Study Title: Improving Delay Discounting to Decrease Harsh Parenting Among Parents Receiving Substance Use Treatment

NCT #: NCT05229120

Protocol Title: Fast Forward: Future Thinking to Improve Parent-Child Relationships

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Dr. Julia Felton

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1. STUDY AIM, BACKGROUND, AND DESIGN ABSTRACT

The aims of the current study are to conduct a small case series (up to N=30) to evaluate the preliminary feasibility of implementing a brief, episodic future thinking (EFT) intervention in a substance use treatment setting serving low-income parents.

Episodic future thinking (EFT) refers to the ability to imagine, in vivid detail, events that may occur in the future (Lin & Epstein, 2014). EFT relies on episodic memory, which allows for recollection of past, personal experiences. Research has shown that episodic memory supports the creation of positive, future events by combining past experiences with vivid detail of events that may occur in the future. Recent studies have shown that EFT intervention can decrease delay discounting (DD), which is a facet of impulsivity (Dassen et al., 2015; Snider et al., 2019; Stein et al., 2016).

The overarching goal of this EFT intervention is to increase parents' focus on positive, future events associated with enhancing the parent-child relationship. Rather than trying to decrease negative parenting practices, the focus of this study is to promote positive parent-child relationships by envisioning future-directed events. To date, no research has examined EFT in relation to parenting behaviors. Moreover, the intervention requires limited time and financial resources to implement, suggesting it may be effectively delivered in a disadvantaged community. The current application of EFT proposes to examine the efficacy of EFT in improving parent-child relationships in the low-resource, minority-majority community of Flint, Michigan. Results from this case series will inform a revision of the intervention with respect to dosage and feasibility outcomes.

Aims of this study include: (1) determining the implementation potential of this intervention (including feasibility, acceptability, and satisfaction) and (2a) examine preliminary efficacy of this intervention in reducing parental delay discounting (focus on immediate relative to long-term rewards) and (2b) improvements in parent-child relationships/parenting quality and related constructs.

2. SUBJECT POPULATION AND ELIGIBILITY

Up to 30 parents will be recruited participate in this study from an inpatient substance use treatment center (Flint Odyssey House), in Flint, MI with a secondary location in Saginaw, MI (“Odyssey House” will be used from here forward to indicate both sites). This research includes individuals currently receiving inpatient substance use treatment. Individuals with substance use disorders (SUD) and those from impoverished areas are more likely to have shortened time horizons and have more difficulty picturing positive future events with their children.

Inclusion criteria:

1. Be the parent of a child between the ages of 6-10
2. Willing to participate in the study
3. Able to participate in written assessments and an intervention conducted in English
4. Are receiving services at Flint or Saginaw Odyssey House (“Odyssey House”)
5. Be willing to receiving daily post cards andmeet regularly with a peer recovery coach over the course of two weeks following the initial intervention
6. Can legally consent for the child to take part in the study and are with their child 50% of the time.

Exclusion criteria:

1. Self-disclosed active suicidality/homicidality
2. Self-disclosed current bipolar disorder, schizophrenia, or psychosis

Children will not directly take part in the intervention; however, they will be included in the observational tasks with enrolled parents that are part of the larger assessment battery to evaluate changes in parenting. Children above age 7 will be verbally assented prior to participating in the observation. Outside of the assent procedures, research team members will not directly interact with children that are participating in the observation. If the interested individual has more than one child in the age range (5-10 years old) we will ask them to complete the observation session with their youngest child in that age range.

In addition to parent enrollment, we will conduct up to 10 key informant interviews with stakeholders at Odyssey house, including Odyssey House leadership and peer interventionists, to obtain feedback on the intervention and any improvements that can be made.

Enrollment and/or Screening

Parent participants will be recruited using flyers displayed at the facility, announcements made at regularly scheduled resident meetings and/or approached directly to gauge interest in participating.

The Odyssey House Clinical Supervisor or other study staff (e.g., Peer) will approach potentially eligible participants to discuss the study and, if the participant expresses interest in participating, conduct the screening procedures to determine eligibility. All individuals will be informed that participation is completely voluntary, will be kept confidential, and will not impact their access to services in any way. The clinical supervisor or study staff conducting screening procedures will then document whether the participant meets eligibility criteria and record this information in the secure study REDCap database.

Once an individual expresses interest in taking part in the study and is determined to be eligible, a Peer will be assigned to approach the participant to obtain consent. The participant and the Peer will determine a time that is mutually convenient for them to conduct the consent process and initial assessment. Odyssey House is a residential treatment center; therefore, screening, consent processes, assessments and the intervention will be conducted in small, private rooms located at Odyssey House. During this scheduled meeting time, the Peer will explain the study to the participant and go through consent procedures. No data beyond eligibility will be collected prior to enrolling in the study. No medical records will be accessed as part of this study. If the interested individual does not meet inclusion/exclusion criteria (“screens out”), they will be offered a resource list of free or reduced cost resources in the Flint area.

Stakeholder Enrollment – Key Informant Interviews

Stakeholders, including peer interventionists and Odyssey House leadership/staff that were involved in the project, will be approached via phone or email or in person at Odyssey House and asked if they would be willing to take part in a one-time interview. Interested individuals will be included.

3. STUDY PROCEDURES

Study procedures will only be carried out by Odyssey House or HFH staff that are 1) adequately trained on the study protocol and procedures and 2) listed as key personnel on the IRB with documentation of completion of CITI and any applicable training requirements. Anyone that does not meet those criteria will not carry out any study procedures.

Following screening, eligible and interested parent participants will meet with a study Peer to begin consent procedures. During consent procedures, the participant will be informed that the intervention session, observation, and key informant interview will be recorded for research purposes. If the participant consents, the participant will be provided a copy of the signed consent.

After consent procedures, participants will be asked to take a pre-assessment battery. The assessment battery may be split into multiple sessions as needed based on participants' request, attention span, or time availability. The assessment battery will include measures of (1) delay discounting (DD) (**Aim 2a)**, (2) consideration of future consequences **(Aim 2a)**, (3) child behavior **(Aim 2b)**, and (4) parenting variables **(Aim 2b)**. To measure DD, we will use the Monetary Choice Questionnaire (MCQ). To assess how the participant considers the future while making decisions (both in general and with their child), using an adapted (to focus on parenting) version of the Consideration of Future Consequences Scale (CFC). To assess child behavior, we will use the Strengths and Difficulties Questionnaire (SDQ) – age 4-10, and child behavior questions from the Children's Health Questionnaire. In order to assess parenting characteristics, we will use the Aggravation in Parenting Scale (APS; a measure of parents' perceived aggravation related to parenting), the Alabama Parenting Questionnaire (APQ; a measure of different parenting behaviors), Parenting Laxness questions (from The Parenting Scale), Parent-Child Conflict Tactics Scale, Parenting Joy, and the Parenting Stress Index (PSI-4). At the last assessment only, parents will also complete a client satisfaction questionnaire (CSQ) and a Working Alliance Inventory (WAI). Additionally, the peer interventionist will complete a brief measure of their perceptions of participants' engagement in the intervention.

All questionnaires are hosted in the study's secure REDCap database will be completed on a password protected computer and encrypted, unless use of the computer is unavailable/impractical (internet outages, disruptions to REDCap, etc.) in which case participants will be able to fill out forms using paper-and-pencil. All measures have proven psychometric properties and are validated for the parents of children ages 6-10.

As soon as possible after the pre-intervention assessment is completed, if the participant's child assents to participate, we will complete a 20-minute observation that will be videotaped and led by either the peer or other study staff. Verbal child assent will be obtained from the child prior to beginning the observation and assent will be documented in REDCap. During the observation, the parent and their child will complete a clean-up, homework, and play task. The interaction will be videorecorded, and recordings will be stored on a password protected servers and accessible only to study staff. Behavior will be coded using a standardized coding procedure (the DPICS). Although the observation will only last approximately 20 minutes, we will ask to schedule these sessions for 40 minutes to allow time for child assent and instructions. All assessments (including the questionnaires and videotaped interaction) will be administered by either a Peer or by study staff, depending on Peer availability. Compensation for the pre-assessment (assessments and observation session) will be $15.

Approximately one week after the pre-intervention assessment is completed, the participant will take part in the EFT intervention, led by a trained peer parent or the PI. The intervention session will last 75- 90 minutes in total and will be recorded for fidelity and to accurately capture each participant-generated episode. The session will begin by the PI/interventionist providing a general overview of the study and reviewing confidentiality. The participant will be asked to discuss their relationship with their child and to give examples of both positive and negative parenting from their personal experience. The interventionist will ask the participant to think about their long-term parenting goals and will discuss how to create a vivid event that will be easy to remember. Finally, several timepoints (based on important future milestones the participant identifies) will be used to create EFT events. The interventionist will create short cues from these events that will then be sent to the participant via postcard once a day for

two weeks. Cues will also be briefly discussed by the peer and participant at several points over the subsequent two weeks. The interventionist will document each check-in for tracking purposes. Peers may split the intervention into more than one meeting depending on participant need/response (related to fatigue, attention, etc.). Immediately following the intervention, parents will complete the MCQ and Parenting Joy survey again. Over the following two weeks, participants will be sent daily postcards including the cue phrase (designed to trigger recall of the future episode they identified during the intervention) and briefly meet with a peer to recall the scenes they envisioned and remind them of what they discussed during the intervention. The participant will receive $14 at the end of two weeks for meeting regularly with the peer (between 3-7 times over the two weeks). The cumulative earned incentive amount will be paid.

Two weeks after the intervention session, participants will complete a post-assessment battery. This assessment will include the same measures as the pre-assessment battery, with the exception of the demographics and items from the Children's Health Questionnaire. Additionally, participants will complete a brief measure of intervention satisfaction and working alliance. Peer interventionists will also be asked to rate how engaged they felt the participant was during the intervention. The post-assessment will also include a second observation session with the parent and the same child with similar tasks to the initial observation session. Participants will be given $15 for completing the post-intervention assessment.

Following completion of the intervention, participants will also be given an opportunity to receive an additional $15 for taking part in a 30-minute key informant interview (KII; see KII script) that gauges participants' views on their perceived acceptability and satisfaction with the intervention and study processes. These interviews will be audio-recorded; recordings will be kept on secure servers, accessible only to the study team, and deleted after 3 years. Participants will receive $15 for completion of the KII.

After completing all study procedures, all participants will be offered a resource guide of free and low- cost resources in the Flint area.

Thus, in total, there will be four study visits/interactions: (1) the initial (baseline) assessment; (2) the intervention; (3) the post-intervention assessment; and (4) the key informant interview (which may be completed over the phone, based on participant preference).

The interventions will be conducted by peer parents. These will be individuals who are already employed by the agency and are certified as peer recovery specialists by the State of Michigan. Agency and center staff will identify peer parents who would be appropriate to engage in this work. Peer parents will then be approached and asked if they are interested; they will be informed that working on this study is optional and that their employment is not contingent on participation. These procedures were created in conjunction with leadership from Odyssey House and peers' time will be supported by grant funding. Peers will be trained by the PI (Felton) and provided weekly and as-needed supervision, including individual review of taped session for fidelity and training purposes. All recordings of peer- participant interactions will be stored on password protected servers and will be destroyed following the three-year requirement for data storage. All peer parents (once selected) will be added to the IRB as research assistants and complete all required human subjects training. We elected to utilize peer parents given strong evidence that peers are perceived as less stigmatizing and, with training, are able to implement straight-forward interventions with fidelity.

In the event that a parent is discharged from, leaves Odyssey House after enrollment, or needs to pause study procedures for another reason, the parent will not automatically be withdrawn from the study and will be allowed to continue in the study if they wish. For those that have left Odyssey House and want to continue, we will work with the parent to determine a convenient location to complete the study

procedures (e.g., another Odyssey House facility, their home, another residential center, etc.). In some circumstances, parents may leave Odyssey House without warning and, since we don't have their contact information, would essentially be lost to follow up unless they return to Odyssey House.
Their data would remain in the study for any study procedures that were completed prior to discharge/leaving unless they ask to be withdrawn from the study. If the parent leaves and returns to Odyssey House and wants to resume the study, study procedures can resume. For anyone in which there is a long pause in study procedures (due to discharge or other reasons), we would potentially ask the parent to retake the baseline assessments or other study procedures if an extended period of time has passed since initial completion.

We estimate that it will take 2-4 months to recruit and train peer parents, 2-4 months for recruitment of participants, 2-4 months for running the study, and 2-4 months for project wrap-up and data analysis from the time of grant award.

Additional Information:
*This project is currently funded by an award from NIDA/ NIH.
*Since this is a pilot feasibility study, the sample size was selected to provide sufficient information regarding implementation outcomes and detect signal on outcomes. Findings from this project will be used to adapt the intervention for a larger RCT.
*The PI will conduct all analyses. She received a minor-specialization in qualitative methods as part of her doctoral studies and serves as the statistical consultant on two NIH-funded treatment development grants.

Weeks from Enrollment	1	2	3	4	5-6
Activity	Assessment 1 (surveys and observation)	Intervention (+MCQ and Parenting Joy survey)	Daily postcard messages and regular (3-7) check-ins with peers over 2 weeks	Assessment 2 (surveys and observation)	KII
Incentives	$15		$14	$15	$15

Stakeholder Procedures – Key Informant Interviews:

Interested stakeholders will meet with a study team member remotely, using a secure video platform (e.g., Webex), or over the phone for a 30-minute semi-structured interview. The interview asks several questions about the acceptability of the program, any challenges, and potential room for changes/improvements. The interview will be recorded, and the recording will be transcribed.

Study details will be discussed prior to each interview. Stakeholder consent will be obtained orally prior to beginning the interview. Stakeholders will be informed that by participating in the interview/survey they are consenting to participate in the study. Stakeholders will be compensated $30 for completion of the interview.

4. ANTICIPATED RISKS

One potential risk to participants in this study is a loss of confidentiality. To mitigate this risk, all research staff, including peer parents, will be trained in the protection of human subjects and will be instructed in maintaining strict confidentiality. In order to de-identify data, we will assign each participant a random identification number. Only these numbers will be associated with the assessment materials. One

master document that links participant names and numbers will be retained in a password protected computer file accessible only to authorized study staff. Participants will be assured that the decision to take part in the study will not affect access to programming or resources. While participation in the program involves completing the intervention at Odyssey House, receiving postcard reminders, and touching base with peer interventionists regularly over two weeks (thus making it possible for other individuals to observe participants being administered the intervention or receiving study-related communications), we believe this risk is minimal. However, we will also attempt to conceal participation status in a number of ways. Peer parents will be trained to take reasonable precautions to prevent revealing parents' participation in the program, including closing the door to the intervention room and not referring to participants' status in the intervention outside of this private space.

We expect any discomfort participants may feel while completing assessment questionnaires (i.e., frustration, boredom, and fatigue) to be short-lived. However, in the event that participants are either disturbed or concerned about reactions to the questionnaires, we will encourage them to discuss these concerns with the research staff. They will be put in touch with mental health staff at Odyssey House, and/or the PI (Felton), a licensed clinical psychologist, if concerns are not satisfactorily addressed. We will also discuss with all participants the nature of the Certificate of Confidentiality during the assent and consent procedures. If participants report feeling uncomfortable answering certain questions, they will be reminded that they are allowed to skip items and still be compensated for participation. Based on previous experiences collecting data from low-income adults, we anticipate very low levels of non-response.

In the event that a participant discloses suicidal ideation or intent, involvement in psychical abuse/neglect, and/or urgent physical and mental health concerns arise for the parent or child, the RA or interventionist will confer with Dr. Felton and the medical and mental health providers on staff at Odyssey House to determine next steps. Dr. Felton, in collaboration with medical and mental health providers at Odyssey House will determine the appropriate course of action. In extreme circumstances, this may involve contacting authorities. The PI (Felton) and Co-I Chronis-Tuscano have conducted similar clinical trials and Dr. Felton has also used similar methods and interventions with Flint, MI-based samples and, from this experience, believe the possibility of having to report participants to authorities is extremely rare. Given that we are not specifically asking about suicidality, we also expect any spontaneous disclosure of suicidality by the participant to be extremely rare. Nevertheless, any participant disclosure of harm to self or others will be treated seriously and the PI will immediately and directly contact Odyssey house medical and mental health providers to follow-up with the participant to clarify their report of harm to self/others and gather more information.

In the rare event that such disclosures are determined to be required by law, we will report only information directly provided by the participant related to child maltreatment (defined as physical or mental injury, sexual abuse, neglect, or other circumstance whether the welfare of the child is threatened). Prior to participation, participants will be given clear verbal and written details (during consent procedures) around these requirements and informed of the research team's ethical and legal obligations to protect the safety of vulnerable individuals. Participants will also be given multiple opportunities to ask questions regarding both reporting requirements and the reporting process and encouraged to reach out to the PI (a licensed clinical psychologist) to address any concerns that they may have. Participants who are reported to authorities under these circumstances will be allowed to remain in the study, but their data will not be used and a replacement participant will be recruited. The research team has already fully discussed these reporting requirements and received support for these procedures from agency leadership at both recruitment sites. Researchers have worked extensively with Odyssey House staff on the development of research procedures, including addressing any concerns the provider may have that may arise during the completion of this project.

Stakeholders

The only foreseeable risk to stakeholders is discomfort at answering some of the questions. We do not anticipate this to be frequent and stakeholders are able to skip any questions they don't want to answer.

5. ANTICIPATED BENEFITS

The primary anticipated benefit of this research to parents and society is the possible improvement in parent-child relationship quality and related constructs.

6. RENUMERATION/COMPENSATION

Parent participants will be offered payment for taking part in each assessment (including written assessments, parent-child observation sessions and key informant interviews), as well as completing daily practice of the intervention over two weeks. Incentives will be provided on ClinCards.

Weeks from Enrollment	1	2	3	4	5-6
Activity	Assessment 1 (observation and assessment)	Intervention + MCQ and Parenting Joy survey	Daily postcard reminders and regular (3-7) check-ins with peers	Assessment 2 (observation and assessment)	Interview
Incentives	$15		$14	$15	$15

Stakeholders will receive a one-time payment for completion of the key informant interview. Incentives for stakeholders will be provided on ClinCards.

7. COSTS

There are no costs to the participant to take part in this study.

8. ALTERNATIVES

The alternative to participants is not participating in this research.

9. CONSENT PROCESS AND DOCUMENTATION

Research assistants (peer parent) will meet with eligible parent participants in small, private rooms at at Odyssey House to review the consent form and answer any questions that participants may have. If a participant appears to be under duress or undue influence or does not have sufficient time to complete the consent procedures, a follow-up meeting will be scheduled. As part of the consent process, the RA will explain the study, its duration, risks and requirements and allow the participant to ask any questions they may have. Participants will be informed that they will be identified only by a randomly assigned number and that only one log linking their ID and names will be kept in a password protected computer file stored on a secure HITECH-compliant server and accessible only to a small number of authorized members of the research team. They will also be informed that the intervention session, parent-child interaction, and the key informant interview will be recorded for research purposes and that these recordings and all evaluation materials and the log linking participant ID and names will be stored securely, only accessible to the study team, and destroyed three years after completion of the intervention. The participant will be provided a copy of the signed consent.

All consent documents will be stored in a locked file cabinet in a secure location at Odyssey House or Henry Ford Health System and kept apart from any other study data.

All children over the age 7 and older participating in the observation session will be assented before the observation with their parent begins. Prior to taking part in the observational assessment, a research assistant will explain their participation in the study (over phone or web conferencing) and allow for time for the child to ask questions. Verbal assent will be documented in REDCap.

Stakeholder Consent – Key Informant Interviews:

For stakeholder interviews, we are requesting a waiver of written consent. The interview poses no more than minimal risk, and a written consent form would be the only record linking the stakeholder participant to the study – we are otherwise not collecting any identifiable data as part of the interviews. The stakeholders are not receiving an intervention and involve no procedures for which written consent is normally required outside of the research context. Consent information will be reviewed with all stakeholders prior to beginning the interview, and we will provide stakeholders with a copy of the consent information sheet to review and keep.

10. WITHDRAWAL OF SUBJECTS

There are no anticipated circumstances under which participants will be withdrawn from the research without their consent. This includes participants that leave Odyssey House – they will not be withdrawn and can continue in the study if they are interested in doing so. Participants who decide to withdraw will not face any penalty or denial of services.

11. PRIVACY AND CONFIDENTIALITY

All participants will be assigned a random study ID. Only one log linking participants names and their IDs will exist and it will be kept separate from all other study materials (including consent forms and assessment packets/recordings). All study materials will be kept in encrypted data files on a password protected computer. Consent forms will be kept separately from study data and will be housed in locked areas in secured offices at Henry Ford or Odyssey House and accessible only by the study team. For stakeholder participants, no identifiable information will be collected. Study materials will be collected by research team members and will only be used by members of the research team. All study materials will be destroyed three years after the completion of the study, consistent with recommended guidelines.

All video and audio recordings will be saved with study ID only on a secure folder on secure servers at HFHS or Odyssey House. Only study personnel will have access to this folder and the video recordings. Audio files will be uploaded to a secure AI-based transcription platform for transcription purposes. Transcripts will be reviewed by the study team and any PHI will be removed before saving the file to a secure study folder accessible only to the research team. Audio files and transcripts will be saved with a study ID only. Once transcribed, audio files will be deleted as soon as possible.

In addition, a Certificate of Confidentiality (CoC) is automatically given to all NIH-funded studies to protect the privacy of research subjects by prohibiting disclosure of identifiable, sensitive research information to anyone not connected to the research except when the subject consents, or when required by law for reporting medical emergencies, serious threats of harm to self or others, child abuse or neglect, or elder abuse.

Important HIPAA Concerns

No medical records are being used for this study.

12. DATA ANALYTIC AND SAFETY MONITORING PLAN

Dr. Felton will be responsible for overseeing the implementation and execution of the data and safety monitoring plan. All research staff (including peer parents) will complete relevant human subjects protection training. Dr. Felton will also ensure that all participants in the study meet specified inclusion/exclusion criteria by reviewing enrollment with research staff at regular study team meetings. Data will be monitored on an ongoing basis and reviewed by the PI at regular intervals to identify any problems or concerns. Analyses will be conducted only after all data is collected, deidentified, and cleaned, thus limiting the possibility of deidentification.

Any findings shared with community stakeholders will be done in aggregate and reflecting mean-level trends. Data will be safeguarded against breaches of confidentiality using the procedures outlined above. These processes include removing identifiable information from data and coding assessment forms with ID numbers only. All data will be kept securely in locked file cabinets accessible only to research staff. Community partners and peer parents will not have access to any assessment materials. Any computers containing electronic data files will be password-protected, stored in locked cabinets in locked offices, and accessible only by study personnel. Only the research staff will have access to the data. The Certificate of Confidentiality from NIH which will protect against requests to disclose sensitive research information, within the bounds of the law.

Adverse Events (AEs) and Serious Adverse Events (SAEs), as defined by the DHHP Office of Human Research Protections, will be monitored by the PI (Felton). Any AEs will be recorded by research staff on required AE forms and discussed by the research team during regularly scheduled meetings. Per regulations, the PI will then prepare a written report for submission to the Henry Ford Health Systems (HFHS) IRB and the appropriate NIH program officer. This report will specify all relevant information regarding whether these events were expected or unexpected, the severity of the event, a brief narrative of the event, and a determination regarding any causal connection between the event and the ongoing research study. Any such events will also be included in the annual progress report send to NIH. In the unlikely event an SAE were to occur, research staff will alert the PI immediately. Subsequent reports to the HFHS IRB and NIH will be completed within 24 hours. The expedited notice will be followed by a detailed report regarding the event.

Primary Outcomes: Delay Discounting and Consideration of Future Consequences

Descriptive statistics will be used to characterize the sample. We defined benchmark milestones *a priori* for successful change in our target mechanism (delay discounting): ≥50% of patients participating in the intervention demonstrating decreases in delay discounting. Consideration of future consequences will be examined using descriptive statistics to evaluate distributional assumptions for parametric statistical tests. If appropriate, single-sided paired-samples *t*-tests with be used given *a priori* hypotheses regarding the direction of the effect.

Secondary Outcomes: Parenting (as measured by a behavioral task and self-report)

Descriptive statistics and distributions will be examined for all secondary outcomes. Parent-child interaction tasks were coded for positive and negative parenting behaviors using the Dyadic Parent-Child Interaction Coding System. Change in both self-reported and observed positive and negative parenting behaviors in will be evaluated using single-sided paired-samples *t*-tests.

13. QUALIFICATIONS OF THE INVESTIGATOR(S)

Dr. Felton is an Assistant Scientist at the Henry Ford Health Systems located in Detroit, MI. She earned her PhD in child clinical psychology from Vanderbilt University with a minor specialization in quantitative methods. Her program of research centers on identifying risk factors for the onset of substance use in children and adolescents (e.g., Felton et al., 2015) as well as examining the role of early environmental and parenting factors associated with the trajectory of drug and alcohol use over time (e.g., Felton et al., 2020). She has specific expertise in assessment, research design, and data modeling techniques, having served as the PI, Co-I, or statistical consultant on a number of NIH-funded grants and published over 65 manuscripts and book chapters on the development of vulnerabilities to mental and behavioral health problems and targeted preventative interventions to reduce these risk factors.

14. REFERENCES

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