Plan Overview

A Data Management Plan created using DMPonline

Title: CHANGE LAB An application and evaluation of Dialectical Behavioral Therapy for improving research work outcomes

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Project abstract:

Recent research has highlighted increasing rates of burnout, stress, and anxiety in the wake of the COVID-19 pandemic. However, there have been few attempts to observe this conflict in action, representing a critical lack of knowledge on both the nature of the issue, (how it arises and is sustained in practice), and the feasible approaches for intervention. Methods and analysis This study employs an action research approach centering on the use of participatory workshops. Workshops incorporating dialectical concepts are designed in collaboration with institutional stakeholders and delivered to adults enrolled in Ph.D. programs and other researchers. Data is collected from questionnaires, interviews, and the workshops themselves and analyzed. Expected Results The research will support the development and dissemination of much needed tools to increase well-being in research communities, as well as the evaluation of a novel approach to for supporting effective problem solving in practice.

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CHANGE LAB An application and evaluation of Dialectical Behavioral Therapy for improving research work outcomes

Data Collection

What data will you collect or create?

This study seeks to evaluate a novel approach to improving workplace outcomes. Therefore, meeting the research objectives requires gathering information on participant characteristics and experiences in the workshop, as well as information related to the workshops themselves, and the organizations in which they take place. We follow the Research Data Management Policy of the University of Barcelona (Política de gestió de dades de recerca de la Universitat de Barcelona), approved by the Research Comission on 28 June, 2019, which promotes a FAIR policy (Findable, Accessible, Interoperable and Reusable).

We will collect data related to the carrying out of our workshops, as well as data generated by the participants during the workshop, following the guidelines of the University of Barcelona.

Data collected via Questionnaire

We will collect data which is directly aligned with the objectives of the research project, meaning information that would allow us to understand the effectiveness of the program, its feasibility, and challenges faced during the program.

This includes demographic information related to their role and experience. We also gather data related to their perceived life satisfaction, self-efficacy, perceived group effectiveness, self-rated performance, and professional relationship with their workmates. When possible, these use pre-established scales from the scholarly literature. Both the questions and their sources are included in Appendix A of this Data Management Plan.

Questionnaires will be administered at the program start and at program end, then at +3, +6, and +12 months following the program, so that we can better establish the long-term effects of the program, if any. Both participants in skills-groups and non-participants will be invited to take the questionnaire to provide a basis for comparison. We expect approximately 50 individuals to complete the questionnaire.

Questionnaire data is not expected to exceed 100MB.

Data Collected through Coaching and Skills Training

The bulk of the data from this research will be generated through audio and video recordings of one-on-one coaching and group skills training.

A one hour MS Teams recording occupies 400MB of space. These will be stored on the Principal Investigators One Drive account and transcribed weekly. Given the target to conduct 3 to 4 programs over a one year period, we estimate a maximum of 8 hours of recordings could be made per week, resulting in approximately 3.2 GB of space.

After recordings have been transcribed by the Principal Investigator, they serve no further research purpose, and will be deleted. Transcriptions will be stored on the PI's One Drive account and occupy less than 1 GB.

Data Collected about the participating organizations

An organizational metadata file in Excel (.xlsx) will contain the date of the program, its objectives, the organizer, and links to questionnaires distributed. The space required for this file is expected to be negligible (less than 100KB).

Data Collected through Diary Cards

Participants are asked to complete a diary card (Appendix B) related to the objectives of the program weekly. Diary cards will be scanned and uploaded to the PI’s OneDrive account. The diary card collects information on:

- Desired goals of the participants (e.g. "using paced breathing during negotiations")
- Emotional Intensity: Burnout, Sadness, Shame, Anger, Fear, Joy
- Use of Skills

It also contains an event log where participants can record events throughout the week related to the content of skills training. Participants keep the originals.

Data Collected through Individual Case Formulation Protocols

The Individual Case Formulation (Appendix C) is a data collection protocol that allows the research team to order their analysis and directs the collection of data relevant to the Study Objectives. The PI completes this document using a pseudonym after signed consent is obtained and after the first meeting. It is updated after each one-on-one coaching session by the PI. It may be reviewed by Mr. Ahmed and Dr. Witterholt during consultation meetings, at the discretion of the PI.

The Individual Case Formulation guides qualitative data collection for each participant. Based on observation in one-on-one and group sessions, the researcher enters notes related to participant background, goals, targets of skills training, barriers to goal achievement. It also contains a section to complete a "chain analysis"- an in-depth exploration of a particular event at work seen as relevant to the achievement of their goals. Finally, it contains fields to guide the reflection of the research team.

Individual Case Formulations are expected to occupy less than 50MB of space (a little more than 1MB per participant).

How will the data be collected or created?

Questionnaire Data Collection

We will collect data related to some of our research objectives before and after the intervention via an online questionnaire (Microsoft Forms).

Use of Microsoft Forms allows us to collect data directly to the University of Barcelona Sharepoint Server where it is password protected and shared only with the research team. Responses are automatically collected into Forms, which are downloadable into Microsoft Excel (.xlsx) file. Only the principle investigator will have full access to the shared folder and Forms.

The other members of the research team will have access to a pseudonymized version of the questionnaire repsonses. Pseudonymization is acheved automatically through the use of Microsoft Power Automate. When a questionnaire is submitted online, the responses are uploaded to a complete version available to the principal investigator, and a pseudonymized version without names available to the rest of the research team. This prevents data from being downloaded and limits the risk that data would be accidentally leaked.

Two questionnaires will be used, with one being delivered prior to the intervention, at 3, 6, and 12 months after the end of the intervention (see Appendix A). Participants in the training group receive a version with some additional follow-up questions after the intervention ends, which are also included in Appendix A.

A control group will be invited to take the questionnaire without undergoing the rest of the intervention. The control group only takes the questionnaire, which serves to record their consent in participating in the study.

Data Collected through Coaching and Skills Training

One-on-one coaching and skills training will either be recorded using MS Teams, if online, or via the MS Voice Recorder application, if conducted in person. MS Teams allows audio and video files to be automatically downloaded to the location of the user's choice, which in this case will be configured to be the password-protected OneDrive.

In-person audio recordings will be similarly configured so that files are stored in OneDrive.

Data Collected about the participating organizations

The principal investigator manually enters this data once consent has been obtained.

Data Collected through Diary Cards

Diary cards are scanned using the webcam of the University-issued laptop of the principal investigator or a portable scanner. These files are saved directly to a password-protected One Drive folder accessible only to the principal investigator.

The principal investigator then enters information from diary card manually into a file stored on the OneDrive account using a pseudonym. Participants keep the originals.

Data Collected through Individual Case Formulation Protocols

The principal investigator fills out the individual case formulations throughout the intervention. A pseudonym is used on the case formulation, which is also stored on OneDrive.

Quality Assurance

This study is comprised of many components. To facilitate successful management of the study, we have created a Quality Checklist which the research team will review at the start of our regular consultation team meetings.

Transcripts of interview data are stored on a password-protected One Drive account.

Questionnaire data is automatically timestamped upon collection and cannot be deleted or modified without deleting the questionnaire itself. Records of deleted questionnaires are stored automatically in One Drive.

Documentation and Metadata

What documentation and metadata will accompany the data?

Metadata related to the questoinnaire data is stored in an Excel file available in the University of Barcelona OneDrive account belonging to the PI. The file describes the construct being sought with each question, the question text, the answer options, the source of the question (either the article citaton or that it was developed for this study), and notes to explain its inclusion (if applicable). The table is included in this plan (Appendix A).

The Individual Case Formulation contains guiding questions for researchers and practitioners meant to facilitate its future use.

Ethics and Legal Compliance

How will you manage any ethical issues?

This plan has been submitted to the University of Barcelona's Bioethics Commission (CBUB) for full review.

Intervention Participants

Potential participants will be invited to express their interest through direct contact with the research team. Once interest has been expressed, the principal investigator will send the information packet (**Appendix F**), which contains a description of the research in lay terms, a description of the process and intervention, and the informed consent sheet. These potential participants are directed

to contact the PI, if they are interested in the program for a Q&A session which is not recorded.

In the event that the potential participant wishes to participate with colleagues, these are sent a Skills Participant Information packet, and are also invited to their own Q&A session to introduce the program and to offer participants the opportunity to ask questions prior to making a decision about their participation. After the Q&A session, participants must return the signed consent for back to the P.I. in order to begin the program.

Pseudonymization for Internal Analysis

The data of participants in one-on-one sessions and skills training is pseudonymized for internal use by the research team so that their identities are only known by the principal investigator. The pseudonymization takes place in the following manner:

1. Using functionality from MS Suite, a code is generated when participants fill out the initial questionnaire based on the person's age and initials (e.g. "AM32"). This code is stored with the participant's email address in a key file that is only accessible to the principal investigator in OneDrive.
2. The principal investigator uses this code to refer to participants with all other documents (transcripts, diary card records, and case formulations) when working with the other researchers on the team.

Questionnaire-Only Participants (Control Group)

During the Q&A session with the organizer, the possibility to distribute a questionnaire to non-participants within their organization to act as the control population for the quantitative portion of the study (See Section 6.2.3). Participants invited to fill out the questionnaire only will receive an abridged invitation to participate, which is delivered via email using MS Forms (Appendix G).

Consent is required to participate in the workshop and to fill out the questionnaire. Participants will be presented with the information sheet that describes the purpose of the study, information about risk, data protection information, and the contact information of the data controller and of the data protection officer and the principle investigator.

Consent for questionnaire-only participants is collected electronically via Microsoft Forms.

The data collected will be of low risk according to the University of Barcelona Data Security Document (Document de Securitat). However, it will contain potentially sensitive information related to their working life that should be protected. The research team will take steps to protect the data and inform participants of the (albeit low) risk that they could be identified by interested malicious parties.

Potential risks

The nature of DBT means that potentially sensitive issues are expected to arise during the study. Participants will be informed of these in their information packet that includes their consent form, as well as during the orientation interview.

Using DBT in the workplace presents potential risks as well as rewards due to the power relations between participants. While increased trust between participant is a desired outcome of the study, it carries the risk that participants could misuse what they learn about their colleagues during skills training for their own ends. Therefore, participants will be made aware of this during the consent process, special care will be taken in monitoring this possibility, and participants will be provided with a contingency plan in case of this possibility. Commitment to respect the confidentiality of others is requested on the first day of skill’s group.

Risks in assessment

While the survey presents minimal risks to participants, there is a possibility that difficult or stressful topics will be discussed in the interviews. However, we have taken two steps to keep the risk of such discomfort to a minimum: By specifying ahead of time which topics will be discussed so the participant can make an informed decision as to their participation.

While our focus in this study is on behavior that would fall under normal working conditions, it is possible that we may encounter situations which are potentially criminal (e.g. harassment). In these cases, the researchers will follow the guidelines set out in the European Textbook on Ethics in Research and the advice set out in the Integrity of Research Code of the UB.

Finally, it is important to recognize that this intervention is not meant to replace individual psychotherapy therapy for those who need it, and that its use is limited to the workplace. A disclaimer is included in the consent form, and information for contacting psychological counselling services will be provided for those who need it.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

Results of this study will be shared to the extent possible while respecting rights of participants. Per the contract specification of the principal investigator, any findings become the intellectual property of the University of Barcelona.

The issue of intellectual property is also covered in the agreements signed by the researchers outside of the UB, which stipulates *"Intellectual and industrial property rights: The University of Barcelona has the intellectual and industrial property rights derived from the research results generated by the researcher, insofar as he / she is a worker of this, in accordance with the current legislation applicable to the matter."*

Works derived from the research, for example journal articles, presentations, book chapter(s), conference paper(s) and/or in the media, will be subject to the intellectual property policies and agreements made with the publisher.

Storage and Backup

How will the data be stored and backed up during the research?

Data will be stored and backed up on the PI's University of Barcelona OneDrive account.

The study is expected to generate data that does risk exceeding the storage allotted to the principal investigator's by the University of Barcelone (1TB), and therefore will not generate additional costs for the research team.

How will you manage access and security?

Access and security is controlled through the principal investigator's University of Barcelona's OneDrive account, which is password protected. Access for other researcher's is limited depending on the type of data, as described below. In all cases, only the principal investigator has access to files that would allow participants to be easily identified, while the other researchers have access to pseudonymized versions.

Access to pseudonymized questionnaire, transcripts, data about participating organizations, diary cards, and individual case formulation protocols:

Researchers have read-and-comment access to these files. This level of access allows users to view and comment on documents, but not alter. Access requires that users log in to their email account and can be easily revoked in the event of a security breach.

Access to other data:

Data Collected about the participating organizations:

Contact data, and any data that allows participants to be readily identified is only accessible to the principal investigator by logging into the University of Barcelona OneDrive account.

Data Collected through Coaching and Skills Training

Recordings made from in-person sessions are made using the principal investigator's laptop, which has been provided by the University of Barcelona and which is also password protected. In this way, audio and video files do not need to be transferred between devices to maximize security.

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

The data gathered from this study could be of interest to other researchers in management, education, and psychology.

What is the long-term preservation plan for the dataset?

Following the Open Access Policy of the University of Barcelona (Approved by the Research Committee on 28 of June of 2019), anonymized responses of questionnaires, qualitative codes of the digital material, and anonymized examples of each code, will be published to the University of Barcelona Digital Respository, which will be stored under a Reconocimiento 3.0 España (CC BY 3.0 ES) License.

Original qualitative data in the form of transcripts, case formulations, and diary cards will be stored for 5 years, in accordance with the Ethical Integrity Code and Best Practices of the University of Barcelona, Section 5 (CODI ÈTIC D'INTEGRITAT I BONES PRÀCTIQUES DE LA UNIVERSITAT DE BARCELONA), after which any information that has not been published will be deleted.

Research focusing on tensions, paradoxes, and dilemmas at work is in its infancy, so the coding resulting from data analysis of qualitative materials is likely to be of use to the research community. Theses codes with anonymized examples, will be published along with the questionnaire responses.

Data Sharing

How will you share the data?

The collection of pre-post test data could be interesting for research and teaching purposes. Therefore, after completion of the study, anonymized data will be shared via the University of Barcelona data repository. A reference to the data will be included in any publications of the work, for example in conference papers and journal articles. To minimize the chances that someone could

reidentify a particular participant, we will include only numeric ratings and anonymous comments. Data published in the data repository will use a different code than the one used during data analysis.

Raw transcript data will not be shared, with the exception of anonymized illustrative quotes and examples that are needed to meet the research objectives. These could be, for example, statements relating to facing dilemmas in the workplace that could not be traced back to a particular individual.

A hypothetical example could be: Code: Emotion regulation behavior: "I was feeling bad all day, so I did some mindful breathing and realized I was worried about an upcoming conference". Other participants voiced agreement. Or "Participants had difficulty completing the reflective task". These descriptions and codes will be published along with numeric data, as well as in scholarly reports and presentations.

Are any restrictions on data sharing required?

Given that consent is required for participation in the study and that questionnaire data will be shared anonymized, there is no restriction required for sharing of numeric data.

However, the digital record of the rest of the intervention and researcher notes are likely to contain information that would allow participants to be indirectly identified. Given that potentially sensitive topics will be addressed in one-on-one sessions and group skills training, these records will not be shared. However, the coding resulting from data analysis can be published to the respository. Text will be scrubbed prior to publication.

Responsibilities and Resources

Who will be responsible for data management?

The PI of the project, Ryan Armstrong, will be responsible for implementing the DMP.

What resources will you require to deliver your plan?

There are no additional resources to carry out this DMP.