Bipolar disorder is an illness characterized by **financial instability** and risky decision-making.

How can **open banking data** support existing contexts of caregiving in managing these risks?

Supportive Fintech for Bipolar Disorder

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Background

Bipolar disorder (BD) is strongly associated with financial instability [5]. Symptomatic periods in BD often manifest in poor financial decision-making. For example, 70% individuals with BD have reported impulsive spending during hypomania [3]. Problematic financial behaviors during symptomatic periods can lead to serious long-term financial instability, which can severely impact the quality of life for individuals with BD and their care partners. Maintaining financial stability is a critical challenge to ensure the long-term wellbeing for individuals with BD.

However, there remains a knowledge gap regarding how idiosyncratic, context-driven, and illness-specific factors impact financial decision-making in BD. Furthermore, the lack of granular, in-situ assessment methods is a key challenge against developing just-in-time and personalized interventions focusing on financial stability for this population. Given the importance of financial stability for individuals with BD, this remains a serious knowledge gap with broad practical and societal implications.

Methods

Given the sensitivity of personal financial data, we initially sought to establish acceptance and privacy concerns regarding the use of financial data as an objective behavioral marker in BD. We conducted an online factorial vignette survey (N=500; US Prolific) to collect data from individuals with BD.

We used a factorial vignette approach to assess level of comfort with a set of hypothetical scenarios. We systematically varied three factors in our vignette experiment to explore differences in comfort across 18 total scenarios involving intervention actors, contexts, and timing.

Factors and levels contained in our factorial vignette experiment.

Factor	Levels
Actors	Clinicians Care partners Banks
Intervention Context	Share spending details Planning & bugeting 48-hour spending restriction
Mood State	During a mood episode During stable mood

We chose to include only third-party actors, opting to exclude self-management as a possibility. Our prior survey deployment [2] demonstrated a high level of comfort when sharing financial data for self-management.

We included a number of explanatory variables as well to explore relationships between clinical and financial topics. Clinical history variables included bipolar diagnostic subtype (i.e., BD-I, BD-II, etc.), whether the individual had ever been hospitalized, and whether they had a psychiatric advance directive in place. Financial history variables included whether the individual has considered or declared bankruptcy, whether they have asked care partners for help managing finances, their primary financial goal, and if they have used a Buy Now/Pay Later service. We also collected the Big Five Personality Inventory [4] and Consumer Financial Protection Bureau Financial Well-being Scale [1].

Results

Actors	Intervention Context	Mood State	Mean	Median	SD
Banks	48h Spending Restriction	During Episode	2.74	2.00	2.96
Banks	48h Spending Restriction	Stable Mood	1.81	0.00	2.54
Banks	Planning & Budgeting	During Episode	3.81	4.00	3.20
Banks	Planning & Budgeting	Stable Mood	4.26	4.00	3.18
Banks	Share Spending	During Episode	2.88	2.00	2.96
Banks	Share Spending	Stable Mood	3.16	2.00	3.03
Care Partners	48h Spending Restriction	During Episode	4.58	5.00	3.22
Care Partners	48h Spending Restriction	Stable Mood	2.98	2.00	2.98
Care Partners	Planning & Budgeting	During Episode	5.95	6.00	2.96
Care Partners	Planning & Budgeting	Stable Mood	5.94	6.00	2.94
Care Partners	Share Spending	During Episode	5.41	6.00	3.06
Care Partners	Share Spending	Stable Mood	5.06	5.00	3.12
Clinicians	48h Spending Restriction	During Episode	3.74	4.00	3.10
Clinicians	48h Spending Restriction	Stable Mood	2.58	2.00	2.81
Clinicians	Planning & Budgeting	During Episode	5.40	6.00	3.00
Clinicians	Planning & Budgeting	Stable Mood	5.29	6.00	3.03
Clinicians	Share Spending	During Episode	5.03	6.00	3.12
Clinicians	Share Spending	Stable Mood	4.63	5.00	3.08

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NIH National Institute of Mental Health