

Lived Experience at the Core: A Classification System for Risk-Taking Behaviours in Bipolar

Corpus Annotation Guidelines for Qualitative Interviews

Daisy Harvey¹, Paul Rayson², Fiona Lobban¹, Jasper Palmier-Claus^{1,3}, Steve Jones¹

¹ Division of Health Research, Department of Health and Medicine, Lancaster University

² School of Computing and Communications, Lancaster University

³ Lancashire & South Cumbria NHS Foundation Trust, Lancashire, United Kingdom

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1 Introduction

This document provides the annotation guidelines for the corpus derived from qualitative interviews with lived experience participants and healthcare professionals on the topic of risky behaviours in bipolar disorder. The total corpus is around 120,000 words, of which ~100,000 words come from interviews with lived experience participants across 18 interviews, and ~20,000 words come from interviews conducted with healthcare professionals across 5 interviews. The interviews were all conducted between May and November 2022. Participants with lived experience were recruited via People in Research – a website hosted by the NIHR (National Institute of Health Research) which advertises public involvement research opportunities – and Spectrum Connect – a database of contacts with a diagnosis of bipolar held by Lancaster University’s Spectrum Connect Centre. The healthcare professionals were recruited either via People in Research or contacted directly by email by the lead researcher. This research has been approved by Lancaster University’s FHM Research Ethics Committee (FHMREC) under approval number 21042.

Research Objectives

The main objectives of this study are:

1. To identify the risk-taking behaviours described by participants (PWLE and HPs) and develop a classification of these behaviours using content analysis based primarily on lived experience.
2. To compare the risk-taking behaviours described by interview participants with behaviours from a risk-taking questionnaire to understand the relevance of a risk-taking measurement tool in clinical practice.
3. To identify areas where further support is needed for managing risky behaviours as well as issues associated with stigmatisation using corpus methods and qualitative analysis.

2 Annotation Guidelines

The transcripts within the corpus are to be annotated using XML encoding. This method of markup can be read by corpus software tools such as Sketch Engine (Kilgarriff et al., 2004) and can also be easily accessed via Python, thus ensuring that the annotated corpus will provide a valuable resource for future computational linguistic tasks on the topic of risk-taking in bipolar. It should be noted that annotation adds an extra level of information to the corpus, rather than redacting text from the corpus which is deemed irrelevant. This means that all of the data from the interviews will be included in the corpus, but the inclusion of XML tags means that sub-corpora can be easily generated, for example, we can build a sub-corpus based on a specific risk-taking behaviour or on utterances which relate to a specific question from the interview topic guide.

2.1 Content Analysis

XML Syntax The first part of the analysis for this study was to produce the encoding for the risk-taking behaviours using content analysis (CA), which is the process of compressing text into “content categories based on explicit rules of coding” (S. Stemler, 2000).

We employ a grounded theory approach to content analysis (S. E. Stemler, 2015) which enables the researchers to develop a coding framework as the coding progresses, based on the data within the transcripts (emergent coding) which is then used as a rubric to re-code existing data and encode future data. We have integrated the content analysis within the corpus building process by annotating the transcripts using XML markup so that the encoded behaviours can later be interpreted by the corpus software Sketch Engine (Kilgarriff et al., 2004).

Transcripts will be annotated primarily by the lead researcher (DH) who will annotate the transcripts with both structural and semantic tags. The second annotator (PR) will annotate excerpts from seven of the lived experience transcripts and two of the healthcare professional transcripts (circa 40%) with only the semantic tags ('rtb' and 'mood') so that Inter Annotator Agreement (IAA) can be calculated for this set of tags. As the tags for risky behaviours and mood are likely to be used as the input for future tasks (e.g. prediction and classification), it is necessary that we obtain an IAA score for these tags so that we can report on the accuracy of this resource in future work.

Whilst the structural annotations will only be completed by one annotator (DH), the process is described below for transparency of the methodology. Semantic annotation for risky behaviours and mood is described from 2.3 onwards, and it is

these semantic annotations which will ultimately be used to calculate IAA between Annotator 1 and 2.

2.1.1 XML Syntax

Each XML annotation should include an opening and closing tag. The opening tag is placed before the section of text that is being annotated, and the closing tag is placed at the end of the relevant section of text, demonstrated below.

`<tag descriptor= "attribute_value_here"> This is the section of text to be annotated.
</tag>`

Note:

- Straight double quotation marks "" must be used (which are default within a plain text editor), as curly quotes "" such as those used in Microsoft Word documents will not be recognised.
- Some tags may be nested e.g. for 'theme' and 'question' as described in section 2.2.3. When closing these tags, the tag which was most recently opened should be closed first. In the example below, the utterance tag is first opened, followed by the theme tag and then the question tag. This means that the question tag needs to be closed first, followed by the theme, followed by the utterance.

`<u who="P##"><theme type="risk_taking"><question type="Q6: What
are the biggest impacts of risky behaviours?">Participant
response</question></theme></u>`

An introductory document including more detailed instructions about the syntax of XML (Hardie, 2014) can be found at:

https://eprints.lancs.ac.uk/id/eprint/69932/1/icame_2014_0004.pdf

2.1.2 Opening the .xml File

It is recommended that the semantic annotation is incorporated using a text editing software such as Sublime Text (<https://www.sublimetext.com>) or similar. Errors in the annotation process can be identified easily by opening the .xml file with Google Chrome which will either represent the correct structure of the .xml file or it will describe where the error is within the file. Each transcript should be opened and annotated separately, and the structural elements of each file such as the filename, utterance tags and header tag should not be edited. Only the participant's responses should be annotated, not the utterances made by the interviewer.

2.2 Structural Annotation

2.2.1 Semi-automated Tagging of Utterances

Each transcript within the corpus begins as a tab separated .txt file, with the first column representing the speaker and the second column including the utterances from each speaker. To convert the .txt file to a file which is readable in .xml format we run an xml conversion python script, which converts the structure of the file into an xml tree. This places all utterances within a parent 'text' tag, and generates the ID number for the document. The text tag generates a child tag 'body', within which the utterances are contained. Each utterance is then automatically tagged according to speaker with a 'u' tag to represent utterance, and the attribute 'who' for this tag is assigned to the relevant speaker. At this stage, the automated tagging is complete and the files which are generated from the script are saved with the filename 'P##_w_tags.xml', where P## refers to the participant number.

2.2.2 The Header Tag

After the .xml documents have been created, a parent 'header' tag is incorporated into each xml file manually based on the demographic information provided by the participants when they signed up to the study. The header tag has one child, 'speaker' which has 9 or 10 attributes for the lived experience participants (the 'county' attribute value was not relevant for all participants) and 9 attributes for the healthcare professionals. These are shown in Table 1.

Table 1: Attributes and attribute values for 'speaker' tag

<i>Participant Type</i>	<i>Tag</i>	<i>Speaker Attribute</i>	<i>Viable Attribute Values</i>
<i>Lived Experience</i>	speaker	id=	"P##"
		age_group=	"25-34"
			"35-44"
			"45-54"
			"55-64"
			"65+"
		Sex=	"M"
			"F"
		years_w_diagnosis=	"#"
		interview_date=	"##/##/##"
		interview_type=*	"Teams_video"
			"telephone"
		county=**!	"[County]"
<i>Healthcare Professional</i>	speaker	Country=	"[Country]"
		est_age_diagnosis=	"#"
		participant=	"Lived_experience"
		id=	"P##"
		age_group=	"25-34"
			"35-44"
			"45-54"
			"55-64"
		sex=	"M"
			"F"
		interview_date=	"##/##/##"
		interview_type=*	"Teams_video"
		country_of_work=	"[Country]"
		years_professional_experience=	"#"
		job=	"[Job_title]"
		participant=	"Healthcare_professional"

* i.e. Via Microsoft Teams video or by telephone

** Most participants were based in England and described where they lived during the interview. This has been changed within the transcript to the relevant county rather than the specific town/city as per the transcription guidelines to prevent identification of interview participants. One participant was not based in England at the time of the interview so the county attribute was not included for this participant.

! Some of the healthcare professionals chose not to disclose their location so the county field was not included within the header for this sub-corpus. For those that did disclose their place of work, the details of specific locations were changed to the relevant county within the transcript as per the transcription guidelines.

Figure 1 represents the structure of an .xml file for a lived experience participant after the utterances have been encoded.

Figure 1: XML structure after structural annotation

```
▼<text id="">
  ▼<header>
    <speaker id="" age_group="" sex="" years_w_diagnosis="" interview_date=""
      interview_type="" county="" country="" est_age_diagnosis="" participant=""> </speaker>
  </header>
  ▼<body>
    <u who="INTERVIEWER"> Interviewer text goes here</u>
    <u who="P##"> Participant text goes here </u>
    <u who="INTERVIEWER"> Interviewer text goes here</u>
    <u who="P##"> Participant text goes here </u>
    <u who="INTERVIEWER"> Interviewer text goes here</u>
    <u who="P##"> Participant text goes here </u>
  </body>
</text>
```

2.2.3 Annotating Interview Sections

Each transcript is also annotated using a semi-automated process to distinguish between the parts of the interview which relate to the open-ended interview questions and those which relate to the survey questions and responses. Each utterance is annotated with a section tag to indicate which part of the interview it belongs to.

2.2.4 Annotating Interview Question and Theme

The annotation of transcripts is completed sequentially, beginning with annotations for the structural tags for interview question and theme, followed by annotation of the semantic tags for risky behaviours and finally for mood.

There are slightly different tagsets for the lived experience interviews and the healthcare professional interviews due to the different questions that were asked during the interviews.

2.2.4.1 Lived Experience Interviews

The 'question' tagset relates to the interview questions which yielded the information most relevant to risky behaviours upon analysis of the interview data. These questions each have their own attribute value belonging to the 'question' tag. The set of questions for the lived experience participants is shown in Table 2. Not all of the questions asked during the interview have an interview question tag attribute as it was decided during exploratory analysis that some questions asked were ultimately out of scope.

Table 2: Attribute values for the 'question' tag – Lived experience interviews

Interview Question Tag Attribute Values for Lived Experience Participants	Closing Tag
<question type="Q1: How do you refer to your diagnosis?">	</question>
<question type="Q2: How would you define risk-taking?">	</question>
<question type="Q3: What are your personal experiences with risky behaviours?">	</question>
<question type="Q4: What is the relationship between mood and risky behaviours?">	</question>
<question type="Q5: What is the relationship between medication and risky behaviours?">	</question>
<question type="Q6: What are the biggest impacts of risky behaviours?">	</question>
<question type="Q7: What emotions do you associate with risky behaviours?">	</question>
<question type="Q8: Are there any risky behaviours associated with positive outcomes?">	</question>
<question type="Q9: What is your experience with access to support for risky behaviours?">	</question>
<question type="Q10: Is there any further support that would be beneficial for risky behaviours?">	</question>
<question type="Q11: Are there any behaviours that aren't included in the MIS CAM which you think should be?">	</question>
<question type="Q12: Have you ever seen a questionnaire for risky behaviours before?">	</question>
<question type="Q13: How do you feel about completing a questionnaire like this?">	</question>
<question type="Q14: Do you take any medication for bipolar?">	</question>
<question type="Q15: Have health professionals ever asked about risky behaviours?">	</question>

For the lived experience participants, all of the question tag attribute values correlate directly with one of the five attribute values of the 'theme' tag (shown in Table 3) i.e. wherever an annotation is made for an interview question, a corresponding theme tag should also be encoded, these combinations are shown in Table 4. This results in nested tags.

Table 3: Attribute values for the 'theme' tag – Lived experience interviews

Theme Tag Attribute Values	Closing Tag	Use Case
<theme type="diagnosis">	</theme>	When participant is describing their diagnosis, usually one of the first responses in the interview
<theme type="risk_taking">	</theme>	This is likely to be the most attribute value for 'theme' throughout the transcripts, it's relevant wherever a participant talks about risky behaviours.
<theme type="support">	</theme>	This attribute value should be used to encode utterances

		where a participant talks about support that they have or haven't received, or that they would like to see in the future.
<theme type="MISCAM">	</theme>	This attribute value relates to participant responses which relate to the ranking survey that they have completed.
<theme type="managing_risk">	</theme>	This attribute value should be used where a participant talks about strategies they have implemented for managing risks.

Table 4: Attribute value combinations for 'theme' and 'question' tags – Lived experience interviews

Combination of Theme Tag Attribute Values and Question Tag Attribute Values	Closing Tags
<theme type="diagnosis"><question type="Q1: How do you refer to your diagnosis?">	</question></theme>
<theme type="risk_taking"><question type="Q2: How would you define risk-taking?">	</question></theme>
<theme type="risk_taking"><question type="Q3: What are your personal experiences with risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q4: What is the relationship between mood and risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q5: What is the relationship between medication and risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q6: What are the biggest impacts of risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q7: What emotions do you associate with risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q8: Are there any risky behaviours associated with positive outcomes?">	</question></theme>
<theme type="support"><question type="Q9: What is your experience with access to support for risky behaviours?">	</question></theme>
<theme type="support"><question type="Q10: Is there any further support that would be beneficial for risky behaviours?">	</question></theme>
<theme type="MISCAM"><question type="Q11: Are there any behaviours that aren't included in the MIS CAM which you think should be?">	</question></theme>
<theme type="MISCAM"><question type="Q12: Have you ever seen a questionnaire for risky behaviours before?">	</question></theme>
<theme type="MISCAM"><question type="Q13: How do you feel about completing a questionnaire like this?">	</question></theme>
<theme type="support"><question type="Q14: Do you take any medication for bipolar?">	</question></theme>
<theme type="support"><question type="Q15: Have health professionals ever asked about risky behaviours?">	</question></theme>

The interview question and corresponding theme tags should be encoded at the beginning of an utterance and should be closed out at the end of the utterance, and they should only be encoded on the participant's responses.

An example of an utterance annotated with a theme and question is shown in Figure 2.

Figure 2: Example of an utterance annotated with theme and question tags (paraphrased)

```
<u who="INTERVIEWER"> So I guess you talked a bit about not having had much access to therapy,
and have you ever kind of got any support for any of the risky behaviours that we've talked
about today?</u>
▼<u who="P07">
  ▼<theme type="support">
    <question type="Q9: What is your experience with access to support for risky behaviours?">
      I've had some group therapy for anxiety but nothing specifically for bipolar. I've had
      support through, I had like a community care coordinator who was good, and I have had some
      crisis care.</question>
    </theme>
  </u>
```

2.2.4.2 Healthcare Professionals

The attribute value tagset for the 'question' tag for the healthcare professional interviews is shown in Table 5.

Table 5: Attribute values for the 'question' tag - Healthcare professional interviews

Interview Question Tag Attribute Values for Healthcare Professional Participants	Closing Tag
<question type="Q1: What is your occupation?">	</question>
<question type="Q2: How would you define risk-taking?">	</question>
<question type="Q3: What types of risky behaviours do people with bipolar engage in?">	</question>
<question type="Q4: What is the relationship between mood and risky behaviours?">	</question>
<question type="Q5: What is the relationship between medication and risky behaviours?">	</question>
<question type="Q6: What are the biggest impacts of risky behaviours?">	</question>
<question type="Q7: Are there any risky behaviours associated with positive outcomes or examples of positive risk-taking?">	</question>
<question type="Q8: What type of support is available for risky behaviours?">	</question>
<question type="Q9: Are there any behaviours that aren't included in the MIS CAM which you think should be?">	</question>
<question type="Q10: Have you ever seen a questionnaire for risky behaviours before?">	</question>
<question type="Q11: Do you think a questionnaire like this would be useful?">	</question>
<question type="Q12: Do people tend to talk about risk-taking before or after a risk is taken?">	</question>
<question type="Q13: Is there any further support you think would be helpful?">	</question>
<question type="Q14: Do you think people find it easy to talk about risky behaviours with healthcare professionals?">	</question>

For the healthcare professionals, question tag attributes 2-14 have a corresponding theme, question 1 is the only question which does not require a theme. The theme tag attributes are shown in Table 6 and the combination of theme and question tag attributes are shown in Table 7.

Table 6: Attribute values for the 'theme' tag – Healthcare professional interviews

Theme Tag Attribute Values	Closing Tag	Use Case
<theme type="risk_taking">	</theme>	This is likely to be the most attribute value for 'theme' throughout the transcripts, it's relevant wherever a participant talks about risky behaviours.
<theme type="support">	</theme>	This attribute value should be used to encode utterances where a participant talks about support that is currently provided or which they think should be provided in the future.
<theme type="MISCAM">	</theme>	This attribute value relates to participant responses which relate to the ranking survey that they have completed.
<theme type="managing_risk">	</theme>	This attribute value should be used where a participant talks about strategies they have observed for managing risk or strategies that could be implemented in the future.

Table 7: Attribute value combinations for 'theme' and 'question' tags – Healthcare professional interviews

Combination of Theme Tag Attribute Values and Question Tag Attribute Values	Closing Tags
<theme type="risk_taking"><question type="Q2: How would you define risk-taking?">	</question></theme>
<theme type="risk_taking"><question type="Q3: What types of risky behaviours do people with bipolar engage in?">	</question></theme>
<theme type="risk_taking"><question type="Q4: What is the relationship between mood and risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q5: What is the relationship between medication and risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q6: What are the biggest impacts of risky behaviours?">	</question></theme>
<theme type="risk_taking"><question type="Q7: Are there any risky behaviours associated with positive outcomes or examples of positive risk-taking?">	</question></theme>
<theme type="support"><question type="Q8: What type of support is available for risky behaviours?">	</question></theme>
<theme type="MISCAM"><question type="Q9: Are there any behaviours that aren't included in the MIS CAM which you think should be?">	</question></theme>
<theme type="MISCAM"><question type="Q10: Have you ever seen a questionnaire for risky behaviours before?">	</question></theme>
<theme type="managing_risk"><question type="Q11: Do you think a questionnaire like this would be useful?">	</question></theme>
<theme type="risk_taking"><question type="Q12: Do people tend to talk about risk-taking before or after a risk is taken?">	</question></theme>
<theme type="support"><question type="Q13: Is there any further support you think would be helpful?">	</question></theme>
<theme type="support"><question type="Q14: Do you think people find it easy to talk about risky behaviours with healthcare professionals?">	</question></theme>

2.2.5 Ambiguous Cases

2.2.5.1 Different question answered than asked

In some cases, the participant may have answered a question that the interviewer hasn't yet asked or is not a direct response to the question that was asked. In these instances, the utterance is encoded with the most relevant question pertaining to the information within the utterance. For example:

Interviewer: Do healthcare professionals talk to you about risky behaviours?

Participant: There needs to be more support available for people living with this condition, I'd like access to talking therapy but I just can't seem to get off the waiting list.

In the example above, although the question asked relates to attribute value "Q15: Have health professionals ever asked about risky behaviours?" in the lived experience interviews tagset, the response is more relevant to attribute value "Q10: Is there any further support that would be beneficial for risky behaviours?" and should be annotated accordingly. This method of annotation is relevant to theoretical thematic analysis where we annotate data into the most relevant category according to our annotation guidelines.

2.2.5.2 Annotating theme only

Not every utterance made by the participant is annotated with a theme and question tag. In some instances, utterances may not receive any tag where they do not contain any relevant information, or where the utterance does not relate to one question specifically. In cases where the participant response does not relate to a question but contains information which is relevant to one of the themes, the relevant section of text is encoded with only a 'theme' tag.

2.2.5.3 Final notes on theme and question tags

It is important to note that due to the way that the interviews ran, not every question will have been asked at every interview, and the interview questions may have been asked in a different order depending on the flow of the interview. Therefore, the question numbers in the 'question' tag attribute values act as a reference for the annotator for consistency throughout annotation rather than dictating where the question is asked over the course of the interview. Questions will also have been phrased slightly different throughout the interview depending on the context of the conversation, rather than being a verbatim representation of the question illustrated in the question tag attribute values.

As described earlier in this document, not all of the questions asked during the interview have a corresponding interview question tag attribute. This is because it was decided during exploratory analysis that some questions asked were ultimately out of scope and would not contribute greatly to answering the research objectives.

2.3 Semantic Annotations

2.3.1 Annotating Risky Behaviours

Risk taking behaviours should be annotated wherever they occur, including if participants repeat a risky behaviour multiple times. In some cases there may be ambiguity as to where the description of a risk-taking behaviour starts and ends, thus we employ a principle of sufficiency for these annotations. Annotations should include enough context that the description of a risky behaviour makes sense as a standalone sentence or phrase, and it should be clear from the annotated text what the risky behaviour is. If too much text is included within an annotation for a risky behaviour it becomes harder to identify and may skew the results of some corpus techniques such as keyword lists.

Risk taking behaviour tags can be stacked where multiple behaviours are described within the same sentence.

Risky behaviours should be annotated where the participant identifies that it is something they have engaged in themselves, or where they refer to other people they know with a diagnosis of bipolar who have engaged in that behaviour.

Risky behaviours should *not* be annotated where they are negated by the participant e.g.

I don't ever gamble, it's not something I've ever thought to do.

The attribute values for the 'rtb' tag are shown in Table 8. They have been categorised into behavioural themes. The same attribute value list can be used for both the lived experience and healthcare professional interviews.

Table 8: Attribute values for the 'rtb' tag

Risky Behaviours ('rtb') Tag Attribute Values	Closing Tag
(Anti-) Social Behaviours	
"Having no filter" (being rude/ inappropriate/ lack of social boundaries) <rtb type="SR1-NF">	</rtb>
Starting arguments <rtb type="SR2-SA">	</rtb>
Neglecting relationships <rtb type="SR3-NR">	</rtb>
Being aggressive, violent or destructive <rtb type="SR5-AVD">	</rtb>
Talking to strangers <rtb type="SR6-TS">	</rtb>
Hyperfixation <rtb type="SR4-HF">	</rtb>
Financial Behaviours	
Spending money impulsively or excessively	</rtb>

<rtb type="FI1-SME">	
High-risk investing	</rtb>
<rtb type="FI2-HRI">	
Gambling	</rtb>
<rtb type="FI3-GA">	
Quitting a job impulsively	</rtb>
<rtb type="FI4-QJ">	
Excessive generosity (giving money/belongings away)	</rtb>
<rtb type="FI5-EG">	
Dangerous or Disinhibited Behaviours	
Going to dangerous or unusual places	</rtb>
<rtb type="VD1-DUP">	
Leaving home or running away	</rtb>
<rtb type="VD2-LHRA">	
Standing on bridges/ high places	</rtb>
<rtb type="VD3-SB">	
Impulsive travelling	</rtb>
<rtb type="VD4-IT">	
Extreme sports	</rtb>
<rtb type="VD5-ES">	
Dangerous driving	</rtb>
<rtb type="VD6-DD">	
Stealing	</rtb>
<rtb type="VD7-ST">	
Carrying or using weapons	</rtb>
<rtb type="VD8-CUW">	
Wearing inappropriate clothing	</rtb>
<rtb type="VD9-WIC">	
Entering vulnerable relationships	</rtb>
<rtb type="VD10-VR">	
Walking in traffic	</rtb>
<rtb type="VD11-WT">	
Health-Risk and Substance-Misuse Behaviours	
Medication non-adherence	</rtb>
<rtb type="HR1-MNA">	
Excessive eating	</rtb>
<rtb type="HR2-EE">	
Not eating	</rtb>
<rtb type="HR3-NE">	
Smoking	</rtb>
<rtb type="SM1-SMO">	
Drinking alcohol excessively	</rtb>
<rtb type="SM2-EA">	
Taking recreational drugs	</rtb>

<rtb type="SM3-RED">	
Self-Injurious and Suicidal Behaviours	
Suicide or attempting suicide	</rtb>
<rtb type="SHS1-SUA">	
Suicidal ideation	</rtb>
<rtb type=" SHS2-SUI ">	
Overdosing	</rtb>
<rtb type=" SHS3-OV ">	
Self-harming	</rtb>
<rtb type=" SHS4-SEHA ">	
Sexual Behaviours	
Having sex with strangers	</rtb>
<rtb type=" S1-SWS ">	
Having unprotected sex	</rtb>
<rtb type=" S2-US ">	
Having an affair	</rtb>
<rtb type=" S3-HA ">	
Porn addiction	</rtb>
<rtb type=" S4-PA">	
Hypersexuality (dating apps)	</rtb>
<rtb type=" S5-HYDA">	
Hypersexuality (non-specified)	</rtb>
<rtb type=" S6-HYNS ">	

If an annotator observes a risk-taking behaviour that is not included within the guidelines it should be recorded for discussion with the wider research team.

2.3.2 Annotating Mood

Some participants refer to mood in relation to engaging with risky behaviours. These should be annotated using the ‘mood’ tag. In some cases a participant may talk about a number of moods in succession, so each section should be annotated with the relevant mood. An example is shown below.

<mood type="depressed"> When I’m in a low mood, I don’t really do anything. I tend to just sit around the house and struggle to take care of myself. </mood> <mood type="elevated"> But when I’m high I feel like I can do anything, really I feel like I’m on top of the world. </mood>

The ‘mood’ tag can be nested with a ‘rtb’ tag in instances where the participant talks about their mood and a risky behaviour in the same section of text. An example is shown below.

<mood type="elevated">When I’m high I feel like I can do anything, <rtb type="spending_and_excessive_generosity"> I spend money I don’t have and usually end up in debt. </rtb></mood>

The tag attribute values for ‘mood’ are shown in table along with their use cases. These tags can be used to annotate both the lived experience transcripts when they discuss their mood states as well as the healthcare professional transcripts when they discuss their observations of people with a diagnosis of bipolar.

Mood	Closing Tag	Use Case
<mood type="elevated">	</mood>	When participants discuss an elevated or ‘high’ mood.
<mood type="depressed">	</mood>	When participants discuss a low mood or talk about depression.
<mood type="rapid_cycling">	</mood>	When participants describe quickly moving between periods of elevated and low mood.
<mood type="mixed_state">	</mood>	When participants describe elements of both an elevated and low mood simultaneously.

2.4 Calculating IAA

Inter Annotator Agreement (IAA) will be calculated using an F-measure (56) for two conditions; span matches (both annotators annotate a text span with a risk-taking behaviour) and concept matches (both annotators annotate a text span with the *same* risk-taking behaviour (Wang et al., 2021)). A ‘relaxed’ approach to matches will be implemented as described in (Wang et al., 2021). In this method, both annotators do not need to mark the exact same span of text. Instead, agreement will be considered valid if their annotations overlap within any part of the text span.

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