methods, and context (Bernal et al., 1995). During this study, we adapted all eight cultural elements to align with Indonesian culture based on discussions within the research group and feedback from stakeholders to ensure the intervention was culturally appropriate. See Appendix Table 2 for the details of Indonesian cultural elements and adaptation results.

## 4. Conclusion

In line with the original Dutch version, the GAF-ID consists of eight structured modules that are offered in a secure online environment. The module contents are

outlined as follows: understanding the basic background of behavioral activation and psychoeducation about depression, monitoring mood and behavioral activities, expanding potential mood-independent pleasurable activities, recognizing and overcoming difficulties with expanding activities, realizing the impact of avoidance behaviors, and building a prevention of relapse strategy. Overall, following the systematic cultural adaptation that took 1 year and 4 months in its entirety, we believe that the GAF-ID is culturally appropriate for the Indonesian population because the adaptation of the original Dutch version was conducted systematically using the FMAP approach (Hwang, 2009), to screen the eight important cultural elements for adaptation (Bernal et al., 1995).

We encountered some challenges when adapting behavioral activation as an intervention and when developing the internet-based intervention program. Firstly, since the concept of internet-based interventions is new in Indonesia, it had to be introduced to the stakeholders during the adaptation process to ensure that they understood the concept properly, in order to provide appropriate feedback and suggestions for adaptation. Secondly, it was very challenging for us to adjust the written manual content for use on an online platform and make it available as an internet-based intervention program. Some technical problems occurred during this process, and therefore it was important to proceed with proper assistance from a technical person (the website developer) who understood the online platform features thoroughly. Thirdly, it was important to investigate every aspect of the intervention's content, especially after it was uploaded to the online platform. The pilot test had to be conducted carefully and with attention to great detail since any of the links and buttons that support the internet-based intervention program could malfunction. This problem will not occur during the face-to-face clinical trial that uses print-outs of written modules.

To our knowledge, this is the first study describing the adaptation of an internet-based mental health intervention for use in an Indonesian cultural context. This study demonstrates that it is possible to conduct a cultural adaptation of a behavioral activation intervention for the Indonesian population. Additionally, it is possible to adapt it into an internet-based intervention program using the FMAP approach (Hwang, 2009) while integrating the eight important elements for cultural adaptation (Bernal et al., 1995). When developing an internet-based intervention it is important to pay attention to the technical features of the online platform during the adaptation. Although we encountered some challenges during the implementation of the GAF-ID trial in Indonesia, all the challenges were solved by using knowledge gained from the cultural adaptation process. By conducting the adaptation appropriately, we were able to avoid obstacles and problems during the implementa-

tion phase which could have been caused by a gap in cultural understanding. We conducted the cultural adaptation of the behavioral activation intervention and internet-based intervention program in line with Indonesian culture, to develop a culturally sensitive internet-based behavioral activation intervention.

The effectiveness of GAF-ID is now being tested in a study in Indonesia (Arjadi et al., 2016). By conducting a cultural adaptation of the intervention, especially prior to its implementation, we have tried to ensure that depressed Indonesians will benefit, because culturally adapted treatments demonstrate enhanced effectiveness, according to the evidence provided by research with other populations (Chowdhary et al, 2014). The hope is that the availability of this culturally adapted internet-based intervention will increase access to mental health services for those suffering from depression in Indonesia, given the number of internet users is predicted to increase to 120 million people (50% of the population) by 2018 (Noviandari, 2014). However, before any firm conclusions can be drawn, we are waiting for the final results that will report the effectiveness of the internet-based intervention. Given the dynamic nature of culture and the ethnic diversity of human beings, cultural adaptation will become a continuous necessity in future (Marsiglia & Booth, 2015). Therefore, if proven to be effective, it is imperative to evaluate the challenges faced during implementation and conduct further improvements to increase dissemination.

## Acknowledgements

We would like to acknowledge The Indonesia Endowment Fund for Education (Lembaga Pengelola Dana Pendidikan), Ministry of Finance, Republic of Indonesia to make this study possible by providing a PhD scholarship along with research funding for the first author (grant number: 790/LPDP/2013).

## Declaration of Interest

The authors report no conflicts of interest in this work.

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## Appendix

**Table 1. FMAP Cultural Adaptation for Internet-Based Behavioral Activation in Indonesia**

Original Dutch version	Justification for Cultural Adaptation Based on Suggestions from The Stakeholders	Cultural Adaptation
<b><i>Behavioral activation content</i></b>		
No psychoeducation on depression available	In general, Indonesians have a very limited knowledge about mental health problems, including depression. It is imperative to provide psychoeducation about depression to help participants acquire a basic understanding of depression.	Add psychoeducation about depression at the beginning (module 1).
Case examples of typically Dutch activities with no collectivistic activities such as religious and/or culturally-related activities, for example: walking the dog in the park	It is important to use case examples that are relevant to Indonesians who are more collectivistic in general. Furthermore, since religion and culture play significant roles in Indonesian daily life, it was recommended that examples are used that include these topics. In the current study, we aimed to target Indonesians in general, so we use general terms related to religion/culture, e.g., “pray,” “do culturally-related activity.” We avoid the use of specific examples or terms from a particular religion or ethnicity because it might not be relevant for our diverse participants from various religious and cultural backgrounds.	Use typical Indonesian activities in the case examples that are relevant for the Indonesian population in general, including elements of religious and/or culturally-related activities, for example: spend time with friends, pray, go to the mosque/church/other religious places, involve in culturally-related activities, etc.
No support from lay counselor	Previous studies in India have shown that lay counselors can successfully deliver face-to-face behavioral activation interventions for depression (Chowdhary et al., 2016). Using lay counselors can support the delivery of psychological treatment in LMICs with a limited number of available mental health professionals.	Add non-face-to-face lay counselor support as a component of the internet-based intervention.
<b><i>Internet-based intervention program</i></b>		
Relatively long text in every page on the internet-based intervention program	In general, words in Bahasa Indonesia contain more syllables than the English and Dutch language. Using less text without changing the message’s meaning is highly recommended to avoid reading tiredness, as well as to keep it simple, concise, and easily understandable.	Use less text without changing the meaning of the message.
Videos of a therapist and two case examples (male and female participants)	In general, the internet connection in Indonesia is unstable. To enhance usability, we wanted to reduce content size of the materials presented on the internet-based intervention program.	Adapt all videos in the Dutch version into black and white illustrations and present them in the form of slide show on the internet-based intervention program.
Limited illustrations to accompany text in all pages on the internet-based intervention program	It was considered important to make the intervention content more interactive by adding illustrations to accompany text.	Add a human illustration (therapist or male/female participant example) to most pages with text.
Female therapist figure	A patriarchal system is upheld by the Indonesian population in general. Therefore, it was recommended a male therapist figure be used on the internet-based intervention program.	Use male therapist figure.
No example of how to do the homework	Although a clear instruction for each homework exercise is provided on the internet-based intervention program, it is also important to provide examples to help participants to do their homework correctly.	Provide an example for each homework exercise on the internet-based intervention program.

**Table 2. Cultural Elements for Adaptation of Internet-Based Behavioral Activation in Indonesia**

<b>Cultural Elements</b>	<b>Indonesian Cultural Elements</b>	<b>Resulting Adaptations</b>
Language	Bahasa Indonesia as a national language	The intervention is provided using a formal Indonesian language
Persons	Participants are Indonesian depressed individuals	The delivery of the intervention is supported by Indonesian lay counselors (non-face-to-face) according to random selection.
Metaphors	Indonesian common local setting and point of view	Examples utilize local images, local activities that are relevant to the Indonesian population in general
Content	Indonesian cultural traditions and beliefs, i.e., a patriarchal system	<ul style="list-style-type: none"> <li>• Therapist image on the internet-based intervention program presented as a professional male figure</li> <li>• Case examples presented with both male and female figures to show that depression can happen to anyone regardless of gender</li> </ul>
Concepts	First systematic online behavioral activation intervention in Indonesia: local conceptual model is still unknown	Consultations with local stakeholders confirmed conceptual compatibility
Goals	Being depressed is not good or even taboo, being mentally healthy and integrated into the community are important	The goal of the intervention is to be more active and less depressed, so that one is well integrated into the community
Methods	Implementation is adapted to features of Indonesian cultural setting	<ul style="list-style-type: none"> <li>• Online guidance by lay counselors is provided at flexible times according to the needs of participants via chats and emails</li> <li>• “Touch” of direct contact with lay counselors is given by scheduled telephone contacts which also aim to prevent attrition</li> </ul>
Context	<ul style="list-style-type: none"> <li>• Negative stigma surrounds depression in the society in general</li> <li>• Most participants have no or limited access to mental health services in general and this is the first internet-based psychological intervention for depression in Indonesia</li> </ul>	<ul style="list-style-type: none"> <li>• Provide psychoeducation on depression</li> <li>• A very clear repetitive step-by-step instruction is provided on the internet-based intervention program, combined with interesting illustrations to make it more interactive</li> </ul>