

Introduction to NVivo: Qualitative Coding & Text Analysis

Digital Integration Teaching Initiative

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Qualitative Data Analysis

Professor Whynot, Fall 2025

Qualitative Coding

Qualitative coding is when you create a list of themes, or a **schema**, that you want to highlight in a set of primary/secondary sources. Then, you go through all your sources and highlight particular moments from the text according to those themes.

Agenda

- What is qualitative coding?
- What is NVivo?
 - Important NVivo-specific vocabulary and functions
 - NVivo demonstration
 - Understand how to use NVivo as a research tool
 - Learn the differences between NVivo file types and why knowing this is important

Slides and handouts available at: <https://bit.ly/FA25-Whynot>

Getting started: Qualitative Coding with NVivo

What is NVivo?

- NVivo is a **text analysis** and **research organization** software that is available through [Northeastern's Student Hub](#) > Resources > IT Services > Software Downloads.
- NVivo provides methods for you to annotate and code documents with user-created tags (codes), summarize and visualize these codes, and organize research materials.

What is NVivo Useful For?

NVivo is particularly helpful for organizing and annotating research materials such as:

- **Primary sources:** any primary sources you may be analyzing such as letters, field notes, or documents from an archive
- **Secondary sources:** scholarly articles, newspaper articles, book chapters.
- **Your own notes** about your project (you can even compose in NVivo!)

Other functions of NVivo

- Create projects that store, organize, and code documents/files
- Provide a method for you to code your documents with a user-created coding schema (codes)
- Query, summarize, organize, and visualize information about your coding
- Conduct forms of computational text analysis, like word counts, on the documents, themselves
- Conduct social network analysis with social media datasets

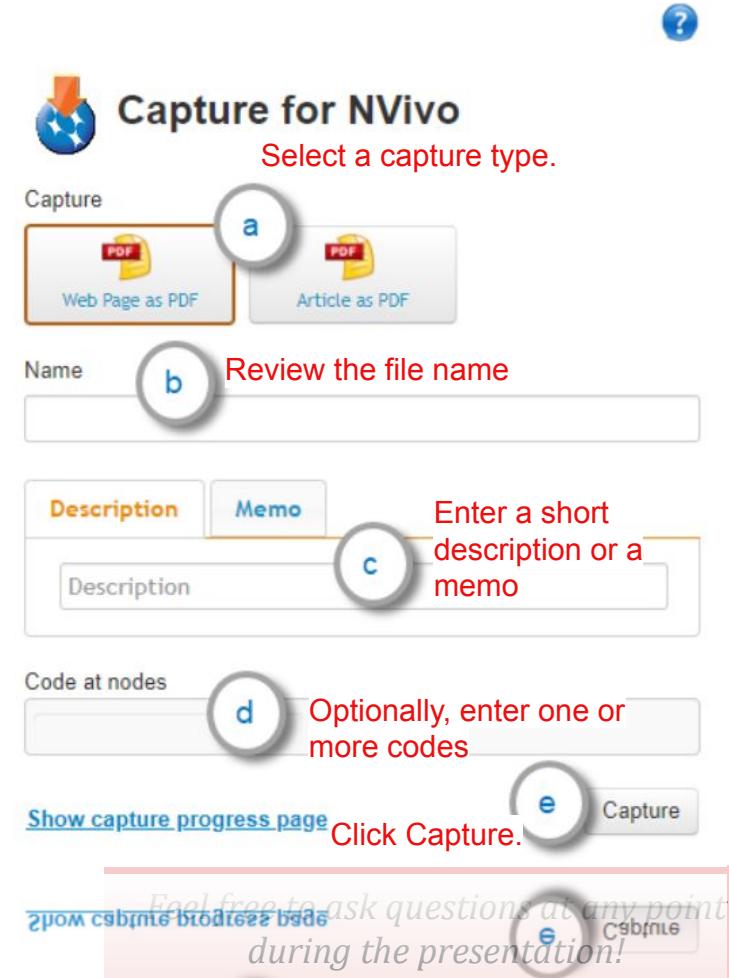
NVivo Vocabulary

Full definitions available on [the NVivo handout](#)

- **Data:** your research documents & files
- **Codes:** the ways to annotate the themes/concepts in your research.
- **Relationships:** coding connections between two data items
- **Cases:** units of analysis for your research.
- **Maps:** visualization tool to see connections between the cases and codes
- **Query:** a flexible way to explore and analyze your files, cases, and codes

NCapture

- NCapture is a free Chrome extension to capture web pages, online articles, Facebook and Youtube content and add annotations, memos, and codes. The captured content is saved as an NCapture file (.nvcx) which you can import into your NVivo project.
- Please be mindful of obtaining consent for individual information you are capturing. Be aware of the current website terms and conditions when capturing data.



Querying

Querying, or asking something from your data, in NVivo provides multiple ways to explore both your codes and your text.

- **Word Frequency:** Counts the number of times words (with stopwords removed) appear in one or more files. Stopwords have non-significant meaning and appear frequently, like “the”, “a,” “is,” etc. They can inflate word frequencies without adding meaning, and are typically removed.
- **Coding:** Shows the number of codes, text that was coded, and the files.
- **Crosstab:** cross reference codes and case classifications. For example, you might want to know how often a particular code appears in both scholarly articles and your primary texts.

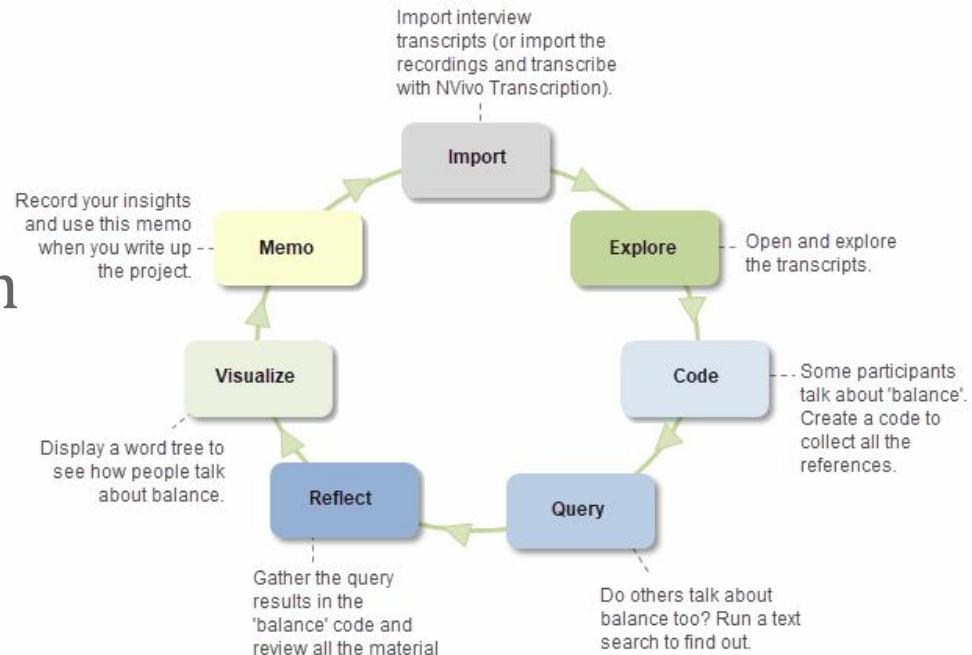
Coding & Organizing Literature Reviews

You can import reference files from EndNote, Zotero, and other citation management tools to organize a literature review. In your citation management tool, export the library as an XML (EndNote) or RIS file (Zotero).

1. Select the XML or RIS file from your directory.
2. Choose to display references by Author and Year, or Title.
3. Select the option to assign data to the Reference classification, or to other classifications (book, journal article, etc).
4. Select the option to replace attributes or memos with file notes, abstract, and keywords.
5. Click Import.

Making effective codes

The codes you create are themselves **arguments**; you are choosing what information you value and want to extract from the transcripts. This is often an iterative process.



Source: Lumivero - Workflow Overview

Codes

The list of themes or codes you will use to code your files. The “codes” folder will be empty until you add your own! You can add codes and sub-codes.

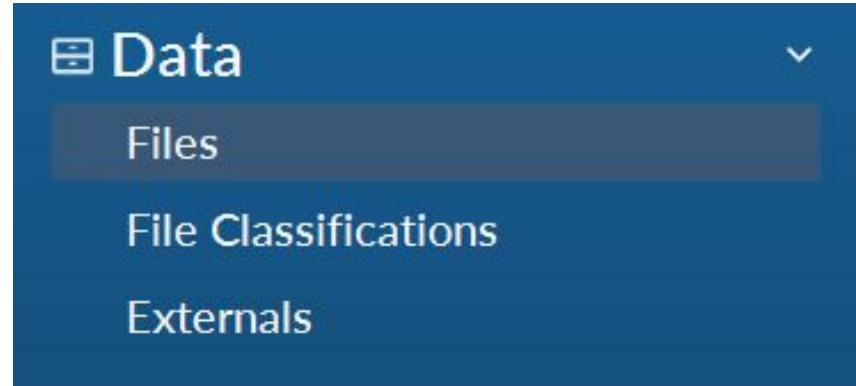
The screenshot shows a software interface for managing data and coding. On the left, a sidebar has 'Data' expanded, showing 'Files', 'File Classifications', and 'Externals'. Under 'ORGANIZE', 'Coding' is expanded, showing 'Codes' (which is further expanded to show 'Auto codes', 'Melaleuca 2017 survey', 'Melaleuca 2018 survey', 'Sub-Codes', 'Sentiment', 'Relationships', and 'Relationship Types'). To the right, a main panel displays a list of codes with their counts:

Code	Count	Count
mental-emotional wellb	13	54
OWN involvement	19	97
personal-individual facto	1	1
physical health	17	36
social connection	24	232
societal context	0	0
talking about ...	0	0

At the bottom of the main panel, there is a placeholder text: "Drag selection here to code to a new code".

Data

The “Data” in NVivo are all the research materials you are using (scholarly articles, transcriptions, newspapers, research notes, etc.).



“Files” will be where you can access all the research materials you have imported into this project.

Feel free to ask questions at any point during the presentation!

Important Reminders

- NVivo can import all types of files, including .docx, .pdf, .doc, .csv, .png, .jpeg, .txt, video/audio files, and more.
- You should always **save** your original documents on your local computer or in cloud storage, even if these documents are imported into NVivo. NVivo can store documents, but it is more of an organization and analysis tool, rather than a storage option.

NVivo is NOT crossplatform friendly

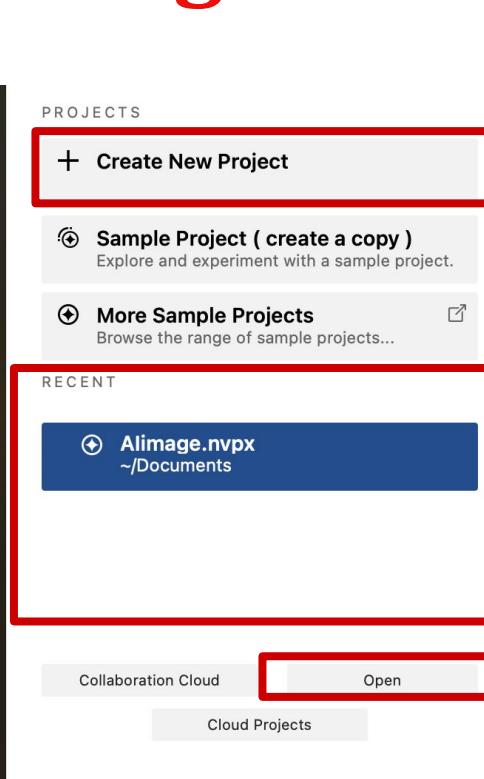
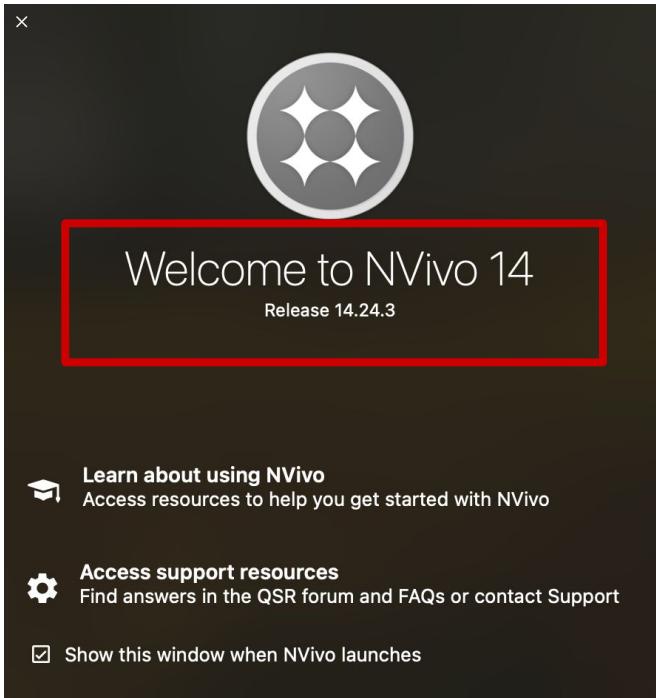
The Mac and PC versions of Nvivo—as well as the version numbers—are different and have different file types.

- Mac NVivo projects end in .npvx and can only open that file project type
- Windows NVivo projects end in .npv, but can open both .npv and .npvx
- Version numbers (11, 12, 14) also impact which projects can be opened on which platform

Anatomy of Nvivo: Mac

Anatomy of NVivo: Opening on Macs

Your version number (you should have version 12 or 14)

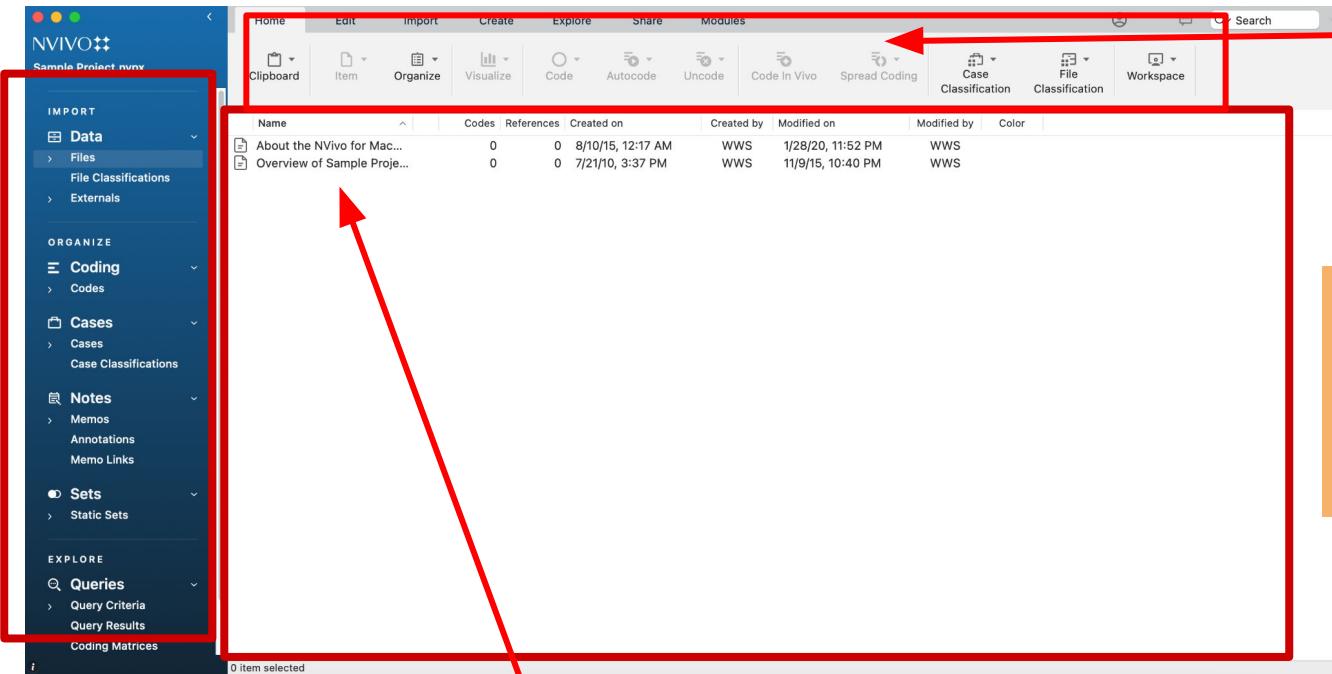


Create a new **project** (stores all your documents, codes, etc)

The recent projects you opened

Open another project that is not recent

Anatomy of NVivo: Projects on Macs



Menu to access files, codes, cases, notes, etc.

Toolbar to access functions

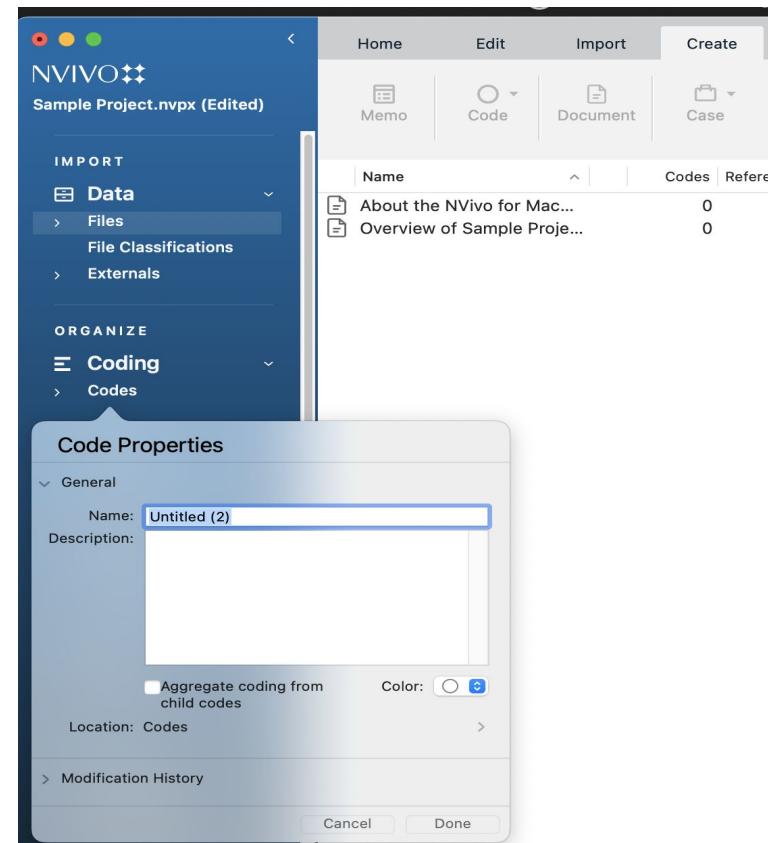
The window that will open the files, queries, etc. You can annotate documents here.

List of codes, files, etc.

Feel free to ask questions at any point during the presentation!

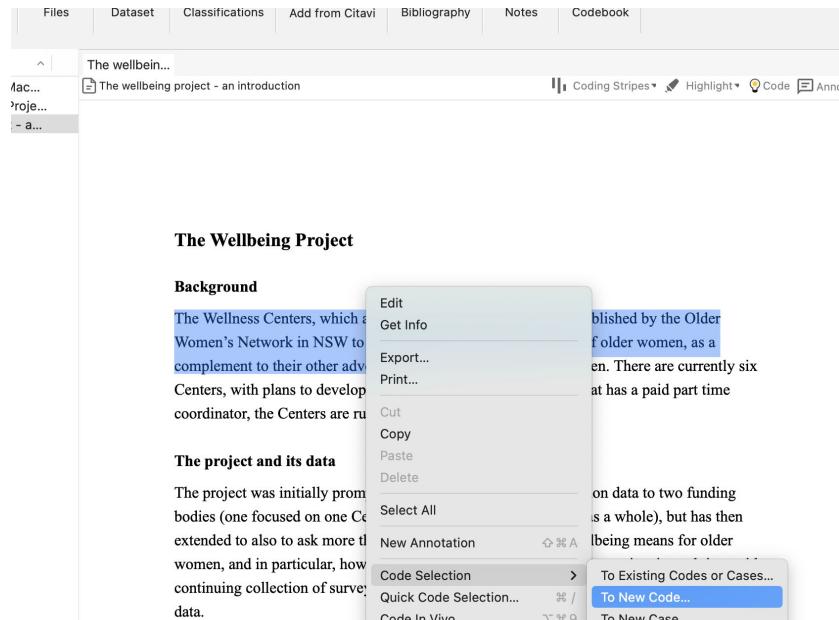
Creating Codes (Macs)

1. Go to “Create” in the toolbar
2. Click “Code”
3. Your new code will pop up and ask for a name and description
 - a. To add a *subcode*, follow the same steps, but click on the original code where you want to add the subcode



Coding Files/Documents (Macs)

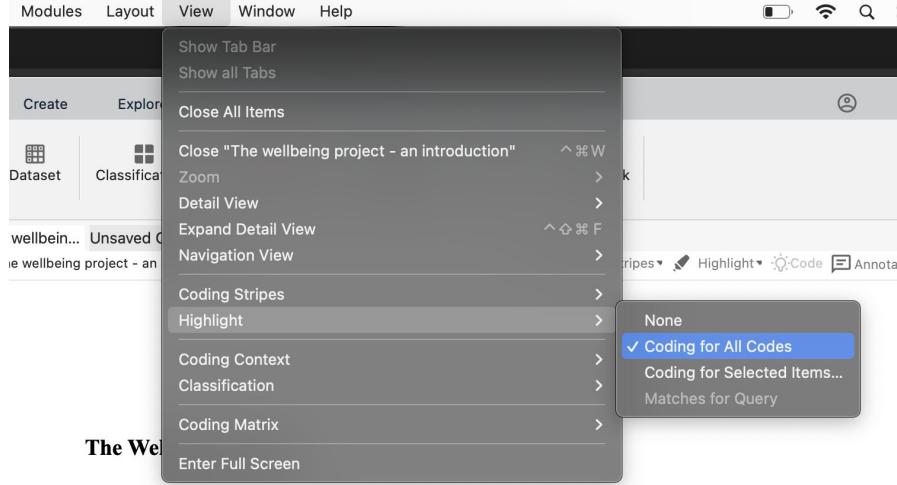
1. Open the file you would like to annotate.
2. Highlight the text you want to code.
3. Control-click and go to “Code Selection.”
4. Click “At Existing Codes or Cases”
 - a. Once you use codes, the codes will show up when you click “Code Selection.”
 - b. You can also add new codes/cases as you annotate.



Feel free to ask questions at any point during the presentation!

View Your Codes (Macs) 1/2

1. Go to “View” in the toolbar
2. Click “Highlight” then “Coding for All Codes”



Your document you are coding and annotation (yellow = codes, blue = annotations)

Background

The Wellness Centers, which are the focus of this study, were established by the Older Women's Network in NSW to enhance the health and wellbeing of older women, as a complement to their other advocacy work on behalf of older women. There are currently six Centers, with plans to develop more. With the exception of one that has a paid part time coordinator, the Centers are run by volunteers.

The project and its data

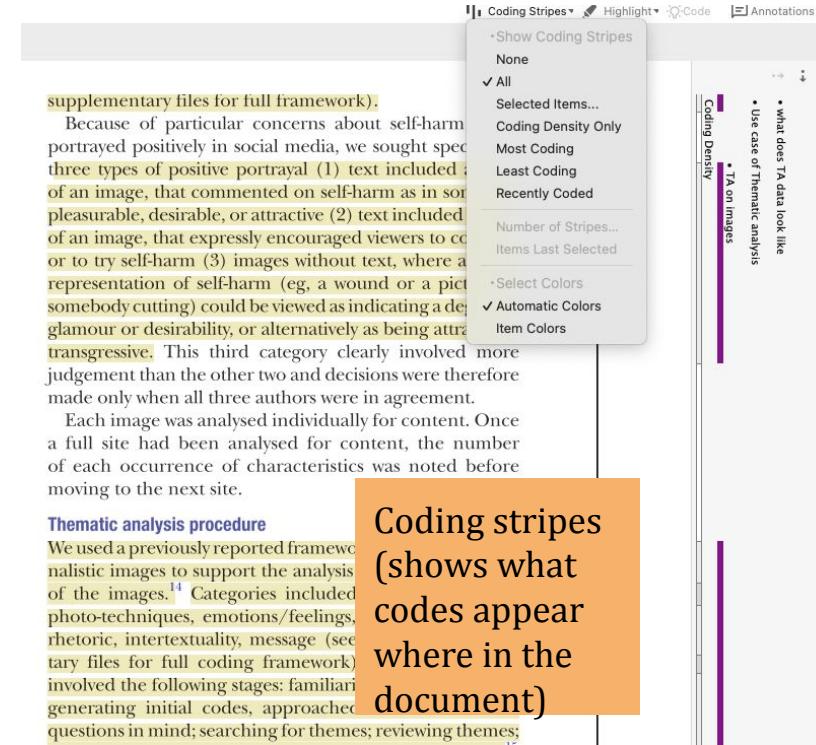
The project was initially prompted by the need to provide evaluation data to two funding bodies (one focused on one Center, the other on the organization as a whole), but has then extended to also to ask more theoretical questions about what wellbeing means for older women, and in particular, how wellbeing intersects with health. The project is evolving, with continuing collection of survey data, and occasionally additional collections of interview data.

ns at any point
ntation!

View Your Codes (Macs)2/2

Click “Coding Stripes” and “All Coding” to see the code names and where they appear in the document.

- a. If you have tagged an entire file as a “case,” everything will be highlighted. Choose “Coding for Selected Items” to select the codes you’d like to view.

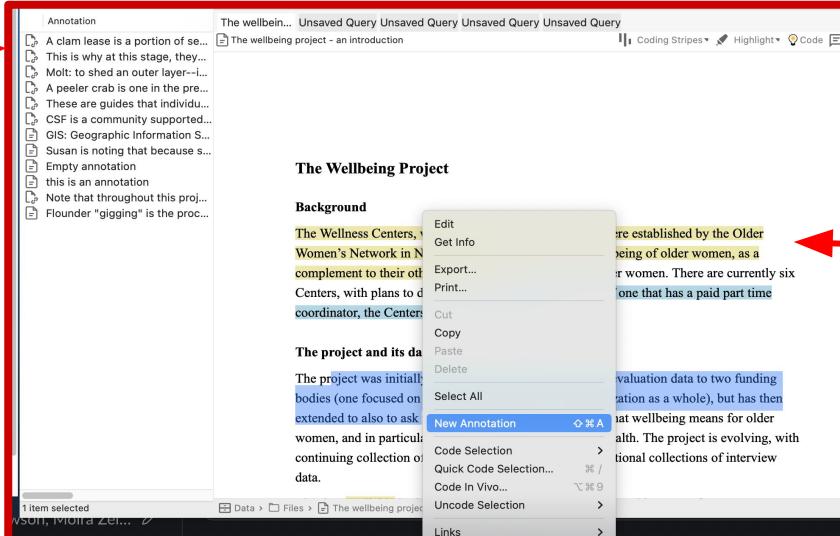


Feel free to ask questions at any point during the presentation!

Annotating Files (Macs)

To annotate (comment), follow the same steps as coding except instead click “New Annotation” after you highlight and control-click to reach the pop-up shortcut menu. Find all your annotations in the “Notes/Annotations” section in the left menu.

List of annotations



The text from the document you highlighted and are annotating

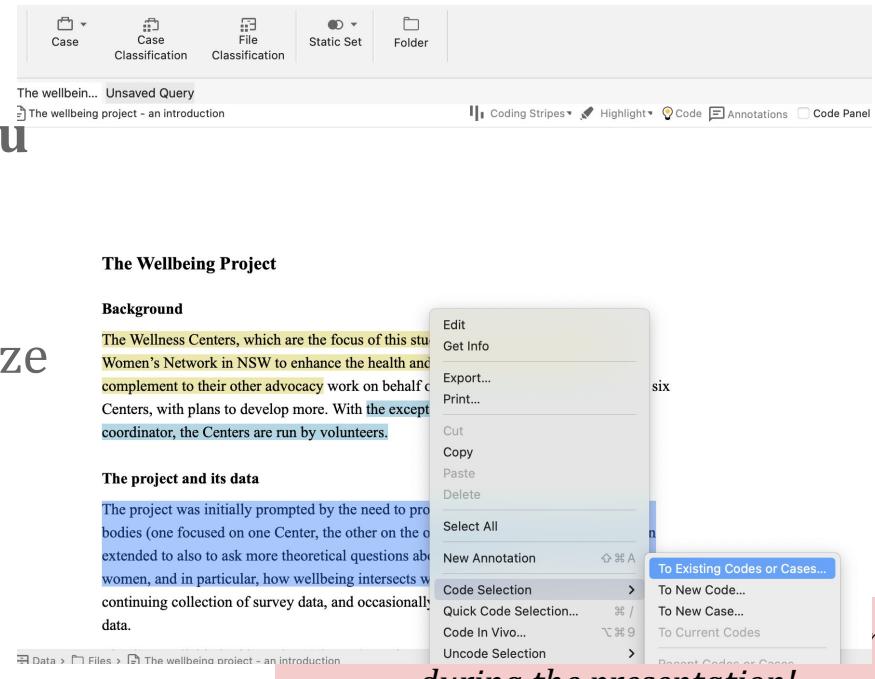
Feel free to ask questions at any point during the presentation!

Cases (Macs)

Cases are the types of research texts in your project and can be organized based on the user's choice. **"They might represent people, places, events, organizations or other entities that you want to analyze and compare."** For example, if you have several transcripts from different trials, but want to categorize the type of trial for each text, you would use cases to do so.

"About Cases", NVivo

To add a “case” to a file, it’s the same method as adding a code, except you choose the “Cases” folder and the proper case.



Word Frequency Example (Mac)

Click the word frequency tab, then select the items you would like to query in the “Selected Items” tab and then click “Run Query.”

The screenshot shows the NULab interface with the 'Word Frequency' tab selected. In the 'Word Frequency Criteria' section, the 'Selected Items' dropdown is open, and the 'Run Query' button is highlighted with a red box. The results table displays word frequency statistics for the selected items.

Word	Length	Count	Weighted Percentage
analysis	8	239	1.71%
data	4	205	1.47%
research	8	192	1.37%
model	5	139	0.99%
qualitative	11	125	0.89%
thematic	8	121	0.87%
themes	6	102	0.73%
codes	5	87	0.62%
keywords	8	83	0.59%
story	5	78	0.56%

Feel free to ask questions at any point during the presentation!

Crosstab Example (Mac)

Hit Explore,
Queries, then
Crosstab, and
Select the codes
you would like to
cross reference
with the cases or
attributes, then
click “Run Query.”

The screenshot shows the NULab interface with the following components highlighted:

- Selected codes (click the plus sign):** A red box highlights the "Codes" section on the right, which lists "Agriculture", "Fishing or aquaculture", "Jobs and cost of living", and "Tourism".
- Selected cases (click the plus sign):** A red box highlights the "Cases" section on the right, which lists "Person", "Age Group", and "Gender".
- Your results:** A red box highlights the central crosstab table showing the count of cases for each combination of gender and code.
- Query:** A red box highlights the "Run Query" button at the top right of the interface.

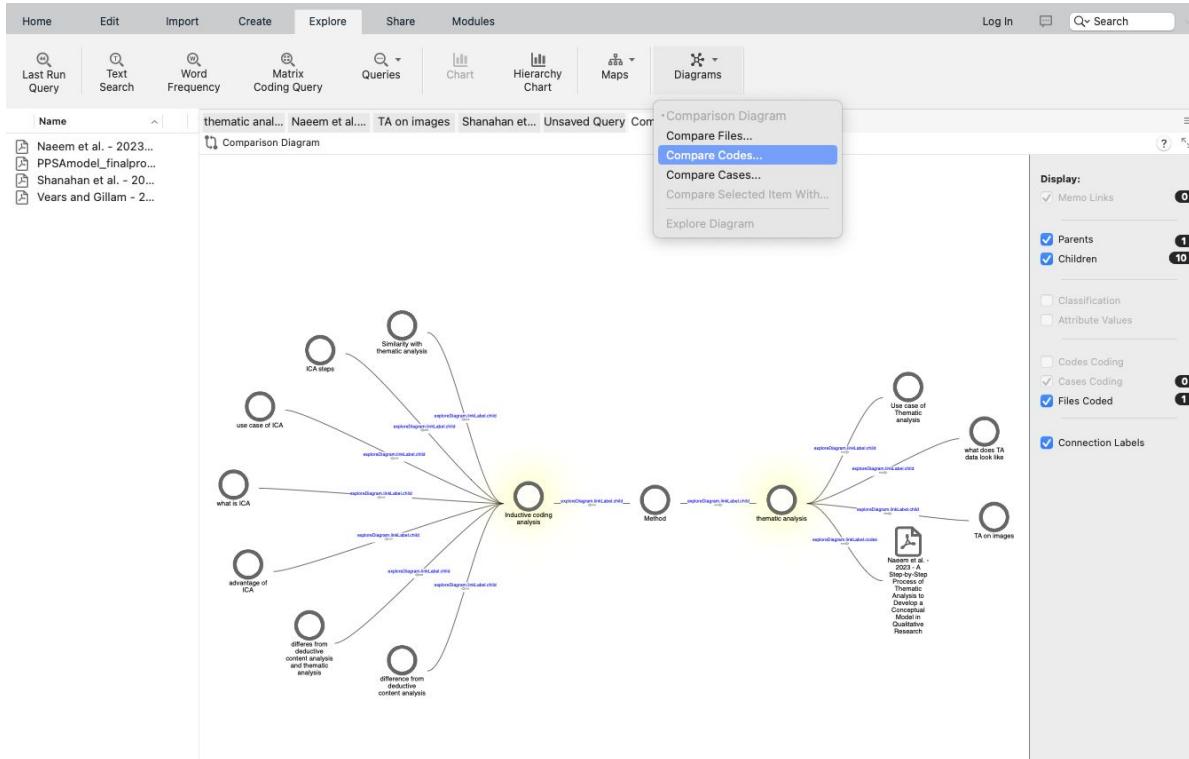
The crosstab table data is as follows:

	Gender = Female (n=3)	Gender = Male (n=2)	Gender = Female (n=9)	Gender = Male (n=12)	Gender = Female (n=12)
Agriculture	0	0	1	1	1
Fishing or aquaculture	3	2	8	12	12
Jobs and cost of living	0	1	2	1	1
Tourism	0	0	1	0	0
Total (Unique)	3	2	8	12	12

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during the presentation!

Exploring Codes (Macs)

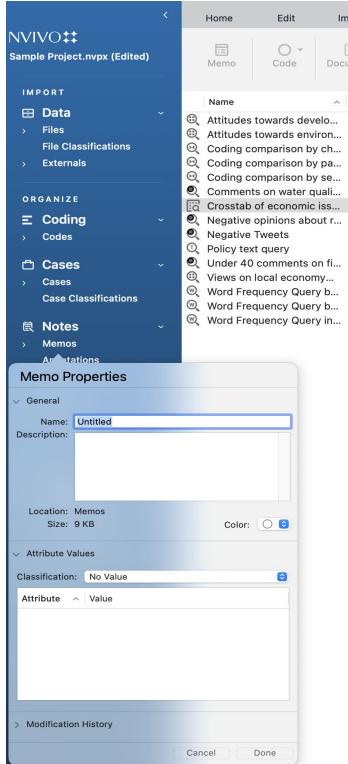
Comparison diagram example



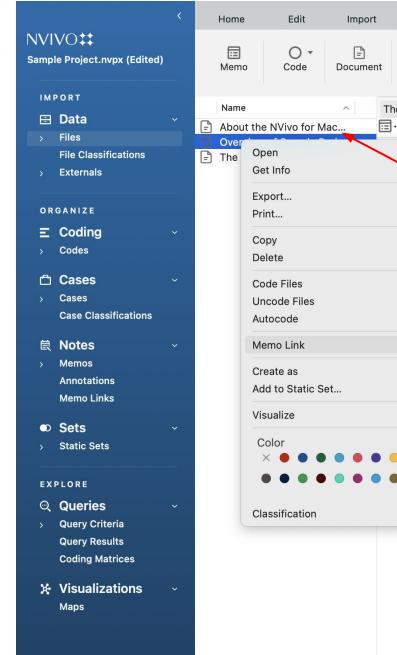
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Memos and Memo Links (Macs)

Menu where
memos are
located



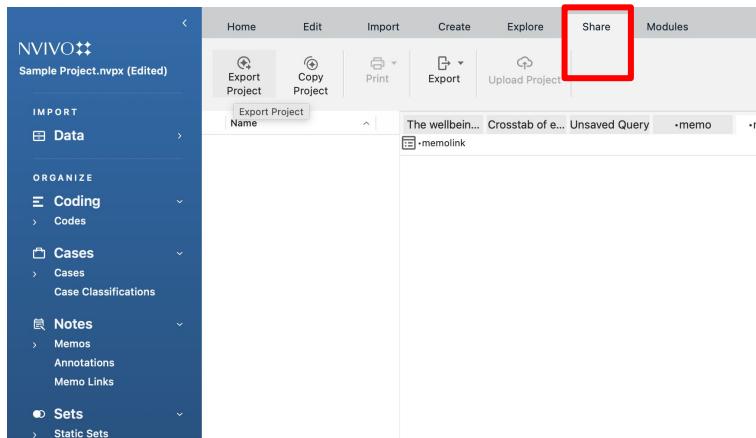
Navigating
memo
creation (hit
create,then
memo)



Navigate
to the file,
then right
click and
hit memo
link and
choose a
new or
existing
memo

Exporting Your Project

Since there is a cross-platform problem, **save and export your projects as .qdpix files** when submitting assignments so they can be opened on both Macs and Windows!



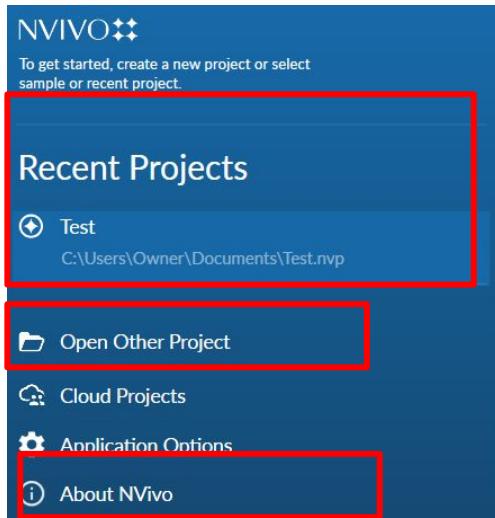
Anatomy of Nvivo: Windows

Anatomy of NVivo: Opening on Windows

The recent projects you opened

Open another project that is not recent

Your version number (you should have version **12 or 14**)



Create a new **project** (stores all your documents, codes, etc)

The NVivo interface continues. On the left, there's a "New Project" button with a plus sign, also highlighted by a red box. To its right are two "Sample Project" options: "Multi-method" and "Automated Insights". In the center, there's an "Account" section showing "Logged in as:" followed by a blurred profile picture. On the right, a "Getting Started" section with a rocket ship icon has the text "For a quick overview of NVivo click the tutorial below...".

Anatomy of NVivo: Projects on Windows

Menu to access files, codes, cases, notes, etc.

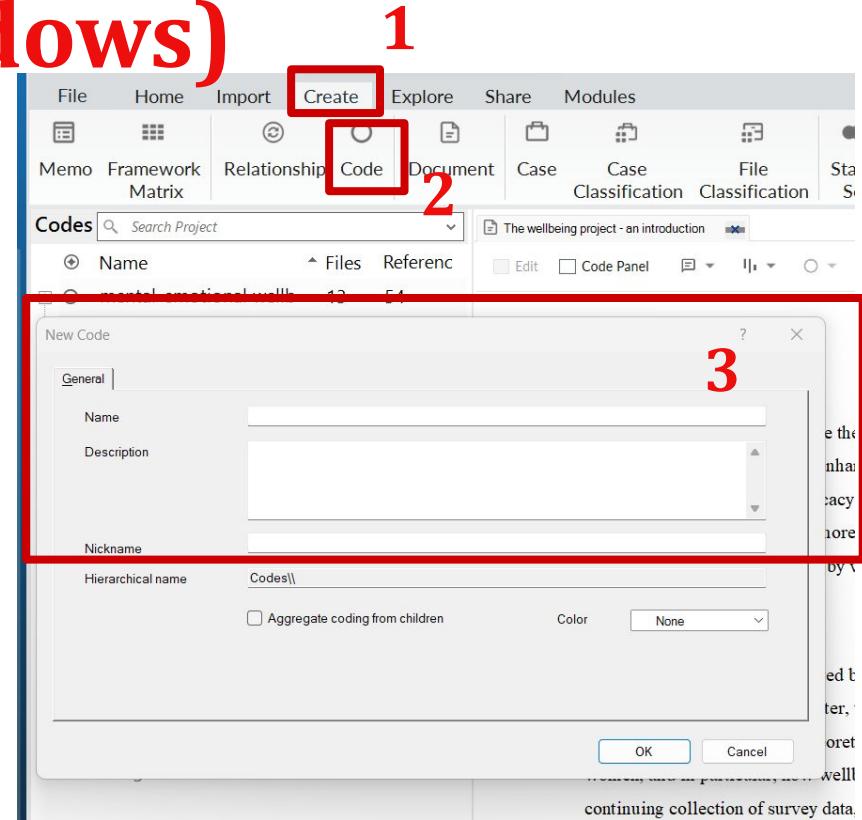
The screenshot shows the NVivo interface on a Windows system. At the top is the menu bar with File, Home, Import, Create, Explore, Share, Modules, Document, and Help. Below the menu bar is the toolbar with various functions like Annotations, Autocode, Chart, Word Cloud, and Compare With. The main window is titled 'The Wellbeing Project - an introduction'. It contains sections for 'Background' and 'The project and its data'. A sidebar on the left lists categories such as IMPORT (Data, Files, File Classifications, Externals), ORGANIZE (Coding, Codes, Sentiment, Relationships, Relationship Types), CASES, NOTES, SETS, EXPLORE (Queries, Visualizations, Reports), and a 'Quick Access' section. A red box highlights the 'Data' section under IMPORT. Another red box highlights the 'Annotations' button on the toolbar. A third red box highlights the project window itself. A yellow box labeled 'List of codes, files, etc.' points to the sidebar. A yellow box labeled 'Toolbar to access functions' points to the toolbar. A yellow box labeled 'The window that will open the files, queries, etc. You can annotate documents here.' points to the project window.

List of codes, files, etc.

Feel free to ask questions at any point during the presentation!

Creating Codes (Windows)

1. Go to “Create” in the toolbar
2. Click “Code”
3. Your new code will pop up and ask for a name and description
 - a. To add a *subcode*, follow the same steps, but click on the original code where you want to add the subcode



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Coding Files/Documents (Windows)

1. Open the file you would like to annotate.
2. Highlight the text you want to code.
3. Drag and drop the selection onto a code.
4. Alternatively, you can right-click and select “Code.”
5. You can also add new codes/cases as you annotate.

The screenshot shows the NULab interface. On the left, a sidebar titled "Codes" displays a list of codes with columns for Name, Files, and References. A red arrow points from the "personal-individual factor" row to the context menu. On the right, the main workspace shows a document titled "The Wellbeing Project - an introduction". A context menu is open over some text, with the "Code Selection..." option highlighted by a red box. The menu also includes options like "Code to Recent Codes", "Code In Vivo", "Uncode...", "Uncode from Recent Codes", "New Annotation", and "Turn on Edit Mode".

Name	Files	References
mental-emotional wellb	13	54
OWN involvement	19	97
personal-individual facto	1	1
physical health	17	50
social connection	24	232
societal context	0	0
talking about ...	0	0

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Steps to View Your Codes (Windows)

1. Go to “Document” in the toolbar
2. Click “Highlight” then “All Coding”
3. Click “Coding Stripes” and “All Coding” to see the code names and where they appear in the document.
 - a. If you have tagged an entire file as a “case,” everything will be highlighted. Choose “Coding for Selected Items” to select which codes you’d like to view.

View Your Codes (Windows)

The screenshot shows the NULab interface for Windows. The top navigation bar includes File, Home, Import, Create, Explore, Share, Modules, Code, and various search and export options. A red box labeled '1' highlights the 'Code' tab. Below it, a red box labeled '2' highlights the 'Coding Stripes' button in the toolbar. A red box labeled '3' highlights the dropdown menu for 'Coding Stripes' which lists options like 'None', 'All', 'Selected Items...', 'Coding Density Only', 'Number of Stripes...', 'Items Last Selected', 'Select Colors', 'Automatic Colors', 'Item Colors', 'Group by Color', and 'Shadow Coding'. The main workspace displays a document with two highlighted sections. The first section is annotated with 'mental-emotional wellb' and 'widowhood'. The second section is annotated with 'OWN involvement' and 'widowhood'. To the right, a 'CODE STRIPES' panel shows a summary of the coding density for different categories.

Coding stripes
(shows what codes appear where in the doc)

The document you are coding and annotations

Feel free to ask questions at any point during the presentation!

Annotating Files (Windows)

To annotate (comment), follow the same steps as coding except instead click “New Annotation” after you highlight and right click. Find all your annotations in the “Notes/Annotations” section in the left menu.

The screenshot shows the NULab interface for Windows. On the left, there's a sidebar with sections like Quick Access, File Classifications, Externals, Organize, Coding (Codes, Auto codes, Melaleuca 2017 survey, Melaleuca 2018 survey, Sub-Codes, Sentiment, Relationships, Relationship Types), Cases, Notes (Notes, Memos, Framework Matrices, Annotations, See-Also Links), and a red box highlighting Annotations. A large orange box labeled "List of annotations" covers the main content area where a list of annotations is shown. The list includes:

File Name	Number
Acacia L	1
Melaleuca 2017 survey	1
Melaleuca 2017 survey	2
Stathi et al AVONet-report	1
Waratah G - Pre	1
Ward et al Well Being in	1

A specific annotation is highlighted with a red box. It contains a quote from a participant (L) and a response (P). The quote is: "L: Particular experience – there's so many capable women in the community, in the society. They are all very, how do you put it, dedicated. Like this **Wellness**, in the committee, people are so dedicated, you know, moneywise as well timewise especially. We are all volunteers, so I really admire women, especially older women, for what they do." The response is: "P: And making use of what they've got". Below the quote, there's another snippet: "L: Yes exactly, exactly, really you know. Really I'm happy, you know, about this Wellness. We should really, you know, continue on for the younger women, Yes."

At the bottom, a red box highlights a table titled "Annotations" with one item listed:

Item	Content
1	This (and the next) paragraph are referring to the centre rather than the concept

Three orange boxes provide context for the interface elements:

- "Where you can find all your annotations listed" points to the sidebar under "Annotations".
- "Your annotation" points to the detailed annotation view at the top right.
- "The text from the document you highlighted and are annotating" points to the quoted text in the middle right.

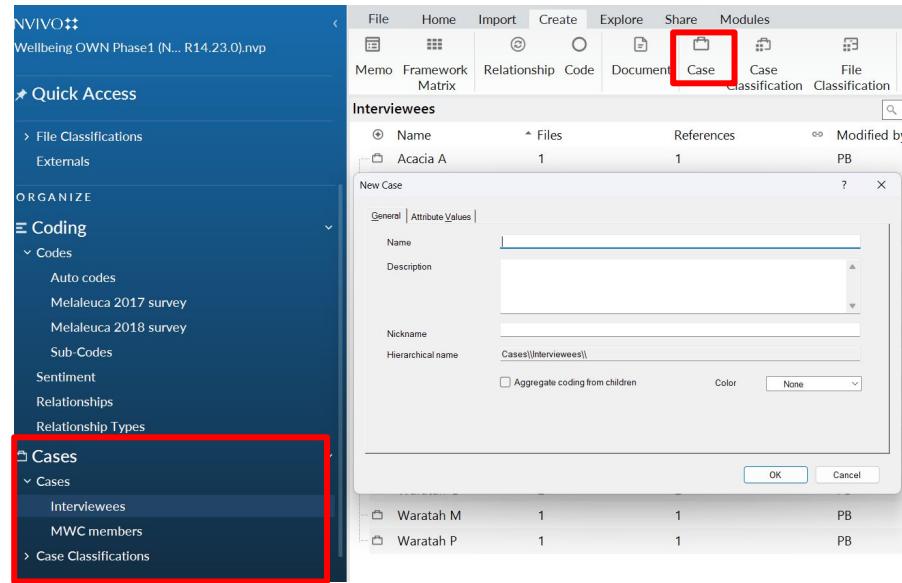
Cases (Windows)

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For example, if you have several transcripts from different trials, but want to categorize the type of trial for each text, you would use cases to do so.

"About Cases", NVivo

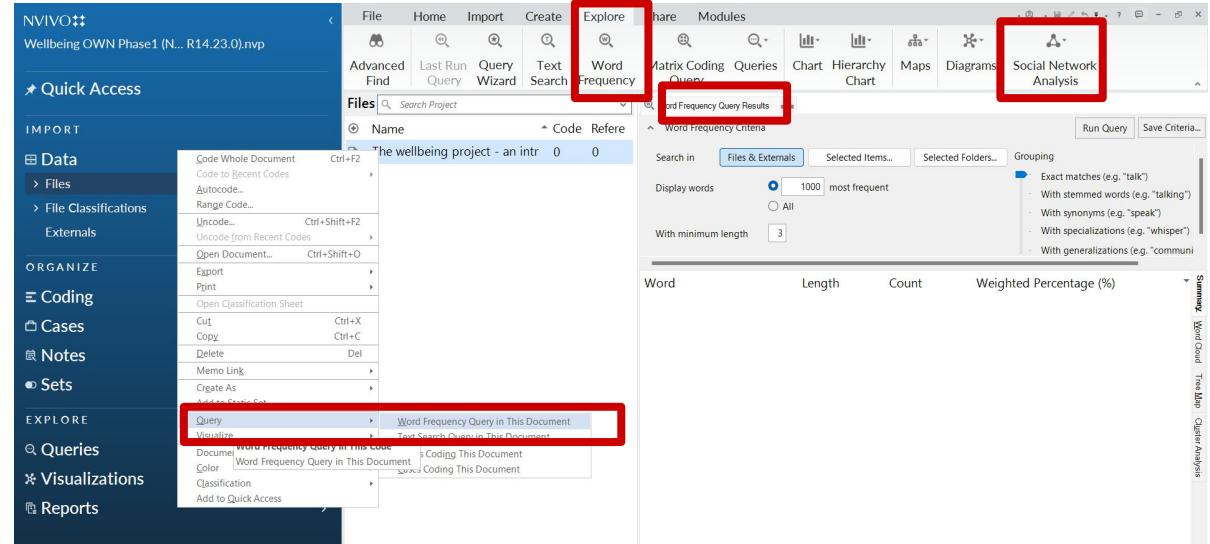
To add a "case" to a file, it's the same method as adding a code, except you choose the "Cases" folder and the proper case.



Feel free to ask questions at any point during the presentation!

Word Frequency Example (Windows)

- “Query” can be found in the “Explore” Tab
- Alternatively, you can right click on a file and select Query
- To query multiple items, select the items you would like to query in the “Selected Items” tab and then click “Run Query”



Feel free to ask questions at any point during the presentation!

Crosstab Example (Windows)

Select the codes you would like to cross reference with the cases or attributes, then click “Run Query.”

Selected codes (click the plus sign)

Selected cases (click the plus sign)

Your results

	mental-emotional wellbeing	Total
Acacia A	2	2
Acacia B	0	0
Acacia L	1	1
Acacia V	0	0
Correa C	2	2
Correa P	0	0
Total	5	5

Feel free to ask questions at any point during the presentation!

Exploring Codes (Windows)

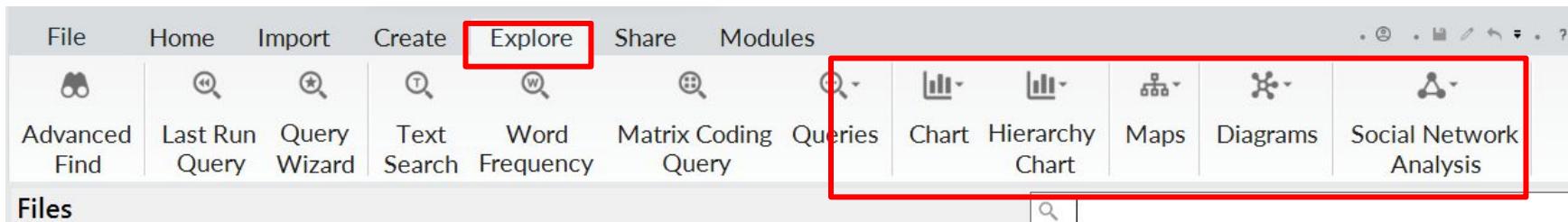
Chart: bar chart of the number of times codes were used in a file

Hierarchy chart: visualizes number of codes used in a file

Explore Diagram: explore the codes used in a file

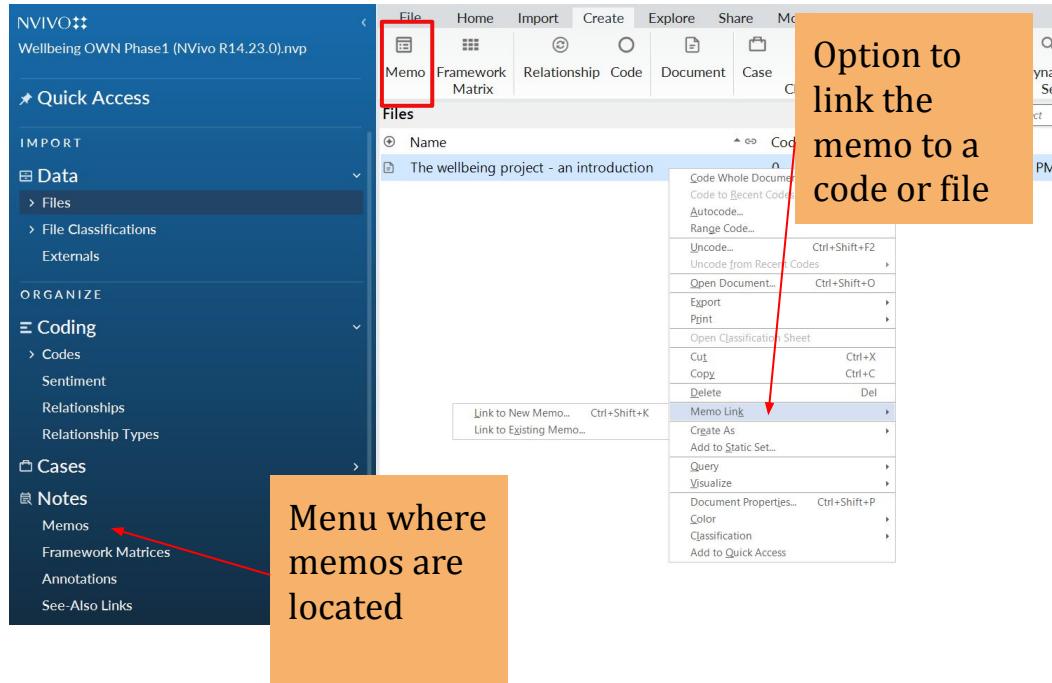
Comparison Diagram: compare the codes used in multiple files

Social Network Analysis: visualize relationships within networks



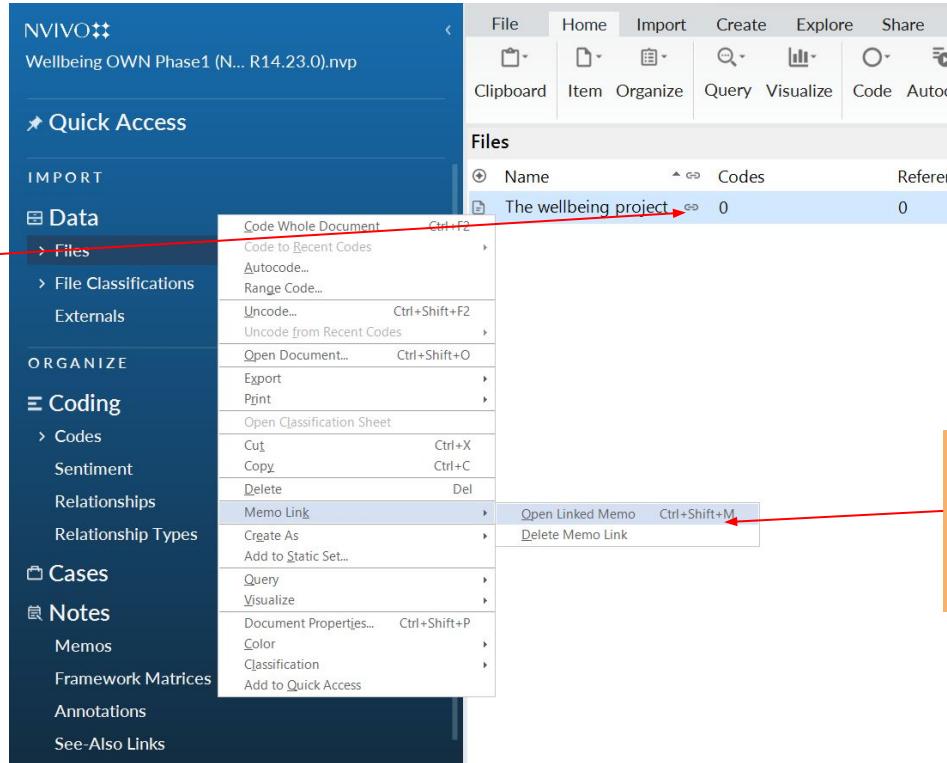
Memos (Windows)

- Memos are more extended write-ups of your analytical insights
- They can stand alone, but also be linked
- “Memo link”: linking memo to a particular file, case, or code



Memo Links (Windows)

Showing the link between the file and the memo

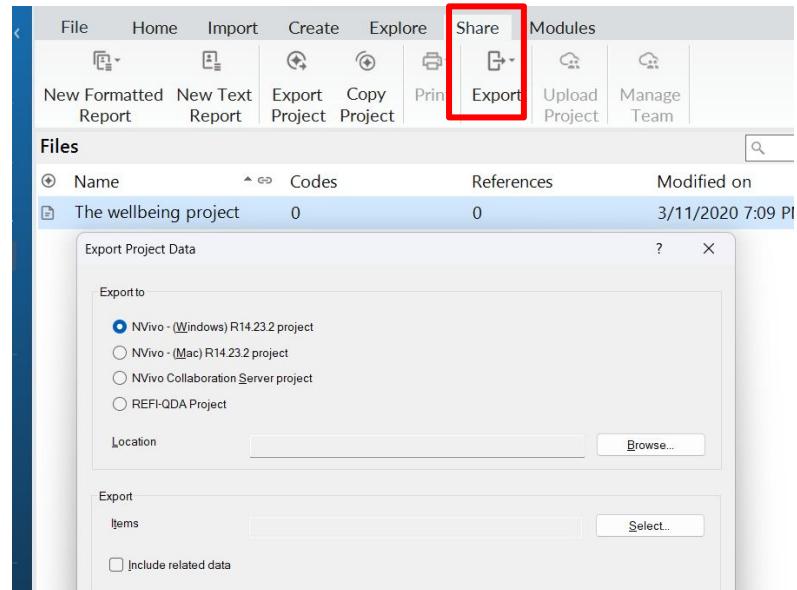


Accessing the memo from the file

Exporting Your Project (Windows)

Since there is a cross-platform problem, **save and export your projects as .qdpx files** when submitting assignments so they can be opened on both Macs and Windows!

1. On the Share tab, click Export Project.
2. Select REFI-QDA Project.



Further Learning & Practice

Qualitative Coding practice

Read "Men and healthy eating' dataset" and "Childfree"

- Come up with three themes you might want to highlight from this text; these themes should be about 1-3 words (ex: "health impacts")
- Underline the moments in the passage that reflect these themes.
- Try to recreate this schema in NVivo!

Ethical Considerations

- **Contextual Privacy**

- When we think about privacy online we want to think of it as contextual. What someone might be comfortable saying in one context might not be something they're okay saying to a researcher.

- **Keeping People Safe**

- It is risky to publicize the username, profile picture, or exact text of a social media post or profile.
 - To show example posts etc, you can make up your own or heavily redact them.

What information would you be comfortable sharing?

Learning Resources

- [Handout: Installing NVivo](#)
- [Handout: NVivo](#)
- [Handout: Accessibility in Digital Content](#)
- [Handout: Copyright and Fair Use](#)
- [Handout: Data Privacy](#)
- [Handout: Data Ethics](#)

Thank you!

—Developed by: Zhen Guo, Dipa Desai, Sean P. Rogers, Garrett Morrow, Cara Marta Messina, Yana Mommadova, Tieanna Graphenreed, and Emre Tapan

- Slides and handouts available at: <https://bit.ly/FA25-Whynot>
- For more information on DITI, please see: <https://bit.ly/diti-about>
- Schedule an appointment with us! <https://bit.ly/diti-meeting>
- If you have any questions, contact us at: nulab.info@gmail.com