Transdiagnosic Addiction Laboratory Manual

TALab Team

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Part I Welcome

Welcome to the Transdiagnostic Addiction Laboratory at Dalhousie University - we are glad to have you!

This is the comprehensive guide for students and trainees working within the Transdiagnostic Addiction Laboratory at Dalhousie University. Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

The goal of this document is to provide you with a detailed guide on navigating programs at the University, as well as providing you with the general rules and expectations you should follow while working in the lab. We also provide some resources both for the program and for setting up and conducting research.

This document was inspired by several other documents (see here and here) and is a work in progress. If you have feedback and/or suggested updates, please reach out to the lab manager at em854359@dal.ca.

1 Mission statement

Research at the Transdiagnostic Addiction Laboratory focuses on factors that influence the development, maintenance, and treatment of substance abuse, and behavioral addictions such as gambling. We are particularly interested in the co-occurrence of addiction and other psychiatric disorders.

1.1 Our research

Current projects within the lab cover the following topics:

- We are interested in understanding the mechanisms of how individuals and populations develop and recover from addiction, with a focus on cannabis, alcohol use, gambling, and video gaming.
- In collaboration with the Canadian Research Initiative on Substance Misuse (CRISM), we are developing a comprehensive evidence-based online platform for screening, self-management and referral to treatment for individuals curious about their substance use habits.
- A large part of our research investigates the co-occurrence and interaction of addiction and other mental health disorders with the goal of accounting for real-world conditions where most individuals struggle with multiple comorbid disorders.

Part II New to the lab? Start here

Before you begin working in this lab, all members are expected to do the below.

Read this manual

This manual contains all of the policies and expectations you are expected to follow while working in the lab, and provides you with many resources you may need throughout your research journey. Our goal with this document is to add in resources as they come up through working with students on different research projects.

It is good practice to consult this manual before asking Igor for assistance on a specific topic.

Complete Ethics Training

As an incoming student in the lab, part of your on-boarding will be to complete the TCPS 2: CORE Course on Research Ethics. You will not be permitted to participate in research within the lab until you have completed this course and emailed proof of completion to the lab manager, Emma at em854359@dal.ca.

Get Access

Access to spaces

The Department requires that the hallway leading to the lab spaces remain locked 24/7. This door is only accessible by keycode associated with your DalCard. The lab manager will need to set up this access for you.

Before you can enter, even if you have been granted access by the Department, you will need a PIN code associated with your DalCard. If you lived in a residence or otherwise have had access to an area on campus that required you tap your DalCard and input a PIN, this door will use the same PIN. Otherwise, if you have not set up a PIN already, you can set one on the DalCard website.

Access to virtual resources

The project you are working on may have different demands as to what specific resources you need. You should familiarize yourself with the software available to you through Dalhousie. Additionally, the majority of lab communication is carried out through Slack. If you haven't received an invitation, please let the lab manager Emma know. If you are working on a systematic review, you will likely need an account created in Covidence. Students enrolled

in the lab will need to get access to OneDrive, where all research files relating to the lab are stored. Otherwise, the specific demands of the project will be communicated to you.

Social media

The lab has several social media accounts (Twitter/X, Reddit, Kijiji, and Instagram) which are available for use by students in the lab upon request. If you would like to make use of these accounts for your research projects and you have approval from Dr. Yakovenko, please ask the lab manager Emma for access. These can be used to post your own recruitment advertisements, or to reach out to other social media pages for sharing your recruitment materials.

Lab Website

All lab members are encouraged to submit a semi-professional headshot and short biography to be posted on our lab website. This information allows us to showcase our lab members, and also allows you to have some proof of engagement with the lab beyond your CV entry. You can view some example biographies on the lab website. In general, these should give a brief description of yourself both professionally and personally, as well as your research interests. The photographs must be taken in landscape format and should not be blurry. You can also provide social media links which can be linked alongside your bio. Once you have this information, please forward it to em854359@dal.ca to be posted on the lab drive.

Review the Below

Depending on whether you are an incoming Volunteer, Honours or (In)dependent project student, or Graduate student, you may have further steps you should consider. Please consult the relevant sections.

2 Volunteer Students

! Important

Volunteers within the lab must sign the volunteer agreement form and return it to the lab manager, Emma.

As a volunteer within the lab, you may participate in a variety of tasks. These can range from assisting on systematic reviews using Covidence, assisting with recruitment, testing study procedures and protocols, to running in-person experiments with participants. Regardless, we hope to provide you with some hands-on experience and involvement in the research process.

If you are considering enrolling in the Honours program, it's a good idea for you to first volunteer within a lab; preferably the lab you intend on completing your honours with).

2.1 Expectations

Generally, students are expected to commit an average of 3 hours per work to working within the lab for a 1-year commitment. This work need not be completed on campus if the nature of your work permits you to work from home; however, all students are encouraged to work on campus if possible. Working on campus is a great opportunity to meet your fellow labmates, make new friends, and learn about research going on in the lab.

Occasionally, the demands of the lab may change and we may ask that you shift your focus to a different project than the one you are currently working on. We expect volunteers within the lab to be flexible within reason, and to be able to shift projects if requested by Dr. Yakovenko.

We understand that sometimes, circumstances change and you may no longer be able to participate to the degree that you had initially agreed to, or you may no longer be able to participate at all. If that's the case, please inform Dr. Yakovenko as soon as possible.

3 Undergraduate students

All undergraduate students must work in the lab prior to working with Dr. Yakovenko. If you are a student considering working with Dr. Yakovenko for either an Honours or 3000-level project, reach out as soon as possible to igor.yakovenko@dal.ca or em854359@dal.ca to arrange volunteering within the lab.

During your program, you will likely be supervised or co-supervised by another graduate student in the lab. Your primary point of contact within the lab will be this graduate student rather than Dr. Yakovenko.

Undergradute students will be responsible for all policies and procedures for their honours (e.g., deadlines, assignments). Additionally, you will be responsible for making Dr. Yakovenko aware of any important/relevant information ahead of time.

As an incoming student, you may be expected to engage with the lab regarding your honours/(in)dependent project before classes begin in September. This may involve the creation of Research Ethics Board applications, designing/testing protocol, etc.. Often, these projects take more than the allotted course time to complete. This headstart will allow you more time to collect your data and finish your project.

You will be expected to meet regularly with your supervisor(s) and be prepared for meetings, with an agenda for the meeting and a summary of work completed since the last meeting, as well as any questions you may want to discuss.

3.1 Honours students

Honours students are expected to develop their own research idea, often within an existing project. While there is some flexibility on research topic, it generally must fall under topics already under investigation by other students in the lab.

Please note that the deadline for applying for the Honours program is usually around the end of the Winter term. However, it is a good idea for you to reach out to potential supervisors well before this deadline. You must have secured a supervisor before you may apply.

For more information about the Honours program, please visit the department page. If you have any questions regarding the honours program, please reach out to your program coordinators at psychhon@dal.ca.

3.2 Dependent or independent project students

These students are expected to work collaboratively with their supervisor on creating the course syllabus. The nature of your project may vary depending on whether you are enrolled in PSYO/NESC 3001/3002 (dependent projects) or PSYO/NESC 3100 (independent projects). You can consult the academic calendar or department website to learn more about these courses.

For single-semester (dependent) projects, you will likely be involved in undertaking a secondary analysis of a dataset which already exists within the lab, or undertaking a much less intensive research project (e.g., developing and testing a protocol).

You will also be expected to complete your commitment to the project beyond the scope of your course. For example, if your project involves the creation of a lab protocol, you will be expected to continue volunteering with the lab on testing and finalizing this protocol, even if this was outside of the scope of your syllabus and your course has already been completed.

4 Graduate students

4.1 Expectations

4.1.1 Development of Research Projects

Graduate students within the lab are expected to develop their own research projects in collaboration with Dr. Yakovenko and their co-supervisors, if applicable. You are expected to carry out these projects independently or with the assistance/collaboration of other students in the program. Your PI and co-supervisor(s) are only to provide oversight and advise you should you have any questions.

Incoming students are expected to proactively conduct literature reviews and attend research development meetings with ideas for their own research projects, rather than waiting to be provided with ideas by their supervisor(s).

While there is flexibility around the research topics, all topics must fall within the mandate of the lab's work. If a student is accepted into the program to help support the work on a specific grant, they will be expected to develop a research project within that grant.

Graduate students within the lab are expected to recruit undergraduate (Honours) students to assist them with their comprehensive (if running a new study) and dissertation projects. These students will be co-supervised by you and Igor. This will provide you with both supervisory experience, and invaluable labour from the undergraduate student to further your research.

4.1.2 Supervision meetings

Students will be expected to meet regularly with Dr. Yakovenko for supervision. Meeting frequency will vary based on personal factors and the training level of the student. Junior students (first 2 years of their training) will be expected to meet with Dr. Yakovenko weekly for 30 minutes. Senior students can expect to meet with Dr. Yakovenko every 2 weeks for 30 minutes.

The purpose of these meetings is to check in and provide updates on the work that has been done since the last meeting, as well as addressing any questions or concerns that cannot be adequately addressed via email and/or Slack. Examples of topics which can be addressed via

email/Slack include troubleshooting statistics/code, requests to review documents, or questions about the program. Meeting times should be reserved for project planning, personal discussions, and supervisory guidance surrounding the program or your training (e.g., research, practicum, milestones, dissertation).



Tip

If you do not need your regular meeting, please let Dr. Yakovenko know, as well as the lab manager Emma to cancel your meeting.

To schedule your meetings, contact the lab manager or click the scheduling link to schedule your meetings directly.

4.1.3 Clinical training

Students are expected to familiarize themselves with program resources. These resources, including the program handbook and practicum guidelines, are available on the program website. If you have any questions about the program, you can reach out to the program administrators at clinprog@dal.ca. Be sure to familiarize yourself with the timelines of the program, including comprehensive projects, dissertation, coursework by year, and practicum hour requirements.

Part III Policies & Resources

There are several general rules and expectations students are expected to follow while working within the lab, as well as several resources collated here which students are expected to consult before asking Igor for assistance. Please review the sections below!

5 General lab policies

5.1 Respect

Please be respectful of not only the people you're working with, but also the spaces you're working within and the equipment you are using. Students are expected to follow the Dalhousie Code of Student Conduct, and researchers must follow the TCPS 2 Code of Ethics (see Ethics Training). Discrimination of any kind will not be tolerated within the lab.

i Note

In the event of an unresolvable disagreement or conflict between labmates, please bring this to Igor's attention. If the conflict or disagreement is with Igor and you are not comfortable bringing this to his attention, please contact your program head/coordinator.

When using the lab spaces, please be sure to clean up after yourself and leave the space as you found it. If you notice that the trash or recycling bins are full, please empty them in the communal bins in the hallway and replace the bags (if applicable). Cleaning and sanitizing supplies are available for you to use - please feel free to use them! And if you notice that any supplies are running low, please notify the lab manager.

Please note that students are not permitted to smoke <u>or vape</u> anywhere on campus, especially indoors, as per Dalhousie policy. Under this policy those who wish to smoke are asked to **leave university property**.

5.2 Safety & Security

It is important to be aware of how to ensure the safety of not only yourself and others working on campus, but also the data with which you are working.

5.2.1 Physical safety

In case of an emergency...

Dalhousie Security should be your first point of contact. You can contact them using the DalSafe app or by calling 902-494-4109. Do not call 911 - Dalhousie Security will call 911 if need be and will ensure that emergency services are capable of navigating to the correct area on campus. If you call 911 on your own, emergency services will have great difficulty locating you.

All students should have the DalSafe app on their mobile devices and be familiar with the services offered in the app. This app allows you to get in contact with security, and allows you to send text messages to security in case you need to be discrete. There is also a "Working Alone" feature which makes Dalhousie Security aware of where you are and allows them to check in on you.

As per department policy, please do not share your Banner (B00 or B01) number and PIN with anyone. When accessing the human research area on campus (where the lab spaces are located), please do not let anyone in who you do not know.

5.2.2 Running participants

Research participants should never be run alone.

Always have someone else within earshot when running participants. This can be an undergraduate student, volunteer, graduate student, or the lab manager. If the study design requires you be alone in a room with the participant, there should be no locked doors keeping you and the extra person apart. There are a few reasons for this, not all strictly related to safety:

- In the event where someone (either you or the research participant) is made to feel uncomfortable by the actions of another, having an extra perspective or witness to the situation can be helpful to resolve disputes.
- Unfortunately, there have been incidences in the department where participants have acted maliciously towards researchers. Having a second person nearby to assist you is imperative, and may discourage assailants outright.
 - On this topic, the department has been working toward establishing a resource containing banned participant names and contact information. To date, this has not been established, but the lab manager Emma may have resources for you. Please reach out and ask **before** you begin recruiting participants.

5.2.3 Data safety

All data collected or datasets which you have access to are not to be shared with anyone. Data and research materials should not be stored on your personal computers - all materials should be stored on the lab OneDrive account. Resources are permitted to be saved to lab computers; however, these documents should also be stored on the lab OneDrive.

All physical research materials (from questionnaires to equipment) should not leave the lab space without explicit permission from Igor.

5.3 Work policies

Work-life balance is important in the lab. We have no expectation of students working a certain number of hours per week. Rather, the important part is establishing reasonable deadlines and meeting those deadlines.

Students are permitted to take time off, if permitted by their program and any other responsibilities. For students in the Clinical program, vacation days are outlined in the student handbook. Before scheduling vacation, you must have approval from whoever you are working with at the time, including Dr. Yakovenko as well as any other supervisors or coordinators in the program. Vacation should not interfere with program milestones; students are still expected to fulfill their responsibilities before departing.

6 Igor's philosophy on supervision

7 Funding opportunities

To include information regarding funding caps, TAships, as well as grant opportunities students should be applying for.

Graduate students are required to apply for funding, and expected to apply for all funding opportunities available to them. Please note that there is a departmental funding cap of \$30,000/year; any external awards awarded to the University for that student beyond that cap will not be awarded to the student. Also note that external awards paid directly to the student are not subject to this cap.

7.1 Funding opportunities

Below is a list of funding opportunities available to most students. If there are other funding opportunities you believe should be added here, please email em854359@dal.ca to request modifications. Note that the deadlines provided below are subject to change; please verify with the funding agencies.

There is also a list managed by the University available here.

Name	Deadlin@escription
Tri-Council Scholarships (CGS-M and CGS-D)	CGS- Each available to students once during their M: program. Available to all students within the Early program. Note that CGS-D has different De- applications depending on the funding agency cem- (CIHR, NSERC, SSHRC); please ensure you are applying under the correct agency for your project. CGS- D: Mid- October
Scotia Scholars Award	Late Available to Master's students as well as PhD April students.

Name	Deadlin@escription
MSSU Student Awards	March Available to Master's and PhD students conducting research relevant to the mandate of the MSSU addressing health research priorities within Nova Scotia.
Harmonized Scholarship	JanuaryHarmonized scholarship application managed by Dalhousie, available to all graduate students yearly.
Killam Scholarships	Same Available to Master's (Level 1) and PhD (Level 2) as students. Apply as part of the Harmonized Har- Scholarships. mo- nized Scholarships
Mitacs	Varies Programs vary. Check available programs and see if any align with your research goals. Opportunities available to both Master's and PhD students.

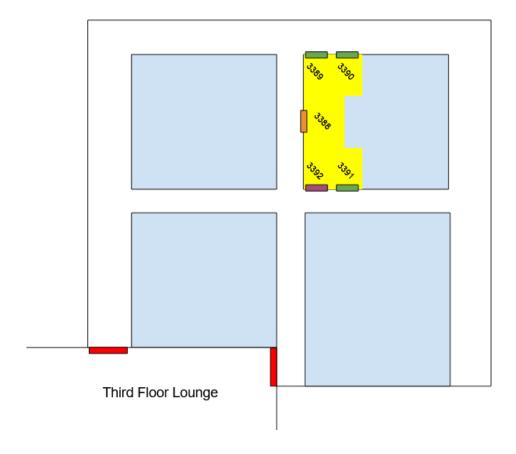
Information surrounding the base stipends, Teaching Assistant (TA) commitments, and general funding can be found in the student handbook.

8 Lab space and resources

8.1 Our areas

We have five rooms available for use by students working with the lab. These rooms are located in the Psychology & Neuroscience wing of the Life Sciences Centre on the Studley campus. Our rooms are located on the second floor (same floor as the lounge and main office for Psychology and Neuroscience) just behind the lounge. You will require access before you are able to enter these spaces; see here for more information.

Our rooms are P3388 to P3392. P3388 is the main lab area open to all students. Several computers can be found there, as well as a printer. Please feel free to use this space. P3392 is the office of the lab manager. P3389, P3390, and P3391 are storage/research spaces available for use upon request to Dr. Yakovenko.



8.1.1 Lab space rules

As mentioned here, please clean up after yourself when using the lab space. The available printer is for use for tasks relating to the lab; please do not print unrelated coursework using this printer. There is a microwave, fridge, kettle, and coffeemaker in the main lab area. Feel free to use these as well. Note that the coffeemaker uses Nespresso pods; if you would like to make use of this machine, please bring your own pods. If supplies are running low, please notify Emma or Dr. Yakovenko. When exiting the space, be sure to turn off all lights and close/lock the door behind you.

Lab spaces are not to be used for research purposes without prior approval from Dr. Yakovenko.

As per department policy, only graduate students may be granted keys to access the space. Undergraduate students must use the key located within the lockbox.

8.2 Personnel

The lab often has access to several volunteers or paid research assistants (RAs) working within the lab. If you think your project could use the assistance of a volunteer/RA, please discuss with Dr. Yakovenko. These volunteers/RAs are to be assigned to work on projects solely by Dr. Yakovenko. Please note that while research assistants may assist with the comprehensive/thesis projects of graduate students, the majority of the work must still be carried out by the graduate students.

9 General Resources

9.1 Using R

For statistical analyses, Igor strongly recommends that students learn R and conduct analyses using R. However, exceptions may be made on a case-by-case basis.

If you've never used R, you will first need to download R and then an IDE (Integrated Development Environment). Simply downloading R is not sufficient for using R. There are several IDEs that can be used for R, the most common and specialized being RStudio. You are free to use any IDEs you would like - however, the content in this manual will assume you are using RStudio.

For more information and tutorial websites/videos, please see the below.

Quarto	Resources for using Quarto. Quarto is used to generate reports alongside R code; useful for analyses.
Operators in R	Resource demonstrating different logical and arithmetical operators in R.
Referencing and assignment	Demonstrates how to reference rows or columns in data frames.
Intro to R	General guide containing information on how to code, basic operations, variable types, and simple functions.

9.2 Setting up GitHub

All projects you work on within the lab should be stored on Github. Note that data should never be stored on Github; rather, only the analysis code and any relevant documents should be stored within.

For more information and tutorial websites/videos, please see the below.

Setting up R projects to GitHub	A short step-by-step video on how to add your
Happy Git With R	existing projects to GitHub. In-depth guide to using GitHub with R, including how to set up repositories.

Part IV Research Practices

Our lab is a proponent open science. If you're unfamiliar with open science, please read Kathawalla, Silverstein, and Syed (2021). In short, the goal of open science is to conduct research in a way that is transparent and reproducible. Our goal within this lab is to carry out the research project with documentation of all the steps and decisions made along the way, as well as conducting data management and analyses in a way that is entirely reproducible for anyone else to run. Any person should be able to take your analysis code and run it on your data from their computer for the same output you reported.

This section will prepare you on how to set up your projects and document these steps, from conceptualization to publication.

10 Initializing your project

There are a few steps you should take when you begin conceptualizing your project.

10.1 File storage

All files related to your project **must** be stored in the lab OneDrive. If you haven't already, please download OneDrive for Desktop and sign in with your Dalhousie credentials. There should never be any files that are stored only on your personal computer. If you don't have a folder for your project, please ask the lab manager to create a directory for your project and send you a link. Once you have the OneDrive folder/directory shared with you, you are able to add this shared folder as a workable folder on OneDrive for Desktop by logging in to OneDrive online, navigating to Shared > Shared With You, and locating the project folder. Once you have the folder, you can select it or open it and click Add shortcut to My files. This will add the folder to your computer and you can (and should) work from this folder as you would any other folder on your computer. If you need further assistance, you can consult this guide.

10.2 Preregistration

All studies being carried out within the lab must be preregistered. Generally our lab preregisters studies using the Open Science Framework (OSF). Depending on the nature of your study, PROSPERO may also be an option.

The goal of preregistration is to delineate the steps that the project will take. In essence, you are writing the introduction and methods section of your paper. This should include:

- Brief overview of the background. Why is this project important? What makes it unique? What is the theoretical rationale for your project?
- Methods used:
 - Participant inclusion criteria, required sample size, as well as power analyses
 - Measures and/or instruments used for data collection
 - Planned analyses

Once you create your preregistration, you will be provided with a DOI. This DOI should be published along with your manuscript to serve as a record of your study design and decisions made. An added benefit of preregistration is that it also gives you a chance to thoroughly conceptualize your study, as well as providing you with a solid first draft of your introduction and methods section when it comes time for you to write your manuscript.

10.2.1 Amending your preregistration

Preregistration should be thought of as a plan for your research study. Regardless of how much you prepare and think ahead, it's always a possibility that things change along your research journey. If you make changes to the design of your study, these changes should be reflected within your preregistration through an amendment. Generally you must provide: 1) the changes made, 2) the rationale for the changes, and 3) the impact of these changes on your study.

Students who are deviating from their amendment should consult this article by Daniel Lakens titled "When and How to Deviate From a Preregistration" (doi: 10.1525/collabra.117094).

10.3 Research logging

All students, regardless of training stage, should create and maintain a separate research log for each study with which you are involved. You can think of this as journaling for academics. Each day you work on your project, once you're done working, you should log any and all decisions made, any lingering thoughts or questions, and also make note of any relevant or key research studies you find if you did a literature search. In particular, if you resolve a question you had previously or if a key decision is made on your project, write it down in these logs. It's also a good opportunity for you to take note of where you left off for the day, which you can consult when you return to the project and have a good starting point.

The format you can follow for these is up to you. These documents will be for your use only. We provide this base format for you to use or follow as you wish:

DATE: DD-MM-YYYY

TOPIC(S): One-word summaries of topics covered

NOTES: Explanation of the topics

TO DO: Notes on what actions should be taken or have been taken

TAGS: A series of tags or keywords to aid you in finding this portion of the research log

Here is an example of how these should be used:

DATE: 19-03-2023

TOPIC(S): design; preregistration

NOTES: Worked on finalizing the preregistration for the study. Discovered a hole in our p

TO DO: Discuss with Igor: SOGS vs PGSI?

TAGS: measures; question

DATE: 25-03-2023

TOPIC(S): design; preregistration; meeting

NOTES: Met with Igor to discuss topics from 19-03-2023. Igor agreed that PGSI is better s

TO DO: Modify preregistration plan: use PGSI over SOGS.

TAGS: design; measures; decision

11 Designing your project

This section is not meant to be an exhaustive guide on how to design your projects. Rather, the goal is to provide a few key considerations we believe are important in our lab.

11.1 Survey-based designs

If you are designing a survey-based study, an important consideration is the use of attention checks and inconsistency checks (see Belliveau and Yakovenko (2022)) integrated within the survey. Unfortunately, many participants in survey based research may not be providing genuine answers to our surveys (see Belliveau, Soucy, and Yakovenko (2022)). Within our lab, we seek to have the highest quality data possible. Part of this process is accomplished through the use of attention checks and inconsistency checks. We generally exclude participants who fail any given attention or inconsistency check in a survey. Additionally, these questions should be distributed evenly throughout the survey.

Once you have your survey created on REDCap or Qualtrics...

Before submitting your survey to Igor for review, you should first:

- Compile a document of questionnaires with references and a table of contents
- Ensure that all questions from the above document are present in the survey
- Ensure that all variables needed for your hypotheses are present in the survey
- Check spelling, grammar, and formatting
- Check all branching logic with any answer possibilities
- Avoid the use of unnecessary text-entry boxes (dropdown boxes or checkboxes are preferred)
- Have peers in the lab conduct test runs through the survey and determine the average completion time. Does this align with what was estimated in your ethics application?

11.1.1 Attention checks

We use several types of attention checks. You should incorporate at least 1 of each type within your survey (for shorter survey designs, e.g. as part of a qualitative study, 1 or 2 attention checks in total are sufficient). The wording of these questions should be simple and straightforward; our goal is not to deceive participants, but rather catch those who are picking responses without reading the question prompts.

Select-C-type	These types of questions instruct participants on which answer choice to select. Participants selecting any answer other than the instructed answer choice are considered inattentive.
Quiz-type	These questions quiz participants on instructions they should have read. Note that Dalhousie REB often requires this type of quiz with regards to evaluating informed consent for participants.
Honeypot-type	These questions aim to minimize desirability bias. These types of questions may, for example, ask participants if they completed some training program unrelated to the study and if so, provide participants with open-ended responses for feedback on this program. Any participants who indicate participating in the training and providing feedback are considered ingenuine.

11.1.2 Inconsistency checks

These types of questions should serve to double-check both <u>inclusion criteria</u> and <u>key variables</u> to the study. These questions can be formatted as simple repetitions (e.g., asking for participants' age twice at two points within the survey) or by evaluating variations of the same question (e.g., asking for participants' age at one point, and later asking for date of birth).

As many projects within our lab are on the topic of addiction, these questions can evaluate the behaviours or substances under examination. For example, if it's required that participants play video games at least once per week over 3 months, you may have this question in your screening questions:

How often over the past 3 months have you played video games?

- Daily
- Every 2 to 3 days
- Once per week

- Less than once per week
- I have not played video games in the past 3 months

Here, the first 3 answer choices are considered eligible for the study. A follow-up question later in the study evaluating participants' gaming behaviour can be formatted as follows:

Over the past 3 months, how long is your typical gaming session?

- <1 hour
- 1-3 hours
- 3< hours
- I have not played video games in the past 3 months

In this case, participants should never select the final answer choice. Any participants who do can be considered ineligible.

11.2 Qualitative designs

11.2.1 Designing interviews

11.2.2 Designing behavioural observation studies

12 Data management

All study files (excluding anything personal or sensitive; manuscript drafts, design documents, participant data, etc.) should be stored on GitHub. This includes:

- Analysis or data management code
- Recruitment materials
- Copies of any non-sensitive documents; ethics applications, preregistration

Any sensitive files can still be stored in your personal GitHub repository on your computer; however, you must be certain to include the sensitive files/folders in your .gitignore file. For more assistance on GitHub, including how to set it up and best practices to follow within the lab, see the Resources page.

12.1 Data cleaning

Once you have your data collected, you must clean your data. Ideally, this step will be carried out while you are recruiting participants.

13 Analyses & Related Resources

For statistical analyses, Igor strongly recommends that students learn R and conduct analyses using R. However, exceptions may be made on a case-by-case basis. For resources on R usage, consult this chapter. Below, you can find a variety of resources which you may need throughout the course of your program.

Any resources missing? Please email Emma to have them added to the list.

Learning Statistics with R	General resource for getting started with analyses in R. Specifically geared towards Psychology students.
Moderated mediation	How-to and sample size guide
Handling missing data	Including Little's MCAR and diagnosing
Effect size calculators	This website for Chi-square/T-tests.
	- '
Bootstrapping	This website for an explanation of what bootstrapping is and use cases.
Power analyses / sample	This resource for SEM. Also consider using GPower.
size calculators	C .
	tions of the different means to handle outliers and when you
should use them.	
Directed Acyclical	Website for creating your own DAGs.
Graphs (DAGs)	
Content/thematic	Below, you will find a variety of resources specific to
analysis	content/thematic analysis.
J	,
	• Understanding data saturation
	• Description of thematic analysis
	2 mild standard names to follow along for the coding
	• 2 gold standard papers to follow along for the coding process (1, 2)
	• Example writeup using thematic analysis

• Justification of sample size

• How-to guide

Part V Clinical program resources

14 Comprehensive projects

15 Practica

16 Program resources and guidelines

17 Residency

References

- Belliveau, Jacob, Krystal I. Soucy, and Igor Yakovenko. 2022. "The Validity of Qualtrics Panel Data for Research on Video Gaming and Gaming Disorder." *Experimental and Clinical Psychopharmacology* 30 (4): 424–31. https://doi.org/10.1037/pha0000575.
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