Clinician's Guide for
Positive Activity Jackpot
Android OS

For further question on use contact: Amanda Edwards Stewart, Ph.D. National Center for Telehealth and Technology, amanda.e.stewart@us.army.mil, 253-968-3420

Background on Positive Activity Jackpot

Pleasant event scheduling (PES) is a common behavioral therapy element used in suicide prevention, depression treatments, and resilience. It is known by many different names (e.g. positive events scheduling, simple behavioral tasks, self-soothing activities, behavioral coping skills), all of which include increasing pleasant behavioral activities to help regulate emotions (Berk et al., 2004). It is based on Lewinsohn's (1974) reinforcement theory of depression. This theory postulates that the quantity and quality of an individual's reinforcement-related interactions are linked to feelings of depression. One way to treat depression is therefore to increase the amount of pleasant events one participates in (Lewinsohn, Sullivan, & Grosscup, 1980). Feels of hopelessness associated with depression are also a key component in suicide. While many factors relate to self-harm and suicidal behavior, difficulty regulating emotions are thought to be a part of it and PES is considered a strategy to help regulate emotions (Linehan, 1993).

More recently, PES has become a component in several cognitive-behavioral suicide prevention treatments (Berk et al, 2004) such as Dialectical Behavior Therapy (DBT; Linehan, 1993). PES is often a part of mid-treatment coping and emotion regulation strategies. While DBT is specifically intended to treat borderline personality disorder, effectiveness studies generally look at rates of self-harm and suicidal behavior as an objective outcome measure (Feigenbaum, 2007; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991). In DBT, PES is comprised of 176 pleasant events. These events range from discrete behavioral events such as: going skating, hiking, sailing, playing tennis or reading a book to other pleasant events more interpersonal or cognitive in nature. These include: playing with children, talking to a friend, listening to others, thinking about having a family, career planning, or reflecting on how one has improved, or thinking "I did that pretty well" after doing something (Linehan, 1993, p. 157-159). This list of items is meant to help clients decide on pleasant events that they might participate in to build a pleasant event schedule. In practice, clients would select one or several manageable events, daily, to partake in. These events are meant to improve the overall quality of life not necessarily as crisis management. Further, PES has been found useful with individuals without any mental health difficulties. In a meta-analytic review of behavior activation (BA), of which a primary element of treatment is PES, BA was found to have a significant, positive effect on mood for non-clinical participants as well as those with depressive symptoms (Mazzucchelli, Kane, & Rees, 2010).

While PES is a common therapy tool, the current application, Positive Activity Jackpot (PAJ), does not require clinical training or assistance to use and is not meant as a standalone treatment. This app might be used in conjunction with clinical care although research of its effectiveness is still pending. Therefore, this guide offers healthcare providers assistance using the app, if they believe it would be valuable in conjunction with standard care.

The content of PAJ was based off of the positive event lists created by both Lewinsohn (1974) and Linehan (1993). Both were modified by a subject matter expert from the Department of Defense's (DoD) National Center for Telehealth and Technology based on the appropriateness of each suggestions for a Service Member population.

PAJ Installation

The app is designed to be installed on a user's phone and can be used for mental health purposes or standard public consumption. It was designed to be installed on an Android platform smartphone. Positive Activity Jackpot can be installed from https://play.google.com/store/apps/details?id=t2.paj&feature=search_result#?t=W251bGwsMSwy LDEsInQyLnBhaiJd. If you need assistance learning how to install an app, please see http://support.google.com/googleplay/bin/answer.py?hl=en&answer=113409&topic=2450444&ctx=topic

Organization of PAJ

The app is arranged under three major tabs (Create Activity, My Activities, and Settings) and allows users to select a positive activity that they might like to participate in. The app allows for the choice of an activity to occur through either random selection (Jackpot), user choice (Customize an Activity), or by proximity to the user (Find Something Nearby). This app was meant to augment the traditional approach of positive event scheduling with the current functionality available in a smart phone; namely, a stored contact list, GPS, internet access, navigation abilities, phone access, graphics, and the overall ability to enhance use through "gamification" (gamification is the use of game design techniques, game thinking and game mechanics to enhance non-game contexts).

Overview of the Content of PAJ

This section briefly reviews all of the features and tools available in PAJ. The app is designed to be fairly intuitive to users. However, these descriptions may be helpful for quick familiarization

Create Activity

The main screen of the app is labeled "Create Activity" and allows users to select a positive activity that can be done in three ways.

Jackpot Tab

The first sub-tab is "Jackpot!" Jackpot is designed to have the app randomly select an activity for the user. The Jackpot arm is fully animated, allowing users to "pull" it, or they may simply shake the phone to start the reel turning. The four columns represent the four steps used in the customize option of this application.

The first column represents if this activity will be done alone, in a pair, or with a group.

The second column represents the participant(s) from your contact list which is randomly selected, if this activity is meant for a pair or group.

The third column has icons representing the major categories of activities [Indoor, Outdoor, Water, Thoughts (only offered if activity is done Alone), Free, Road trip (only offered if GPS is functioning on the phone), Physical activity, Shopping, Restaurant/food, Travel, and Miscellaneous].

The last column on the Jackpot screen includes random shapes representing the possible activities identified. With over 381 possible activities, it was infeasible to have icons that gave an accurately pictorial representation of each event.

Under each of the four columns is a lock feature. This allows participants to keep a certain selection while randomly changing the unlocked categories. Some columns are dependent on others; for example, if a user locked the specific event (the last column), the third column (the major category of that event) would also lock since events are dependent on their category. Also, if a user were to lock the actual contact(s) chosen for an event, the first column (alone, pair, or group) column would lock since the specific individual(s) chosen are dependent on this (the second column).
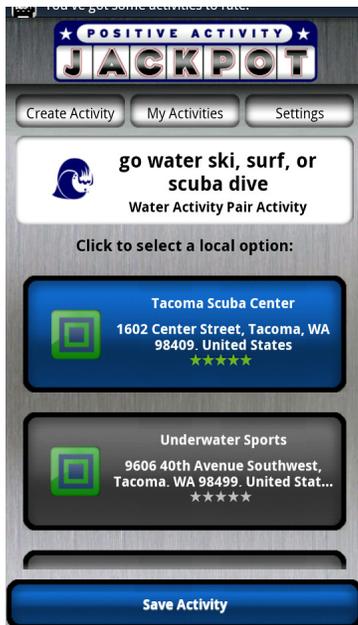
Once the user has decided on a specific activity, and has clicked the Select Activity button, they progress to the local options screen. This screen gives a summary of the activity and all possible Google options of specific locations that might relate to this event. Not all activities have local suggestions. Only events that easily lend themselves to a local address would be recommended. For example, no local option would be given for the activity, "be with happy people" but a local option is given for the suggestion, "go to an auction or garage sale" since this suggestion would appropriately link to local auction houses, if any are in the surrounding area. Further, some options will have local options only if it is appropriate for the category they are in. For example, "play lawn sports like badminton, croquet, shuffleboard, or horseshoes" is in both the Free category and in the Outdoor category. A local option of a sports supply store is suggested only if this event is selected in the Outdoor category; if selected when the user is under the Free category, a local address to buy such games would not be suggested.

Once a local option is selected, or even if none is selected, the user can then press Save Activity and will be directed to the final summary screen. This screen summarizes the chosen activity and then gives the user appropriate options to carry out the activity. Such options will vary depending on the type of event; the full possible range of options include the ability to use their phone to navigate to the local address, call the local option, schedule the event in the phone's calendar, and contact any suggested individual(s) with whom they have chosen to perform this activity. They may also post this activity to social media (such as Facebook or Twitter), if such applications are installed on their phone.

After users select the Finished button, they will automatically be directed to the "My Activities" tab to see all past saved activities. This tabs functionality will be discussed later in this document.

Customize an Activity

Under the main tab of "Create Activity", the second way of selecting an activity is Customize an Activity. This allows users to choose an activity for themselves in three to four steps.

The first step involves users choosing to do an activity alone, in a pair (with one other person), or in a group.

They can scroll through the choices in the wheel or "pull" the handle for randomization of this step. The dialogue box below gives users a summary of this specific step's choice. When the user is happy with their selection, they can press the Next button.

The second step only appears if the user chooses pair or group in the previous step. This step will include all the contacts their phone has imported during the set up of the app, if they decide to keep all contacts or deselect all (contact selections can also be changed in the sub-tab Contacts under the "Settings" tab). The user can then select the contact(s) with whom they want to perform an activity. The dialogue box below the selection wheel will then summarize the choices of this step. If the user decides to change their selection from step one, they can click the Previous button or, if they are satisfied with their choices, they will need to select the Next button to proceed.

The third step involves users selecting a category of activity. There are a total of 11 possible categories, all of which are listed above. Some final activities (found in step four) cross activity categories. For example, "go to the beach" is both an Outdoor activity as well as a Water activity and is therefore suggested in both. The categories were assigned by a subject matter expert (SME) at T2 as the most appropriate category for each of the specific activities suggested on Lewinsohn and Linehan's lists. Further, given smart phone's GPS and internet capabilities, a category of Road trip was added by the T2 SME as it goes along with the theoretical foundation for pleasant event scheduling. This category, if chosen by users, allows users to select a location within a 90 mile radius of their current location and pulls up sights of interest in that city under the Local Options screen (the Road trip option is only available if, upon app boot up, the phone GPS is available). If Road trip isn't chosen, the fourth and final step involves choosing a specific activity. There are 381 activities in total; 244 items were adapted from Lewinsohn's (1974) original list of 320 items. The language was modified on many to reflect present tense and similar suggestions were often grouped. The same process was used for the 176
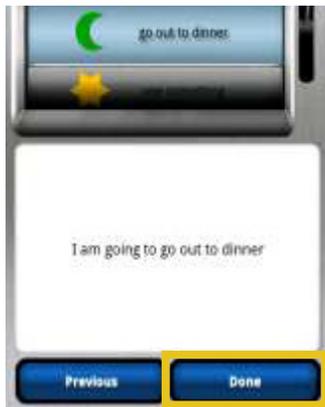
positive activities suggested by Linehan (1993), of which 137 items were included. Positive events from both lists were eliminated if they seemed inappropriate for the intended end user population of this app (active duty military personnel) and/or eliminated due to feasibility given mobile application characteristics. For example, Lewinsohn had recommended "criticizing someone" and "getting drunk" where Linehan recommended "gambling"; these were eliminated because they might not be positive or appropriate activities for active duty military personnel. Further, an example of an item eliminated due to feasibility was Linehan's "going on vacation". This item seemed unnecessary given the travel category which more clearly laid out types of vacations and the road trip category that directed users to nearby cities with sites of interest.

Once all steps have been decided on, the user clicks the Done button at the bottom of the last of the step screens. The user is then directed to the local options screen and then the summary screen with identical functionality as the Jackpot screens. After saving their activity, they are also directed to the "My Activities" tab as with Jackpot.

Find Something Nearby

The final option under "Create Activity" is Find Something Nearby .This option allows users to engage augmented reality technology to find a local positive activity. Such activities can vary in distance with the maximum distance of a suggestion being 30 km. Users have a scrollable bar at the bottom of this screen to choose sites nearer or to include those that are further away.

The boxes that are populated differ in color; colors correspond to distance from the user's GPS location (light blue corresponds to closer locations and dark blue/black is furthest away). When a user identifies an option they are interested in, they can touch that suggestion box and a pop up will appear giving further information on that specific suggestions, such as the locations address and phone number, the ability to navigate to that address or call the listed phone number.

Unlike the other two "Create Activity" options, Find Something Nearby does not allow for chosen activities to be saved under "My Activities". This would have been a difficult technological challenge and wasn't deemed necessary given that recommendations were based on the immediate location of a user and meant to provide options to users that could be chosen at the moment. From a clinical standpoint, this option was meant to help individuals who needed an immediate positive activity instead of one to help stimulate ideas for daily positive activities, thereby generating positive activities in a moment of need.
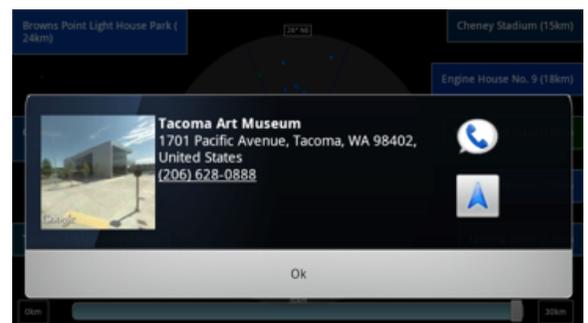
My Activities

The second major tab is labeled "My Activities". Under this tab, users will find a list of all their previously saved activities. When they click on one of these saved activities, the user will be able to use their phone's GPS map functionality to navigate to a chosen location and call the location (if selection included a local option), schedule an activity in their phone's calendar, or invite possible participants via email, text, or social media. Users will also be able to rate an activity. Rating should be performed after a user has participated in the saved activity. Rating impacts the probability that an element of the activity (contact, activity category, or specific local activity) will be recommended at random under the Jackpot tab. In this tab, users can also press their phone's menu button to delete previously saved activities if they wish. Once the user has selected a specific activity, they can also delete this activity by clicking their phone's menu button and choosing this option. Further, a reminder to rate a saved activity will automatically populate on a users phones status bar a day after the activity was saved.
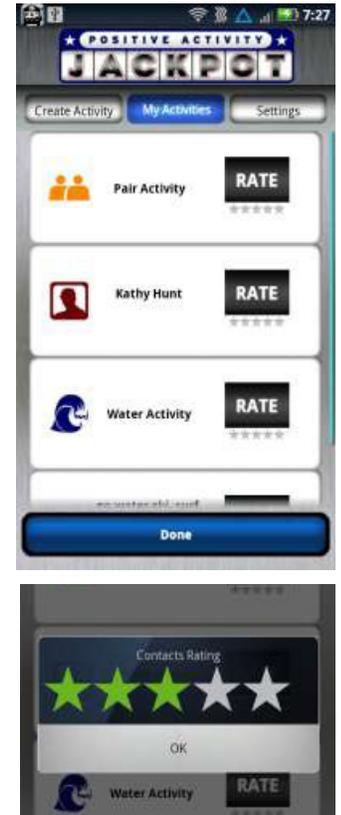
Settings

The app's third major tab is "Settings". Under this tab, users can Learn about the application; how it functions and what theory it is based on. The Learn tab has an audio option.

Users can also change their contact selection (under Contacts) that the app uses when recommending another individual or group with whom to do an activity. This tab has the option to deselect all contacts.

Under Activities, users can deselect possible activities the app will suggest by category. Activities are organized by category (seen on the left side of the wheel) and specific activity recommendation (seen on the right side of the wheel). No major category can be eliminated but all recommended activities in that category could be deselected. Road trip does not show up under this screen since all road trip options are GPS generated and are not saved on the phone as are other major categories and their suggestions.

Lastly, under the Preferences tab, users can manage other aspects of the app, such as audio, vibration, and whether to send anonymous data for trouble-shooting purposes.