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IPRO 306 Final Report

Enhancing Psychology Research Through Advanced Communications Technology

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1.0 Introduction

Although some studies have been conducted on emotional experiences, affect, and memory, there are still a number of questions that need to be addressed. One such question that the Institute of Psychology at IIT is interested in involves whether the patterns of emotional memories in individuals with clinical depression are different than from those of the normal population.

IPRO 306 is focused on providing some insight to this research question with the aid of the most current technology.

2.0 Background

This project was conceived when several students, with the help of faculty advisors from the Department of Psychology, recognized a lack of empirical data regarding the accuracy of retrospective recall of mood in the clinically depressed population. In other words, researchers have not yet studied how accurately a person with Major Depressive Disorder can remember and report their past moods. This lack of research is problematic because clinicians rely almost entirely on the ability of their patients to report on how they have been feeling. If clinicians make diagnostic or treatment decisions based on inaccurate reports, these decisions themselves may very well also be inaccurate.

Research into mood through self-reports have shown there are two dominant mood factors: Positive Affect (PA) and Negative Affect (NA) (Watson, Weise, Vaidya & Tellegen, 1999). Watson, Clark, and Tellegen (1988) defined Positive Affect as states of excitement, attention, enthusiasm, pride, determination and strength; and negative affect as generally subjective feeling of distress including moods states such as anger, contempt, disgust, guilt fear and nervousness. Furthermore, these researchers developed the Positive and Negative Affect Schedule (PANAS), a reliable and valid method of measuring a person's PA and NA through self-reports.

In fall 2006, IPRO 306 obtained fifteen PALM Personal Digital Assistants (PDAs) and equipped them with a software program called Experience Sampling Program (ESP). This well-researched, open-source software allows the user to program a set period of time where the PDA will alert the user with a beep and prompt them to take a survey. The Mood Research Team programmed the PANAS into the software and set the trial time for one week, with the PDA set to beep eight times during the hours of 9:00AM and 10:00PM during the week. This use of PDAs to obtain on-the-spot mood reports is a technique called the Experience Sampling Method (ESM), which is currently one of the most reliable and valid methods of studying mood states (Scollon et al., 2003).

The end result of this research done by the IPRO 306 Mood Research Lab is not a tangible product or service, but rather, a set of data providing scientifically procured evidence for certain memory patterns (or lack thereof) in the clinically depressed. As such, there are no customers financially invested in the project or awaiting a finished product. However, the final results of the study will be submitted to a peer review in the

scientific community to assess the soundness and validity of the methods used. If it is approved, the study can be published and contribute to the body of literature used by clinicians to better understand the disorder they treat on a regular basis.

Before starting the study, it was necessary for the team to understand all the ethical guidelines set by the Institutional Review Board that are required in research involving human participants. For this reason, all members on the team completed the “Human Participants Protection Education for Research Teams” course offered online by the National Cancer Institute. This program educated the team on the history of research involving human participants leading to the current standards of ethical research methods. After successfully completing this course, all team members were eligible to participate as research assistants in a study involving human participants.

3.0 Purpose

The purpose of the research done in the IPRO 306 Mood Research Lab is to contribute to the body of knowledge regarding the patterns and accuracy of retrospective recall of affect in persons with Major Depressive Disorder. This will be accomplished by using Personal Digital Assistants (PDAs) equipped with a standardized mood inventory to measure the recall accuracy in volunteers from the non-hospitalized, clinically depressed population and comparing it to that of volunteers from the healthy population.

Last term, the team formed the Mood Research Lab and began research, obtaining full data sets for twelve of the total goal of fifty participants by the end of the term. While much was accomplished, the team faced many challenges in continuing the project; the most important of which was to establish a solid, comprehensive set of procedures for each member to follow in the lab. This was established as one of the team’s main purposes not only to ensure the smoothest operation and quickest, most efficient means to reach the total goal of fifty participants, but also to standardize the research methods to ensure the most reliable data.

In addition to performing the research objectives, the team is also invested in completing all of the IPRO deliverables on time and in accordance with the IPRO office guidelines.

4.0 Methodology

In order to conduct a study on people's affect over a time period and compare it to their retrospective reports, the mood research lab had to first recruit participants and collect data from them in the form of momentary affect ratings and retrospective ratings.

In the past, affect ratings were collected using the Experience Sampling Method (ESM), which used an electronic signaling device like an alarm to instruct participants to complete self report questionnaires using paper and pencil. However, with the advanced technology that we have today, it was possible to implement an ESM study with the use of a Personal Digital Assistant (PDA) programmed with an open-source software program called the Experience Sampling Program (ESP). ESP allows users to customize the questionnaires, the duration of the study (1 week), times to alert the user, the response time and even the loudness of the alarm that is used in the ESM study.

The IPRO 306 Mood Research team programmed the Positive Affect Negative Affect Schedule into ESP in order to address the research question. ESP was set to alert users eight times a day for seven days during the times of 9AM-10PM. They were asked to fill out the survey exactly as they felt that moment; not how they have felt or think they will feel.

After participating in a week long study of filling out mood questionnaires, participants were required to come back to the mood lab and fill out a retrospective mood questionnaire in which participants filled out the same questions that they did over the course of the week, but with regards to how they thought they felt over the course of the week.

Once this data was collected for all participants, the team was then able to compare the average of the momentary reports to the retrospective report, and analyze patterns and trends between the two.

5.0 Assignments & Roles

Project Manager: Alice Jacob

Alice was responsible for managing all the individual sub-teams and ensuring that they remained on schedule by communicating regularly with all sub-team leaders and receiving periodic updates on the progress of each task. She was in charge of compiling an agenda for each meeting and leading the two weekly IPRO meetings. Alice was the team's IPRO office liaison as well as the contact person for any outside organizations the IPRO becomes involved with. As with all other team members, she was responsible for lab work and also worked with Stephanie, the lab manager, to ensure the efficient operation of the laboratory.

Recruitment Sub-team:

Team Leader	Tina Chiu, Vlad Vilenchik
Team members	Entire Team
Description: This sub-team was responsible for advertising to recruit volunteers. During the first semester of the project, the Recruitment sub-team compiled a master list of all locations to advertise, which were then grouped into three different tiers according to distance from campus. The first tier was covered during the first semester, and Vlad and Tina made sure that the second tier was covered by the team from January 22 nd -27 th . The actual advertising was performed by all members of the IPRO team and not just the sub-team. The recruitment was extended in early February to satisfy the team's goal of collecting data as quickly and efficiently as possible. The extended recruitment period ended on February 27 th .	

Technical Support Sub-team:

Team Leader	Chris Jones
Team members	Entire Team
Description: This sub-team was responsible for maintaining the best performance of PDAs and other lab equipment. The entire team made sure participants did not have troubles with PDAs and, if any were encountered, the participant was immediately contacted and the problems were solved.	

Data Management Sub-team:

Team Leader	Tarek Abou-Nemeh
Team members	Tina Chiu, Alice Jacob, Stephanie Walter, Kevin Franke
Description: This newly developed sub-team was responsible for the collection, organization, formatting, and entry of all data collected throughout project. The product of this team's labor was a complete, error-free set of all the data collected in the research study, ready for analysis.	

Project Plan/Midterm Report/Final Report Sub-team:

Team Leader	Kevin Franke
Team members	Tarek Abou-Nemeh, Chris Jones, Alice Jacob
Description: This sub-team was responsible for creating and submitting the IPRO deliverables listed above on time. This team will work together to have a rough draft of each document available for the rest of the team at least a week prior to the due date to allow time to receive feedback for possible improvements.	

Exhibit/Poster/Abstract/Brochure Sub-team:

Team Leader	Chelsea Miller, Krystin Hernandez
Team members	Entire Team
Description: This sub-team is responsible for creating and submitting the IPRO deliverables listed above. This team will work together to have rough drafts of each project available for the rest of the team at least a week prior to the due date to allow time to receive feedback for possible improvements.	

Presentation Sub-team:

Team Leader	Tarek Abou-Nemeh
Team members	Tina Chiu, Kevin Franke, Chris Jones
Description: This sub-team is responsible for preparing and performing the team's presentation on IPRO Day. This team will work together to have a first draft of the presentation prepared well before IPRO Day to allow time to receive feedback for possible improvements. Tarek is also responsible for organizing times for the team to practice the presentation sufficiently before IPRO Day.	

Designation of Roles

Lab Manager	Stephanie Walter
Stephanie managed all aspects of the IPRO lab. She was responsible for developing an R.A. schedule for the lab, in which each member was assigned three one-hour shifts per week where they were the research assistant on duty. She was also given the task of developing a comprehensive procedural manual for all activities to be completed in the lab during each member's shift. She oversaw the organization and efficiency of all lab work and assumed the responsibility of managing any errors made in the lab by an R.A. In such instances, it was her responsibility to correct these errors and take the appropriate measures to prevent such errors from being repeated.	

New Member Trainer	Chelsea Miller
Chelsea was appointed the responsibility of training Krystin Hernandez, who was not a member during the first semester's work. Chelsea's specific duties included: providing the new member with all background material about the research study, providing her with the link to the IRB training website to become certified to participate in a research study involving human participants, walking her through the procedures to follow as a research assistant in the lab, and supervising her while she performed these tasks for the first few times.	

Lab Skills Evaluations	Alice Jacob and Kevin Franke
<p>Sensing the importance of having every member of the team equally capable of performing each task in the lab, the faculty advisor appointed Alice and Kevin the duty of evaluating each team member's knowledge of the correct lab procedures. Stephanie, the lab coordinator, provided them with a comprehensive checklist of all steps and skills that are included in the normal scope of duties of a research assistant in the mood lab. Kevin and Alice collaborated to evaluate each team member using this checklist. When an R.A. was seen as lacking in a certain skill, Alice and Kevin were responsible for demonstrating the proper way to perform the tasks and testing them again until they illustrated a satisfactory ability to perform their job.</p>	

Minute taker	Krystin Hernandez
<p>Krystin was responsible for recording minutes during all IPRO meetings and uploading them to iGroups promptly after each meeting. At the end of the semester, she compiled all minutes as outlined in IPRO office guidelines and uploaded them to iKnow on Friday, April 6th.</p>	

iGroups account manager	Chris Jones
<p>Chris was responsible for the organization of the files posted to the group's iGroups account.</p>	

Agenda/Weekly Task List	Alice Jacob
<p>One of Alice's important tasks as Project Manager was to prepare an agenda for every meeting and a weekly task list for the team to accomplish. She presided over the two team meetings a week and ensured that these objectives were met.</p>	

Weekly Time Sheets	Stephanie Walter
<p>Stephanie was responsible for collecting the weekly class, job, and extra curricular activity schedule from each of the team members and compiling them into a master schedule. After this was accomplished, she was able to set up a weekly schedule with one-hour shifts in the lab for each of the members. Each member was assigned three one-hour shifts per week, and was expected to remain in the lab for the necessary time beyond these shifts in order to complete the tasks they were responsible for each day.</p>	

Pizza Party Coordinator	Chris Jones and Krystin Hernandez
<p>On March 20, IPRO 306 celebrated the completion of their study by enjoying pizza, pop, and cookies during a meeting. Chris was in charge of arranging for the pizza delivery and the beverages, while Krystin brought in home-made chocolate cookies for everyone. This meeting was also very special because the team viewed some of the preliminary results from the statistical analyses of the data.</p>	

6.0 Obstacles

Enhancing Laboratory Efficiency

When the IPRO team began the new semester with the research study already underway, the focus was placed squarely on improving the speed, efficiency, and quality of the data collection. This need was answered by a very strong recruitment effort, which immediately led to a very high volume of participants calling the laboratory interested in participating in the study. Suddenly, direct pressure was placed on the team not only to work many extra hours, but to work with far less room for errors.

The team quickly acknowledged this issue and addressed it on two fronts.

1.) A schedule of equal shifts for every team member was compiled which not only fit into each individual's academic and personal obligations, but satisfied the time requirements for the work that needed to be done in the lab. This "shift system" was designed so that the Mood Lab would run every weekday from 9AM-3PM. One assigned team member would complete a one or two-hour shift, and, as they left, the next team member would come in for their shift and continue the day's tasks. Each team member was assigned three shifts over the course of the week and was responsible for handling all the necessary business for that day.

2.) Whereas in the first semester, only around two members knew how to do certain tasks each and no member was knowledgeable in every skill, the shift system required every member to be competent in every laboratory task. Thus, the task of training, evaluating, and approving every member's performance of Mood Lab duties was assigned to Kevin, the previous term's Project Manager, and Alice, the current term's Project Manager.

The change from having a few individuals with separate abilities and duties to a full unit of synchronized individuals equally proficient in all the necessary skills provided for seamless transitions as well as extremely high efficiency in the operation of the Mood Laboratory. After establishing these very important changes, the team was able to operate at the pace and competency needed to accomplish the goals they had set.

PDA Malfunctions

The team encountered its first major PDA problem when a number of participants informed our laboratory that their units had stopped beeping for several hours at a time. This malfunction, if unaddressed for too long, posed the threat of completely invalidating a participant's entire data set. The Troubleshooting sub-team discovered that the problem occurred when the PDA was charged during the period of 9:00PM to 10:00PM when ESP was set to alert the user with questionnaires. Each participant from then on was instructed to only charge the PDA after 10:00PM, and only if completely necessary.

Another PDA problem encountered by the team was due to incorrect time settings on the PDA. The device would work as expected, but if the time settings were incorrect (e.g. time was set as 9:00PM instead of 9:00AM), it would beep during incorrect portions of the day, thus invalidating the data. Once recognized, the Troubleshooting sub-team

would contact the participant immediately and walk them through the process of correcting the time settings on the PDA over the phone.

In response to these PDA malfunctions, a mutual decision was made by the IPRO team members to add to the individual responsibilities of each R.A. during their shift. First, every R.A. was required to double-check the time setting on a PDA before giving it to a participant for their trial. Also, members were expected to perform a phone call to each participant 48 hours after they began their trial in order to ensure that the unit was functioning correctly. This solution was a very important factor in assuring the validity of the data collected.

Unforeseen Obstacles

At one point, the Mood Research Lab's participant screening room was no longer available for the team to use. This obstacle first arose with no prior notification on a day with many participants scheduled to come in. Suddenly, the team members on duty were faced with a situation where three participants had all arrived at the same time and had no place to be screened. This potential crisis was handled by utilizing an empty classroom for one participant and firmly requesting any two vacant rooms from the Psychology office. The professional manner in which the team member conducted herself granted the Mood Research Lab the use of both the personal and research offices of a Psychology professor not even affiliated with the IPRO. The use of two additional rooms not only prevented the loss of the team's original room from hindering the progress of the team, but it allowed the research team to handle twice as many participants in one day.

In another instance, one particular participant required assistance due to a disability. The quick response and coordination between team members allowed this individual to still participate. This was achieved by dispatching a team member to meet with the participant at their location and accompany them to the lab for screening. This sort of creative problem solving under pressure were common throughout the study and significantly contributed to the prevention of delays and frustration for participants which could cause a significant change in their affect, thus invalidating the team's results.

Another factor the team did not expect to encounter as a potential barrier was the impact that extreme weather conditions would have on the research study. The progress of the study was significantly hindered for a few days when a severe snow storm prevented participants who were already scheduled for appointments from traveling to the Mood Research Lab. In this instance, there is no direct solution to eliminate severe weather, so the best way to deal with the issue was to contact all participants before their appointment and find out if they were still capable of traveling to IIT to begin the study. This way, the team could be prepared for those who were still able to make it, while those that could not were rescheduled to a later date.

7.0 Project Results

1. All team members had their lab skills assessed and approved by February 2nd.
2. The recruitment phase set to end on Jan 27th was extended in order to obtain more participants at a faster rate. It was completed on February 27th.
3. The lab improvements were technically fully implemented by February 2nd, when the last team member was evaluated, but, as an ongoing process, were complete on March 13th, when the last participant returned their PDA. See Sections 12.
4. On Jan 16th, the data collection phase began and was completed on March 13th, nearly a month sooner than the team's initial expectations.
5. Data organization and entry set to be completed by April 4th was completed on March 9th.
6. As such, the data analysis that was projected to begin April 4th began on March 12th and the results of the study were available on March 20th.
7. All IPRO office expectations were completed on time.

It is important to note that the large disparity between the expected deadlines for team objectives and the actual date of completion was not a result of overly cautious planning or uninspired goal setting. Rather, the team simply was unable to foresee the tremendous positive impact that the heavy recruitment, shift system, lab improvement, and team member evaluations would have on the pace of the study.

Team Member Evaluations

By the expected date of February 2nd, Kevin and Alice had evaluated all team members on their knowledge and execution of lab procedures, finding each one satisfactory. See Section 12.9 of the Appendix for the team member evaluation checklist.

Recruitment

The team observed that the new lab procedures allowed them to handle far more participants per week than before, so it was the main goal to get as many participants to call into the lab as possible. The initial recruitment phase set to be completed on January 27th was executed exactly according to plan. The results of this phase were slower than expected, and yielded far more healthy volunteers than depressed. As a result, the recruitment phase was extended, with an added focus on obtaining depressed volunteers. This extended phase worked very well and was completed by February 27th.

Lab improvements

Stephanie, the lab manager, had all new laboratory documents developed and submitted to the team by January 23. The implementation of these lab improvements were technically complete by February 2nd, when the final phase, the team member evaluations, were completed on February 2nd. However, she was in charge of continually observing the progress of the lab work and ensuring that it did not fall behind during the entire research phase, so it was an ongoing process that ended when the final participant was completed on March 13th. See sections 12.4 – 12.8 for all laboratory documents.

Data Collection

This phase was originally given a then very ambitious estimated date of completion of April 3rd. However, the final participant began the study on March 6th, which means the final data set was collected a week later on March 13th, thus completing the data collection phase much earlier than expected. The reasons for this discrepancy are many. The successful recruitment efforts provided a greater number of participant calls to be answered and returned. The shift system then created a larger and more organized amount of time where team members could get work done. Next, the lab improvements established the most organized and professional way of conducting the phone screening and scheduling process. Finally, the team member training and evaluations ensured that every member was equally capable of screening and scheduling. These improvements made the data collection much quicker and more efficient than the system initially used by the team during the first semester of the project.

Data Management

This new sub team lead by Tarek was required to spring into action on March 1st, in response to the unexpectedly quick rate in which data was gathered. The final participant began the study on March 6th; the data entry phase began March 7th and was completed by March 9th. Stephanie and Tina collaborated to enter the first half of the data, and Alice and Tarek collaborated to finish entering the rest and to double check the progress made by Stephanie and Tina. Both of these groups were instructed to double and triple check their work as they went along. Kevin was then in charge of reviewing the data entered by the entire team for any errors. When he was done, he submitted it to Dror Ben-Ze'ev for the final error check.

The reason the team was so vigilant in discovering and eliminating any possible errors is because an outlier due to a mistake in data entry has the potential to cause an effect in the data analysis when there actually is none, or, conversely, it could negate an effect that does indeed exist in the data set.

I PRO Deliverables

Each of the I PRO deliverables that the team was responsible for to this date have been completed and the timeline for all future I PRO deliverables remains unchanged.

8.0 Research Results

The descriptive characteristics of the sample group can be viewed in section 12.1 of the Appendix. The following are the data analysis results of the study, in proper American Psychiatric Association (APA) format.

Accuracy of Retrospective Recall of PA

A 2 (group: depressed or control) x 2 (rating: average weekly or retrospective) mixed design Analysis of Variance (ANOVA) on PA scores revealed a significant main effect of rating, $F(1, 49) = 38.677, p < .001, \eta^2 = .44$. Across groups, retrospective PA scores ($M=3.29, SD=.79$) were higher than average weekly PA scores ($M=2.81, SD=.68$). There was also a significant effect of group, $F(1, 49) = 9.51, p < .005, \eta^2 = .16$. Overall, controls had higher PA scores ($M=3.33, SD=.71$) than depressed participants ($M=2.78, SD=.65$). The hypothesized group x rating interaction was not significant, $F(1, 49) < 1$. Both groups overestimated PA during retrospective report to a comparable degree.

Accuracy of Retrospective Recall of NA

A parallel 2 (group: depressed or control) x 2 (rating: average weekly or retrospective) mixed design Analysis of Variance (ANOVA) on NA scores revealed a significant main effect of rating, $F(1, 49) = 14.908, p < .001, \eta^2 = .23$. Across groups, retrospective NA scores ($M=1.92, SD=.80$) were higher than average weekly NA scores ($M=1.62, SD=.60$). There was also a significant effect of group, $F(1, 49) = 29.46, p < .001, \eta^2 = .37$. Overall, depressed participants had higher NA scores ($M=2.16, SD=.69$) than controls ($M=1.37, SD=.41$). The group x rating interaction was not significant, $F(1, 49) < 1$. Both groups overestimated NA during retrospective report to a comparable degree.

Discussion

In very basic terms, the results displayed the following trends:

- 1) Healthy volunteers reported higher levels of positive affect than depressed volunteers, both in average weekly reports and the retrospective report
- 2) Depressed volunteers reported higher levels of negative affect than healthy volunteers, both in average weekly reports and the retrospective report
- 3) Both healthy and depressed volunteers exaggerated their retrospective report of both PA and NA in a similar fashion.

These results can be viewed graphically in section 12.2 of the Appendix

Study Statistics

The team also took very detailed statistics of the progress made in the Mood Research Lab. A graph showing the breakdown of the number of participants at each stage of the study can be seen in section 12.3 of the Appendix.

9.0 Recommendations

The culmination of all the efforts of IPRO 306 will be on IPRO Day, when the team proudly displays their research results and their IPRO experience. Since this project has been completed, there is no incoming team to make recommendations to.

However, the fifteen PALM PDAs acquired by IPRO 306 for use in their research will remain with the Institute of Psychology for use in future ESM studies. As such, the team created a comprehensive PDA and ESP user's manual that documents the procedures and resources used by the team to accomplish. This document can be used by any future students or faculty interested in conducting an ESM study to learn from our experience and have an established method on which to base their own. This document can be seen in section 12.10 in the Appendix.

While it is not likely that another IPRO will study retrospective recall of affect and very few are even involved in the behavioral sciences in general, the team strongly feels that the lessons learned over the course of two semesters are applicable to any and all IPRO projects. The members of the team took seriously the guidelines set forth by the IPRO office, and found that the keys to the success of the project were, indeed, heavily stressed by the IPRO office: open and professional communication, active team member involvement, and careful project management. IPRO 306 recommends that all participants in the IPRO program, regardless of the actual details of the project, do not overlook the importance of basic teamwork and project management skills in accomplishing any task as a group.

This IPRO was a unique in that it was a research study in the behavioral sciences that was founded by the Institute of Psychology and developed from the ground up by the students in it. It is the earnest recommendation of the team members of IPRO 306 to the Institute of Psychology and to the IPRO office to strongly consider developing another project of this nature, not only for the benefit of future undergraduate Psychology students, but for any students interested in gaining the skills and knowledge that participation in behavioral science research can afford.

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11.0 Acknowledgements

The IPRO 306 team would like to recognize the following individuals and organizations for their invaluable contributions to the success of this project:

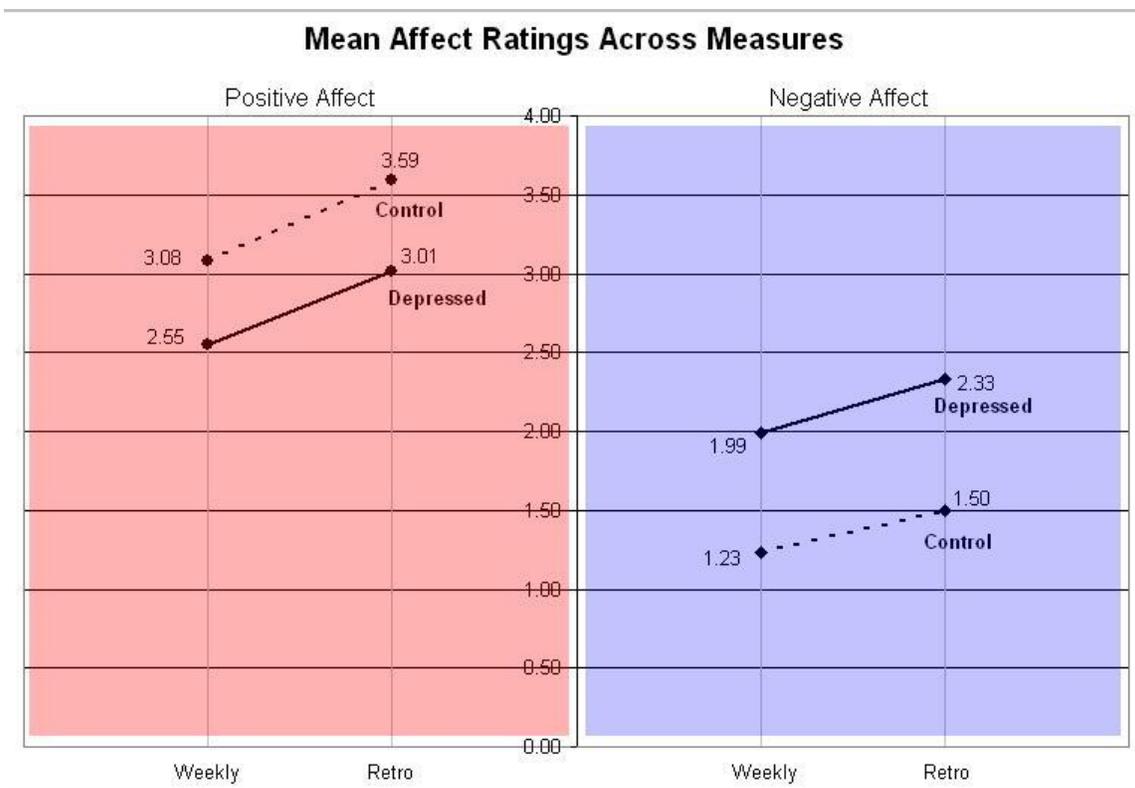
- Faculty advisors Dror Ben-Ze'ev and Dr. Michael Young
- Tom Jacobius
- The IPRO Office
- All volunteers and participants in the study
- IIT Institute of Psychology

12.0 Appendix

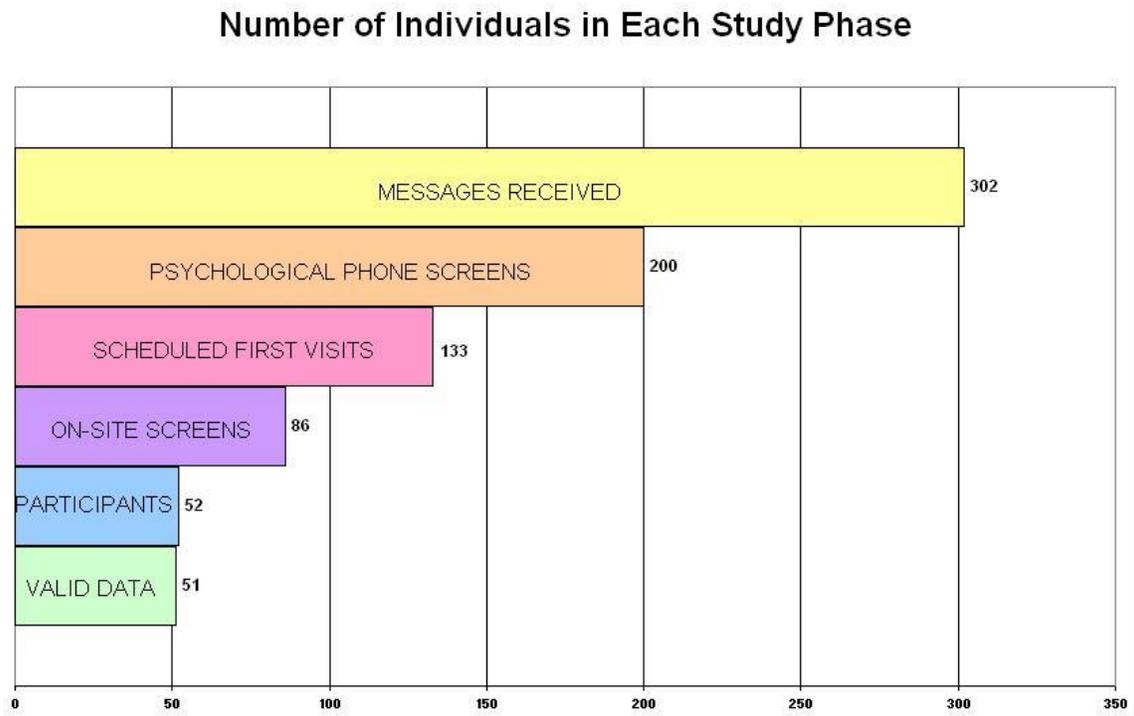
12.1 - Descriptive Characteristics of the Sample Groups

Variable	Depressed Group (N=26)	Control Group (N=25)
Age, M (SD)	40.50 (12.02)	34.72 (10.36)
Sex, n (%)		
Female	21 (80.8)	16 (64.0)
Male	5 (19.2)	9 (36.0)
Ethnicity, n (%)		
African American	8 (30.8)	8 (32.0)
Caucasian	10 (38.5)	13 (52.0)
Hispanic/ Latino	6 (23.1)	2 (8.0)
Other	2 (7.7)	2 (8.0)
Education, n (%)		
Some High School	4 (15.4)	0 (0)
High School	5 (19.2)	2 (8.0)
Some College	12 (46.2)	7 (28.0)
College Degree	4 (15.4)	9 (36.0)
Graduate Degree	1 (3.8)	7 (28.0)
Marital Status, n (%)		
Married	2 (7.7)	4 (16.0)
Widowed	2 (7.7)	1 (4.0)
Divorced	8 (30.8)	5 (20.0)
Single	12 (46.2)	15 (60.0)
Living With Partner	2 (7.7)	0 (0)

12.2 – Mean Affect Ratings Across Measures



12.3 – Number of Individuals in Each Study Phase



12.4 – Manual of Lab Procedures and Documents

Lab Procedures and Documents

Prepared By: Stephanie Walter

Jan. 23rd, 2007

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Purpose

- Outline clearly defined expectations for everyone to follow
- Ensure everyone knows what was completed while they were out of the lab
- Ensure everyone knows what still needs to be done
- Be the most productive
- Always be prepared

This is the current plan. It may change in the future. Feel free to offer suggestions for improvement.

Weekly Shift Schedule

Shift Starts	Shift Ends	Monday	Tuesday	Wednesday	Thursday	Friday
9:00am	10:00am	Stephanie	Chelsea	Stephanie		Chelsea
10:00am	11:00am		Tina	Kevin		Chelsea
11:00am	12:00pm		Tina	Tina		Vlad
12:00pm	1:00pm	Tarek	Chris		Vlad/Chris	Kevin
1:00pm	2:00pm	Krystin		Krystin	Vlad/Chris	Alice
2:00pm	3:00pm	Alice		Alice/Krystin	Kevin	Tarek
3:00pm	4:00pm		Tarek	Stephanie		
	Possible Participant Appointments					
	No Participants Scheduled					

- Please be present and on time or early for each shift.
 - IF an unexpected, rare event occurs that prevents you from being present or on time for a shift please call me ASAP so I can make other arrangements. (Stephanie's Cell - 708-837-2402)
- Shifts in gray boxes are slightly more flexible because there won't be any participants. However, you are expected to be present and make sure all necessary tasks for the day have been completed.

The Following Needs to Be Done Everyday

Use this as a Daily Checklist.

The Following Needs to Be Done Everyday

Item	How to Know if This Has Already Been Done
Record Messages	- On the Phone Message Master List, the most recent calls will have yesterday's or today's date - When you attempt to listen to messages, it will say there is "No New Messages"
Make Reminder Calls	- In the Appointment Calendar, on the page for the following day, the "Remind?" column is initialed for every appointment
Make 48-Hour Calls	- On the 48-Hour Check-in Calls sheet, each call due for that day will have RA initials in the "RA Caller" column
Charge PDAs	- There is 2-3 PDAs plugged in to the power strip and others on the left side labeled "Charged"
Make Screening Calls	<i>(Should never be completely done)</i>

- Everyone Participants whose name is not highlighted can be called again.
- If there is some doubt as to whether an item has been completed or not, complete it again yourself. However, there should be no need for this as long as everything is documented correctly.

ALWAYS RETURN THE KEY TO THE PSYCHOLOGY OFFICE.

PDA Problems Record Document

**Phone Messages Reporting PDA Problems
 CALL IMMEDIATELY!**

Contacted and Solved?	Date of Message: _____	Description of Problem:	Description of Solution:	Unit Number: <input style="width: 40px; height: 20px;" type="text"/>
	Time of Message: _____			
	Participant Initials: _____			
	Phone Number: _____			
Contacted and Solved?	Date of Message: _____	Description of Problem:	Description of Solution:	Unit Number: <input style="width: 40px; height: 20px;" type="text"/>
	Time of Message: _____			
	Participant Initials: _____			
	Phone Number: _____			

Specific Directions

- Fill in all known information.
- Alert necessary people to get the problem fixed ASAP. (Dror, Chris, Alice, Steph)
- Once the problem has been resolved, write how it was fixed and place a large "X" in the box on the left.
- Do not discard this sheet when full. It will be kept for records.

Phone Message Master List Document

****NOTE**** This document has changed slightly.

#	Date	Name	Phone #	Return Time	Ad Location	D/C	RA Initials	Call Code
192								
193								
194								
195								
196								
197								
198								
199								

Columns Described

- Date: Date the message was left
- Name: Participant's Name
- Phone #: Participant's Phone Number
- Return Time: Specified "good" time to call Participant back
- Ad Location: Place Participant saw our ad
- D/C: Depressed or Healthy Volunteer (Control)
- RA Initials: IPRO Person that attempted to call the Participant
- Call Code: Code referring to the results of the call

Specific Directions

- When you answer the phone while in the lab, write the person's information on the Phone Message Master List.
- Do not repeat any names on the Phone Message Master List.
- Write a Call Code and your Initials each time you try to call the person.

Highlight the Entire Line When One of the Following Occurs:

- All four (4) boxes of RA Initials and Call Codes are filled in
- After a phone screening, the Participant is Accepted for a First Visit (Call Code:4)
- After a phone screening, the Participant is Excluded from the study (Call Code:3)

ALWAYS RETURN THE KEY TO THE PSYCHOLOGY OFFICE.

Appointment Calendar Document

Tuesday, January 23 rd , 2006					
Time	Return?	Initials	D or HV	Remind?	Notes
9:00am		P.W.	D		
9:30am		A.L.	HV	☑	
10:00am		S.W.	HV	☑	A
10:30am	X	C.J.	HV	☑	Good
11:00am					
11:30am					
12:00pm					
12:30pm					
1:00pm					
1:30pm					
2:00pm					
2:30pm					
3:00pm					
3:30pm					
4:00pm					
4:30pm					
5:00pm					
5:30pm					
6:00pm					

Columns Described

- Date appears above the columns
- Time: Half hour time slots
- Return?: Large "X" indicates it's a return visit
- Initials: Participants Initials
- D or HV: Depressed(D) or Control(HV)
- Remind: Initials of IPRO Person who made the reminder call the previous day and any notes from the call
- Notes: Either a code (A, R, N) indicating the results of the first visit, or a measure of the quality of the data (Ex. Good, bad etc.) collected during a return visit

Specific Directions

- Please use pencil. Do not cross anything out.
- Only schedule appointments for times that are highlighted.
- **Group appointments together. Do not leave empty times between scheduled appointments.**
- After making a reminder call, write your initials in the "Remind?" column and any necessary notes. (See lines 2-4)

Scheduling a First Visit (See line 1)

- Write Participant's Initials
- Write appropriate D or HV

Scheduling a Return Visit (See line 4)

- Write a large "X" in the "Return?" column
- Write Participant's Initials
- Write appropriate D or HV

NOTE OPTIONS

A - Accepted; R - Rejected; N - Did Not Arrive

Procedure During Participant Appointments

- The first person in the lab should find the page for today, remove it from the binder and place it on the clipboard.
- As the time passes, fill in the "Notes" column for each Participant.
 - A – Accepted after First Visit
 - R – Excluded after First Visit
 - N – Did Not Arrive
 - For Return Visits, indicate whether the data was good or not.
- After appointments are complete for the day, place the page in the pocket in the back of the binder. The "Notes" column should be filled in for each appointment. Do not discard any calendar pages. They will be kept for records.

ALWAYS RETURN THE KEY TO THE PSYCHOLOGY OFFICE.

12.5 – Master Phone Message List

#	Date	Name	Phone #	Return Time		AD Location		D/C	RA Initials	Call Code
223										
224										
225										
226										
227										
228										
229										
230										
231										
232										
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251										

Call Codes: Blank=Not Called; 1=No answer, no machine; 2=No answer, left message; 3=Answered, rejected; 4=Answered, accepted/scheduled

12.6 – Daily Appointment Calendar

Tuesday, January 31st, 2006					
Time	Return?	Initials	D or HV	Remind?	Notes
9:00am		P. W.	D		
9:30am		A.L.	HV	<i>IC msg.</i>	
10:00am		S.W.	HV	<i>KF msg.</i>	A
10:30am	X	C.J	HV	<i>WV msg.</i>	Good
11:00am					
11:30am					
12:00pm					
12:30pm					
1:00pm					
1:30pm					
2:00pm					
2:30pm					
3:00pm					
3:30pm					
4:00pm					
4:30pm					
5:00pm					
5:30pm					
6:00pm					

NOTE OPTIONS

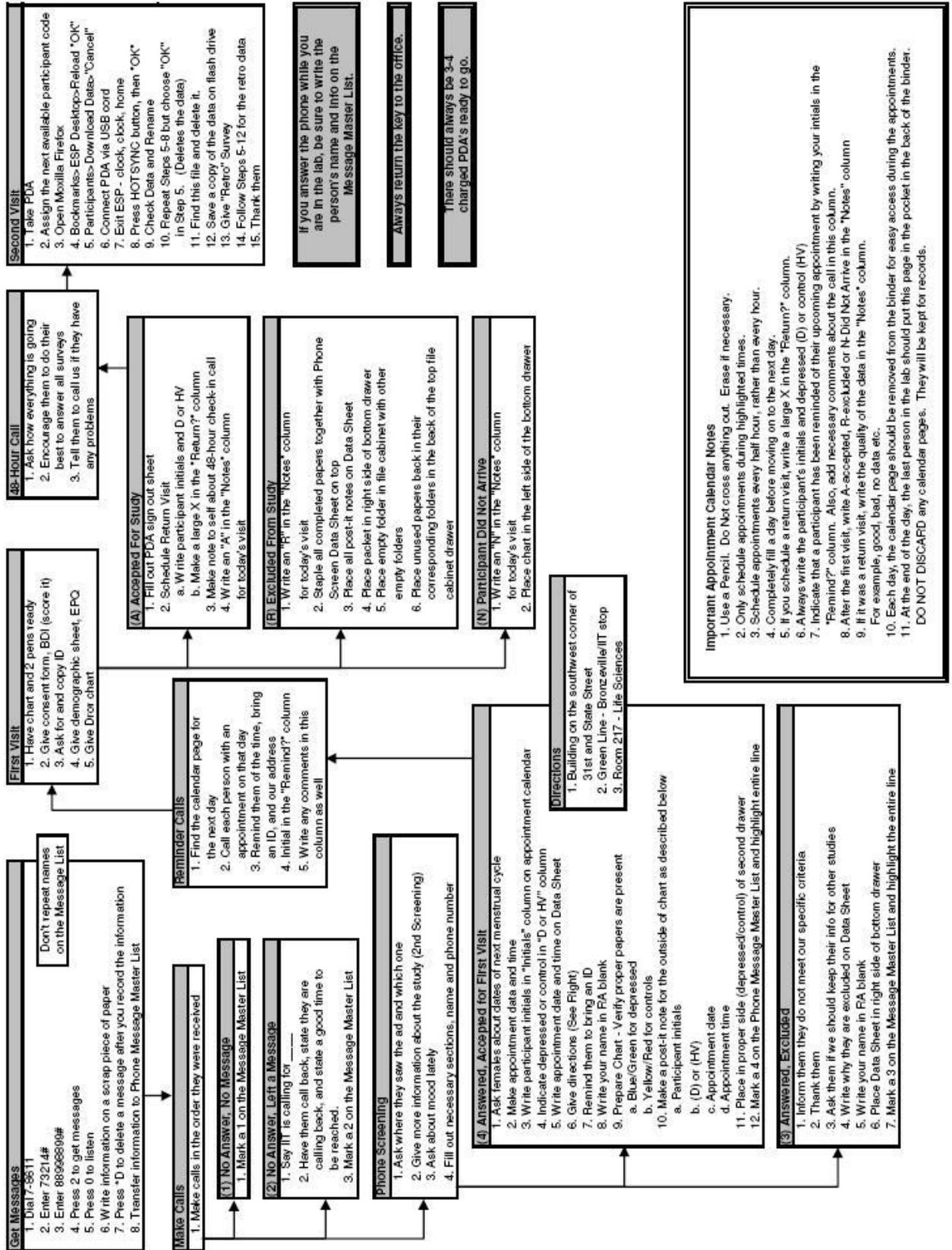
A - Accepted; R - Rejected; N - Did Not Arrive

12.7 – Weekly Lab Report

<small>Enhancing Psychology Research through Advanced Communications Technology</small>																																		
IPRO 306		Weekly Lab Report																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">Week Starting:</td> </tr> <tr> <td style="height: 20px;"></td> </tr> </table>	Week Starting:		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">Week Ending:</td> </tr> <tr> <td style="height: 20px;"></td> </tr> </table>	Week Ending:		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">Report Date:</td> </tr> <tr> <td style="height: 20px;"></td> </tr> </table>		Report Date:																										
Week Starting:																																		
Week Ending:																																		
Report Date:																																		
<p>Week Totals <small>This section contains information collected during the week indicated above.</small></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; padding: 2px;">Number of PDA Problems Reported</td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding: 2px;">Unit Numbers Involved</td> <td></td> </tr> </table> <p>NOTES: - - -</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; padding: 2px;">Number of New Messages Recorded</td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding: 2px;">Number of Participants Excluded After the First Visit</td> <td></td> </tr> <tr> <td style="padding: 2px;">Total Currently Running as of Week Ending Date</td> <td></td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 25%; text-align: center; padding: 2px;">Depressed</td> <td style="width: 25%; text-align: center; padding: 2px;">Controls</td> </tr> <tr> <td style="padding: 2px;">Number Accepted After the First Visit</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px;">Data Collected</td> <td></td> <td></td> </tr> </table>					Number of PDA Problems Reported		Unit Numbers Involved		Number of New Messages Recorded		Number of Participants Excluded After the First Visit		Total Currently Running as of Week Ending Date			Depressed	Controls	Number Accepted After the First Visit			Data Collected													
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<p>Upcoming Appointments <small>This section outlines the upcoming week's appointments as of the Report Date indicated above.</small></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Day</th> <th style="width: 15%;">Date</th> <th style="width: 15%;">First Appointment Time</th> <th style="width: 15%;">Number of First Visits</th> <th style="width: 15%;">Number of Return Visits</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Monday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Tuesday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Wednesday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Thursday</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Friday</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Day	Date	First Appointment Time	Number of First Visits	Number of Return Visits	Monday					Tuesday					Wednesday					Thursday					Friday				
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Monday																																		
Tuesday																																		
Wednesday																																		
Thursday																																		
Friday																																		

12.8 Laboratory Operations Flow Chart

IPRO 306 - Laboratory Procedures Flow Chart



12.9 – Team member evaluation checklist

Enhancing Psychology Research through Advanced Communications Technology		Research Assistant Evaluation	
IPRO 306			
Lab Skill	Notes	Initials	Date
Check Messages			
Use and Understand Phone and Audix			
Correctly Add Messages to Message Master List			
Perform Phone Screenings			
Use and Understand Phone Screen Data Sheet			
Conduct a "Depressed" Phone Screening			
Conduct a "Healthy Volunteer" Phone Screening			
Use and Understand Appointment Calendar			
Give Directions			
Prepare a Chart for First Visit			
Use and Understand Message Master List			
Lab Shift Skills			
Conduct 48-Hour Calls			
Conduct Reminder Calls			
Explain Consent Form and Get Signature			
Explain, Administer and Score BDI			
Copying ID and Consent Form			
Administer Demographic Sheet and EPQ			
Know What to Do if HV had a BDI > 13			
Use and Understand PDA Checkout Sheet			
Use Appointment Calendar for Return Visits			
Mark Correct Code on Appointment Calendar			
Properly Train Participant on PDA Use			
Scheduling/Recording 48-Hour Calls			
Tell Participant They're Excluded			
Properly Handle Excluded Participant's Chart			
Administer "Retro" Survey			
PDA Functions			
Download Data			
View and Rename Data			
Erase Data			
Make Backup Copy of Data			

Purpose: The purpose of this document is to describe the steps required to acquire ESP, setup an experiment, download the experiment to a PDA, and retrieve data from a PDA.

1.0 Acquire and Install Mozilla Firefox

- 1.1 Go to www.mozilla.com/firefox
- 1.2 Click the green box that says "Download Firefox"
- 1.3 Double-click the Mozilla Firefox Setup 1.5.0.7 Icon (on Desktop by default)
- 1.4 Follow on-screen prompts to install Firefox

2.0 Acquire and Install Palm Desktop

NOTE: Do not Install Palm Desktop from the CD.

- 2.1 Go to <http://www.palm.com/us/software/desktop/>
- 2.2 Click "Download Version"
- 2.3 Select Handheld/Smartphone Model (Tungsten E2 in our case)
- 2.4 Select your current version of Windows
- 2.5 Click "Go"
- 2.6 Click "Ready to Download? Begin Here." Follow prompts to save to your computer.
- 2.7 Double-click the zipped folder named PalmDesktopWin414e (on Desktop by default)
- 2.8 Follow on-screen prompts to install Palm Desktop

3.0 Acquire and Install ESP

- 3.1 Go to <http://www.experience-sampling.org/esp/>
- 3.2 Click "Download ESP"
- 3.3 Click "ESP for Microsoft Windows"
- 3.4 Enter e-mail address and click "Download ESP"
- 3.5 Follow prompts to save to your computer
- 3.6 Double-click ESPDesktopConduitInstaller Icon (on Desktop by default)

4.0 Change HotSync Settings

- 4.1 Right-click the HotSync icon
- 4.2 Select "Custom..."
- 4.3 Each Conduit should say "Do Nothing" except the following:
 - ESPmem
 - ESPdesktop
 - Install
 - Install to card
 - Install Service Templates
 - System
- 4.4 To change an Action for a Conduit, first click the Conduit you wish to change

- 4.5 Click "Change..."
- 4.6 Select the proper change such as "Do Nothing" or "Synchronize the files"
- 4.7 Double check that only those Conduits listed in 4.4 are allowed and the reset say "Do Nothing"

5.0 Edit Mozilla Firefox Text File

- 5.1 Open your Mozilla Firefox folder. If you used the default installation, the location is below:
C:\Program Files\Mozilla Firefox
- 5.2 Double-click the Chrome folder
- 5.3 Go to File > New > Text Document
- 5.4 Title the document exactly this: installed-chrome.txt
- 5.5 Double-click installed-chrome.txt and type the following on the very first line:
content,install,url,file:///c:/Program%20Files/esp4/
- 5.6 Press ENTER once after you type this line
- 5.7 Go to File > Save > File > Exit

6.0 Running ESP on the PC

NOTE: There are two options for finding the desktop.xul file needed to run ESP on the PC

- 6.1 OPTION 1: Click Start > Search > All Files and Folders
- 6.2 Type "Desktop" and click Search
- 6.3 Double-click desktop.xul and ESP should run
- 6.4 OPTION 2: Open My Computer
- 6.5 Follow this path:

C:\Program Files\ESP4/desktop.xul

NOTE: This will only work if you used Default installation settings

7.0 Create Experiment

- 7.1 Click File (the lower of the two "File"s) > New Experiment
- 7.2 Decide where you want to save it
- 7.3 Customize options for your particular study (See Section 12.0 for help with the various options)
- 7.4 Click File > Save

8.0 Install ESP on PDA

- 8.1 Plug in PDA with link cable
- 8.2 Click ESP on computer
- 8.3 Choose "Install ESP program to Palm..."
- 8.4 Follow on-screen prompts

9.0 Write Questions and Install on PDA

9.1 Click Questions

9.2 Choose "Edit Questions". A text file will open with a sample question.

9.3 Write questions following this strict format:

1|This is a sample question|Yes|No|Maybe

NOTE: Extra spaces can be used to format how the question appears on the

PDA. Also, there may be a small square as the final character of your

"questions" document. This square must be deleted for the questions to work.

9.4 Click File > Save > File > Exit

9.5 Click Questions

9.6 Choose "Send questions to palm..."

9.7 Follow on-screen prompts

10.0 Install ESP Settings on PDA

10.1 Click File > Save to save the experiment

10.2 Click Settings

10.3 Choose "Send Settings to palm..."

10.4 Follow on-screen prompts

11.0 Retrieve Data

11.1 Click Participants

11.2 Choose "Download data from palm..."

11.3 Follow on-screen prompts

Click "Cancel" to keep the data on the palm

Click "OK" to transfer data and delete it from the palm

11.4 Notice where the data was saved

11.5 Go to this location and rename the file immediately

12.0 ESP Terminology

12.1 General Terms

ESP: Experience Sampling Program that gets installed on the Palm

ESPdesktop: Interface for creating an experiment on the PC; more intuitive, a bit harder to install, large screen, PC needed

ESPpref: Interface for creating an experiment on the Palm; less intuitive, smaller screen, no PC needed until data collection

12.2 Menu Item Terms

File: save, open experiments stored on your PC

Experiment: Allows you to download settings, questions, ESP all-in-one on multiple PDA's

Settings: Import experiment settings from or export them to the PDA

Questions: Import questions from or export them to the PDA

ESP: Install ESP to PDA

Participants: Import Data

Help: Available Help File

12.3 Setting Terms

Use Automation: ESP starts automatically according to time

Take Over Machine: ESP locks the machine when its activated

Run in Demo Mode: Runs in demo mode for testing

Max Seconds to Respond: Number of seconds they get to respond to the questions

No Answer Value: The number that will show up when a question is missed

Widget: Button, dropdown, and other options for how the question will appear

Randomize Question Order: Random question order or assigned order

Play Sound: Will make the PDA beep using one of 3 types of alarms

Vibrate: Allows the PDA to vibrate when it rings

Blink LED: Blinks the PDA light when it rings

Run Weekdays From: The time it runs on weekdays in 24 hour format

Run Weekends From: The time it runs on weekends in 24 hour format

Total Trials: Number of trials the will be total

Trials Per Day: Number of trials per day

Max Seconds to Respond: Time limit of trial

Seconds Between Beeps: number of seconds between each alert beep

Randomize Trial Times: Ability to randomize the trial times

Run at Invocation: Allows the survey to be run by clicking on the ESP start button

Shut off PDA after Each Trial: Turns off the PDA after each trial is completed or the time has elapsed

13.0 Troubleshooting

Problem	Try This
The date and/or time are incorrect	1) Double-click "Pref" on the home screen 2) Click "Date & Time" 3) Set the correct date and time
The pen is not working correctly	1) Clean the tip of the stylus 2) Recalibrate the pen alignment via the "Pref" window
The screen reads "ESP is sleeping..." and the PDA has stopped beeping	1) Click the clock 2) If nothing happens, press the reset button 3) If step 1 works, press clock again, then home 4) Double-click "Prefs" 5) Click "Sounds" and make sure all sounds are set to high. 6) Double-click ESP on the home screen
While running ESP, the PDA becomes unresponsive with nothing on the screen	1) Charge the PDA for at least an hour 2) Turn it on using the power button on top 3) If step 2 does not work, use the stylus to press the reset button 4) Set the correct date and time 5) Click Home 6) If ESP does not automatically start, double-click it on the home screen
...If none of the above solve your problem...	1) Factory restore the PDA by holding the power and reset buttons at the same time 2) Follow on-screen setup prompts 3) Reinstall ESP

14.0 References

A practical guide to experience-sampling procedures. *Tamlin Conner Christensen; Lisa Feldman Barrett; Eliza Bliss-Moreau; Kirsten Lebo; Cynthia Kaschub; Journal of Happiness Studies*; 2003; 4(1); p. 53-78

Abstract:

Experience sampling is a powerful method for understanding a range of psychological phenomena as they occur in the daily lives of individuals. In this primer, the authors discuss the different techniques, equipment, and design options available to the experience-sampling researcher. The authors place special emphasis on computerized procedures and discuss the crucial social dynamic of the research team, which optimizes the success of experience-sampling procedures. (PsycINFO Database Record (c) 2006 APA, all rights reserved)

Conner, Ph.D, Tamlin, (2006, August). Experience Sampling Resource Page. Web site:
<http://psychiatry.uchc.edu/faculty/files/conner/ESM.htm>

Description:

This website provides a starting point for researchers interested in conducting their own computerized experience sampling study. The term "experience sampling" refers to a set of empirical methods that are designed to allow people to document their thoughts, feelings, and actions outside the laboratory and over time within the context of every day life. Oftentimes this involves having the participant carry around some type of device (like a [personal digital assistant](#), PDA) that signals them during the day to answer questions about their experience. More recently, research has begun to use daily surveys administered over the web. Other names for this methodology include *diary methods*, *daily process methods*, and *ecological momentary assessment* (EMA). Note that "EMA" is a somewhat broader term, incorporating self-report and/or ambulatory monitoring of physical states like blood pressure. The term EMA is used more in health-related fields, whereas the terms experience sampling, diary methods and daily process methods are used more in social and clinical psychology.