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Prenatal and Perinatal Trauma Case Formulation: Toward an Evidence-Based Assessment of the Origins of Repetitive Behaviors in Adults

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Abstract: Historically, the practice of treating adults for prenatal and perinatal trauma has consisted of individual practitioners' modalities that lacked empirical validation around treatment specificity or efficacy. Yet, their commitment to understanding the origins of behaviors has provided hope for clients challenged with life-long problems. This paper describes, based on a review of the literature, a first step towards integrating prenatal and perinatal psychology theory and practice knowledge with current case formulation and evidence-based practice models. The goal was to create a coherent and reliable assessment method to serve as a guide for students and professionals and also test its efficacy. The author, using the new assessment protocol, interviewed 6 participants with long-standing repetitive behaviors. Results revealed that the residual effects of prenatal and perinatal trauma were identifiable in each participant. Future studies will test inner-observer agreement with this prenatal and perinatal trauma case formulation and apply the assessment information toward improving treatment outcomes in adult clients' long-standing repetitive behaviors.

Key Words: Prenatal, perinatal, psychotherapy, adult, trauma, case formulation, assessment, evidence-based practice, qualitative methods, descriptive analysis, quantitative measure

Introduction

Pre- and perinatal (PPN) psychology highlights the origin of human behaviors in ways that no other developmental or psychological approach offers. Yet today, nearly 80 years after Otto Rank's seminal work (1929/1993), there is still a lack of recognition or/acceptance of the principles that prenatal and perinatal psychology holds as fundamental. The most commonly mentioned in the literature are that the unborn child is a conscious and aware being, that learning and remembering takes place in the womb, and that early trauma memories impact later adult behaviors. Historically, it was through clinical sessions with adults, recalling their early trauma experiences, that these unique factors were recognized. One

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reason that PPN psychotherapy principles have not become integrated into mainstream psychology, this author suggests, is that there has been a lack of critical appraisal of its assertions, claims, and methods of inquiry. That is, our basic assumptions have not been clearly defined and systematically tested using evidence-based methods. All theories need the support of empirical data to be viable because beliefs alone about a phenomenon lack verification (Rudestam & Newton, 2007).

The most compelling reason to move from a single practitioner-based model, which has characterized the history of our field to date, into a critically reviewed and empirically based one is to take "reasonable steps to ensure the competence of their [practitioners'] work, and to protect patients, clients, students, research participants, and others from harm." (American Psychological Association, 2002, p. 1064) Another reason would be to change the perception that has harshly characterized our field to date, "… [e]thical issues can arise when clients ask that their problems be treated with techniques with questionable effectiveness (e.g., rebirthing therapy)…" (Farmer & Chapman, 2008, p. 27). This article then, is a continuation of the clarifying steps already begun (Lyman, 2005) toward addressing this gap. The research questions for this effort were, Could an evidence-based practice model of prenatal and perinatal assessment be created that identifies the origins of long-standing behaviors in adults? Will the model (or protocol), when tested, find what it purports to find? What follows is a description of the assessment development process and the research, beginning with a number of definitions (alphabetical order) as a context for study, then the assumptions on which this investigation is based, and the limitations. Following these is a review of the literature that specifically focused on key concepts from clinically relevant historical works. Next, using accepted case formulation and evidence-based practice (EBP) methods for developing paradigms, an assessment model for adults with lifelong repetitive behaviors is described. The testing of the model follows with a description of the method section, then the results, discussion, and recommendations for future research are offered.

Definitions that Offer a Context for this Research

A number of definitions are necessary to place this research in a specific context:

Evidence-based practice: "Evidence-based practice is the integration of best research evidence with clinical expertise and patient values"

(Institute of Medicine, 2001, p. 147).

PPN adult consciousness: A state where a person is subjectively aware of early memories or experiences. The awareness may consist of sensory or somatic content, mental images, emotional feelings, or a combination.

PPN adult psychotherapy: An evolving specialization that identifies and treats an individual's reaction to stressful, overwhelming, or traumatic events that occurred during the prenatal and perinatal periods. Without intervention unresolved early traumas have the potential to become maladaptive and repetitive patterns throughout life. Most frequently psychotherapy intervention has been performed through eliciting these early memories and re-experiencing fully the intense emotions connected to them through a variety of integrated therapy approaches.

PPN emotions or feelings: Characterized in the literature as being very intense, or unbearable (i.e., intense fear, helplessness, and/or horror). PPN emotions are triggered by reactions to internal or external events in the present that activate, or are activated by, early imprinted memories.

PPN trauma experience: Any experience due to an overwhelming event/events during the prenatal, birth, and early infancy period that produces intense emotion that were unable to be processed and integrated into memory at the time. Some trauma events found in the literature seen in adults are maternal stress, maternal drug/alcohol use, maternal sequella from previous miscarriages or infant deaths, maternal emotional rejection, as well as unsuccessful abortion attempts, oxygen deprivation, and obstetrically related interventions, such as anesthesia, induction, use of forceps or suction during delivery, or C-section (Findeisen, 1993; Hull, 1986) to name a few. Residual effects of the PPN trauma experience are likely to be the unwanted symptoms in the present that control or avoid residual PPN trauma feelings.

PPN trauma imprints: Lasting impressions that are described in the literature as the origins of a repeated behavior with characteristic features of reliving a past event with the same emotional intensity and identified by intrusions, avoidances, and hyper-vigilance. A number of authors describe imprints as biochemical and physiological and that

therapy is about following these trauma imprints to their source (Emerson, 1989, 1996, 2002; Janov, 1983).

Presenting problem: A client's real life difficulties, as well as the underlying psychological mechanisms (Persons, 1989).

Psychological assessment: The "…gathering and integration of data in order to make a psychological evaluation, decision, or recommendation." (American Psychological Association, 2007, p. 751)

Unconscious (context): Those psychological processes and knowledge structures that shape awareness without themselves being conscious, as in beliefs or memories. (American Psychological Association, 2007, p. 966)

Assumptions

On the basis of the key concepts found in the prenatal and perinatal historical literature related to psychotherapy with adults, the assumptions are made to explain what has been observed.

1. There are early prenatal and perinatal sensory capabilities that allow for awareness, memory, and learning. What is learned during this period contributes to psychological and personality development;
2. Stressful or traumatic prenatal or perinatal events and experiences will have lasting effects;
3. These lasting effects will be found in an individual's repetitive behaviors, which can be identified;
4. In the clinical or research situation, even though PPN memories may not be accessible to clients' consciously, using a targeted inquiry method, the effects of early imprints can be assessed.

Limitations

The main limitation is that this new protocol is at the beginning phase of being rigorously tested. Also, due to the nature of the PPN historical literature where there has been a reliance on anecdotal evidence (however rich in content), the assumptions on which this research is built needs further critique, thus results will need to be considered in this light.

A Brief and Focused Review of the Literature

A focused review of the literature identified the seminal and foundational publications by clinical practitioners in the PPN field. The search strategy is described first, and then the brief review of the literature, followed by a summary and critique. Some historical information is presented in tables for ease of reading and to facilitate comparisons.

The Search Strategy

To identify relevant PPN adult psychotherapy resources, PsycINFO's 2.3 million abstracts were searched for English language articles using the terms "prenatal" "perinatal" "psychotherapy" "adult" "trauma" "repetitive patterns" between 2006-7. Seminal books on key concepts of PPN were sought and bibliographic reference lists from these, as well as journal articles, and any dissertations found, were examined as well. To manage the large amount of materials, any that weren't directly related to published authors who had written on premises that contribute to adult PPN psychotherapy were excluded. Thirty-two articles were found in the *Journal of Prenatal and Perinatal Psychology and Health* (JOPPPAH), and no articles with a focus on the prenatal or perinatal time frame outside our journal were found using PsycINFO. *The International Journal of Prenatal and Perinatal Psychology and Medicine*, which is not indexed in PsycINFO, was also searched.

The Literature Review

In brief, since *The Trauma of Birth* where Rank (1929/1993) stated that "the anxiety at birth forms the basis of every anxiety or fear" (p.17), and for a time birth was considered to be the origin of anxiety by Freud (1909, 1926), the field of prenatal and perinatal psychology has consisted of a clinical case study approach with adults, documenting where early trauma processes around entrenched, repetitive patterns in adults begin. Later, Donald Winnicott (1958) and Wilhelm Reich (1933/1969) also described the traumatic nature of these early events as influencing human development and as being held in the body (see Table 1 for summary).

The PPN field's foundational clinicians clarified that in a state of regression clients were able to recall early traumatic experiences consciously. These early experiences were identified as the first experiences of their enduring emotional and behavioral difficulties

Table 1: Seminal Authors' Contributions to a Prenatal and Perinatal Adult Model of Psychotherapy

Seminal Authors	Formal Training	Best Known for	Map of the Psyche?	Theoretical Assumptions	Clinical Assessment	Mechanism of Change	Intervention	Outcome Research
Sigmund Freud * 1856-1939 Austria	Neurology/ Psychiatry	Founder of the psychoanalytic & [illegible] school of psychology	Yes. Conscious/ unconscious [illegible] id, ego, superego [illegible]	"The act of birth is ... the first anxiety experience and therefore the source and model of the affect of anxiety" (Freud, 1908, p. 36)	[illegible] (Freud, 1926)	[illegible]	N/A	N/A
Otto Rank ** 1884-1939 Austria	Psychoanalysis	1924 book: "Trauma of Birth"	Yes. [illegible] personality types [illegible]	Primal anxiety from birth trauma [illegible] throughout life (Rank, 1929)	Identification of prenatal and birth experience	[illegible] prenatal and birth experience	Analytic/cathartic model with emphasis on the therapeutic relationship [illegible]	Case studies
Donald *** Winnicott 1896-1971 England	Pediatrics/ Psychoanalysis	[illegible]	Yes. True self, false self; early object relations (Winnicott, 1958)	Developmental stage of infancy explains adult dysfunction	Emphasis on a more [illegible] view of birth as well as traumatic [illegible]	Clinical regression [illegible]	Analysis, with regression to early states	Case descriptions
Wilhelm Reich 1897-1957 Austria-America	Psychoanalysis	Pioneer of body psychotherapy	Yes. Unity of psyche and soma (Reich, 1933)	Traumatic experiences block the natural flow of life energy in the body, leading to physical and mental illness	Character analysis through [illegible] in the body at the [illegible] level	Release of the client's muscular armor (body armor)	Address character structure [illegible]; direct body work and breathing	Physical and energy based, [illegible]

* Also [illegible] Carl Jung, a colleague of Freud's, [illegible] (Campbell, 1970) [illegible]

** Early psychoanalysts who continued Rank's emphasis on birth trauma were [illegible] (Fodor, 1949) [illegible] (p. 179)

*** [illegible]

As published in the *Journal of Prenatal and Perinatal Psychology and Health*, [illegible] article by [illegible] "[illegible] Assessment of the Origins of [illegible] in Adults."

(Chamberlain, 1999a; Janov, 1970; Lake, 1981; Orr, 1974; Swartley, 1978). These authors also have articulated that the early PPN traumatic memory functions as the prototypic response for all future stressful situations and several have described their methods of assessment and treatment. Of particular importance to the current research are the contributions by Frank Lake, Art Janov, and Stanislov Grof who researched PPN trauma in adults. Lake attempted to verify memory functions as early as the first trimester (Lake, 1982) in his model, the Maternal Foetal Distress Syndrome (Lake, 1981). Janov's primal therapy identified the early imprints from birth and the womb (Janov, 1983) where clients are to go into their intense feelings to express their pain. Grof's COndensed EXperience (or COEX) (Grof, 1985) system identified the themes that developed during PPN periods that permeate an adult's entire life unless the traumas are recognized and resolved. Emerson (1996) also writes extensively on the nature of early trauma as well as the association and reinforcing conditions that follow. A number of other authors have contributed to our understanding of adult behaviors based on early debilitating events as well. (See Table 2)

In the *JOPPPAH*, a number of relevant articles inform the discussion on a PPN approach to adult assessment and psychotherapy. Related to assessment, Landsman (1989) used verbal metaphors and their behavioral counterparts to identify PPN imprints, suggesting that major developmental stages are identifiable within clients' use of language, especially during stressful periods. Ward (2004) stated that the retrieval of PPN memories offers an explanation for how clients behave in the world. Over-reactions or unreasonable emotions were identified as prenatal and perinatal imprints (Hull, 1986) as well. Documented also in the literature is the use of hypnosis for assessment, popular in the 1970s. This method, which included ideomotor signaling to questions, assumed that clients' finger responses of "yes" or "no" were drawing unconscious memories. Hendricks and Hendricks (1987) discuss diagnostic clues for discriminating between a number of PPN issues. Raymond (1987) also articulates that perinatal memories are useful as a diagnostic psychotherapeutic tool (through regression) into the unconscious toward the source of current problems. Stated this way "we trace negative emotional and behavioral patterns in the here and now to the root source within the unconscious mind" (p. 303).

Models have been developed by a number of practicing clinicians. Castellino (2000) offered a Stress Matrix Model, to assess the degree of shock affect or shock imprinting a client is carrying, identified as

Table 2: Foundational Authors' Prenatal and Perinatal Contributions Toward an Adult Model of Psychotherapy

Foundational Authors	Formal Training	Best Known For	Map of the Psyche?	Theoretical Assumptions	Clinical Assessment - Treatment Goals	Mechanism of Change	Intervention	Outcome Research
Frank Lake 1914-1982 Great Britain	Psychiatry	The belief that the earliest pre-natal period is the most pivitol to adult life	Yes. Personality begins with conception, the blastocystic stage implanation	The mother's behavior and emotional state determine the child's l and persist into adulthood (1981)	Assessment of early prenatal life (conception through the 1st trimester) development-ally, psychologically, emotionally, cognitively, and spiritually	Reexperiencing of primal states (and subsequent integration along with the problem in the present)	Reichian-style breathing for deep regression as the catalyst for primal re-capitulation and assimilation	LSD (1954-70), later primal inte-gration workshops (1979-82), 1200 recorded tapes and written transcripts of sessions.
Arthur Janov 1924- US	Psychology	Created Primal Therapy (1970), trauma based	Yes. 1st line (body sensations) 2nd (emotional catharsis), 3rd (insight) line of consciousness Real/unreal self	Unmet needs lead to primal pain that divides the self; ex-pression in therapy heals the split ("follow the imprint") toward integration	Assessment: Identify ways to get the client closer the his/her feelings; with feelings vs. symbolic acting out and psychosomatic symptoms	A natural (evolution-ary) process of healing allowed to unfold (in safe situation) through feelings and their ex-pression, release, and integration (body/ intellect)	Client's work into their own deep feelings, through expressiveness, followed by an integration of the therapeutic experience	Case studies; Phenomenology, physiological measures (pre/post) vital signs; other self-report outcome measures
William Swartley 1927-1979 US	Psychology	Originator of Primal Integration (primal therapy but integration with other modalities)	Yes. Unmet needs or trauma split conscious-ness and prevents holism	Regain holism. Assumption that early needs/trauma lead to a wide range of symptoms	Assessment: Major traumas of conception, cell division, implantation, umbilical	Same as primal therapy but emphasis on making changes in daily life	Integrated, combining neo-Reichian primal massage, Lowen's bioenergentics, Moreno's psychodrama, Perl's gestalt, Roger's client-centered, etc.	None found
Leonard Orr 1938- US	Seminary school	Creating Rebirthing (1974)	No.	At birth impressions about the world form and are encapsulated into negative self statements, "Life is hard"; talking will induce birth traumas	No assessment.	Fast and intense breathing, so emotions come up; change occur-ring through moving pain into pleasure, and a release of old beliefs	"Remember and re-experience one's birth; to relive physiologically, psycholgically and spiritually the moment of one's first breath and relax the trauma of it"	None found
William Emerson 1940 - US	Psychology	Founder of the discipline of PPN, trainer of clinicians worldwide, prevention emphasis	Yes. Trauma, shock and the recapitulation of these throughout the client's life (Emerson, 2002)	Individuals lives are unconsciously arrang-ed in response to in-complete residual early trauma experiences; birth is a re-eanctment of earlier traumas	Indentify traumatic memories and repetitive patterns, access unconscious material, release the trauma and emotions, integrate the experience	The re-eexperience of unconscious material from trauma during the prenatal and birth periods; use of cartharsis and itegration in psychotherapy.	Regression (compatible with Freudian, Jungian, Gestalt, neo-Freudian, Reichian, bioenergetic, systems, transactional, existential, and non-directive therapies)	8,000 hours of regressions sessions with adults with longitudinal follow-up for 20 years
Stanislav Grof 1931- US and Czechoslovakia	MD, PhD in medicine	Birth matrices, LSD research, holotropic breathing, altered states, transpersonal psychology	Yes. Cartography, unfinished biographical material: perinatal and transpersonal		COEX (a specific constellation of memories, similar theme and emotional feel), birth perinatal matrices, core exp., symbolic expressions of birth	(1985) LSD, later breathwork/music; the core experience is relived and integrated	Feelings of cosmic unity	

coming from either a single incident or a trauma that is constant and repetitive. Dr. Castellino described also a list of observable cues (trauma postures, eye contact, facial expressions, non-verbal behaviors) in addition to the importance of taking an in depth clinical history for assessment. Other models around early trauma are the Prebirth Analysis Matrix (PAM) by Turner and Turner (1993) which consists of a conscious recall of specific pivotal moments during the PPN period. Hull (1986) put together the Prenatal Suffocation Syndrome (PSS) related to symptoms (breathlessness, helplessness, panic, depression, hopelessness, exhaustion, and rage) in adults following oxygen deprivation prenatally or perinatally from his practice. A Gestational Model was offered by Verny (1994) to study material that emerges in the course of adult psychotherapy by dividing the first nine months of life into 6 stages (primary germ cell stage, conception stage, oviduct stage, implantation stage, uterine stage, and labor and birth stage). MacLean (2003) adapted Eye Movement Desensitization and Reprocessing (EMDR) (Shapiro, 2001) to PPN. Around the theme of searching in the unconscious, Ward (2004) expressed "… Looking for that which is not visible, is at the foundation of pre- and perinatal psychotherapy …" (p. 89). Fitzpatrick (1988) conceptualized the PPN trauma experience as providing a template for later behaviors and the same survival reactions that were perceived to work back then would be found in the client's present problems. Chamberlain (1999b), like Emerson, used a clinical strategy of explaining to clients that their symptoms might be learned responses associated with past experiences, which could be explored. Additionally, from his use of hypnosis in the 70s, Chamberlain (personal communication, November 3, 2007) currently describes trance states as natural phenomena that occur spontaneously in everyday life. Other case studies with adults reported clinical PPN material related to body states: feeling "small," wanting to curl up, size of the head perception (van Husen, 1988), cognitions such as "I'm am not breathing yet" (van Husen, 1988), to having "no words" and having a fear of fear itself (Hull, 1986). Repression, denial, and displacement of early pain was reported also as manifesting at a later time through psychosomatic and psychological symptoms by Findeisen (1993). Sonne (1997) describes the sequella of prenatal trauma as being expressed through *transference* mechanisms.

Outcome Measurements

A number of case studies mostly reported positive outcomes. Hull

(1986), with 200 patients using age regression to birth trauma for chemical dependency issues, described the treatment as being efficacious. Three adult case studies using transpersonal dimensions with EMDR (MacLean, 2003) reported a healing around PPN trauma. A single case study for psychosomatic complaint of dermatitis in which physical injury to the mother prenatally was explored as the cause (Riley, 1986). Sonne (1997) presented 10 case studies where addressing transference issues helped heal abortion survivor issues. Two case studies by Turner and Turner (1993) looked at prebirth and perinatal memories activated during adult life, hypothesizing that mental and emotional states from the clients' parents form the non-conscious emotional reaction patterns. Case studies by Ward (2004) describe her use of Frank Lake's work in examining the roots of suicide as far back as conception. Kafkadides, like Grof and Lake, used large-scale studies to investigate the effects of womb life in shaping behaviors in adults through the use of psychedelic drugs (Kafkadides, 2002). A qualitative phenomenological approach was utilized with psychotic adults with a history of PPN distress where body therapy was reported as being meaningful (Fitzpatrick, 1988). A case study by Zimberoff and Hartman (1998) of a Taiwanese traumatized during the PPN period around gender bias utilized regression therapy to facilitate healing experiences. Anecdotal evidence from clinical practice sessions of attempted abortions in adults documented through age regression was provided by Watkins (1986). Irving (1997) observed that sexual abuse and the experience of birth have common symptomologies (physical, emotional, phychological) clinically. A survey questionnaire (n = 2,116) on the potential relationship between PPN experiences and current personality traits was created and administered by Irving-Neto and Verny (1992). Non-parametric chi-square tests, t-tests, and point biserial correlations did not support the hypothesis.

Summary

In sum, long-standing repetitive problems in adults suggest an association with early traumatic memories. Assessing the PPN issues in adults has identified the traumatic imprints and conscious/unconscious cognitions, and finally, what highly emotive feelings are still present and accessible to exploration. The literature demonstrates that there is a theoretical development to the point of being able to inform an early trauma case conceptualization. Attention to language levels and non-verbal communications, including body states and sensations, should be part of a PPN assessment.

Analysis and Critique

While the seminal and foundational clinicians and authors give prenatal and perinatal psychology its shape and scope, the field can be critiqued as being primarily a consensus approach based on anecdotal experience and tradition that have been relied on to make clinical decisions. While the case study approach has had a central role in clinical psychology (Kazdin, 2003), in the literature reviewed no research was found that critically appraises the effectiveness of PPN practitioners' methods (and no publications were found that described PPN "failures" as well). Nor were any references to PPN psychotherapy being tested experimentally found. Further, while literature from PPN clinical settings documents the permanence of prenatal and perinatal events affecting later behaviors, the many clinical case study designs are methodologically weak due to non-standardized procedures with primarily subjective reporting by the clinicians themselves. Definitions, if offered, are different in scope as well. These are mostly own-control designs with arbitrary baselines established within a therapeutic context of recalling, then releasing, early affective experiences.

Another critique that needs to be addressed and explained is that of looking at early memory retrospectively. Clients who have come to rely on fallible memories are likely to have less than accurate recall. On the other hand, it is equally as important to not exclude or dismiss possible ways of learning about the origins and treatment repetitive behaviors because there are challenges in doing so. What is clear is that rigorous methods are needed.

An Evidenced-Based Practice Model of Assessment Using Case Formulation Principles

It should be stated here that my own educational background is in psychological assessment, thus I began the creation of the PPN with the knowledge that "the single most important means of data collection during psychological evaluation is the assessment." (Groth-Marnat, 2003, p. 69) And, aware of the importance of a reliable and ethically sound approach, an evidence-based practice (EBP) model for a prenatal and perinatal model of assessment seemed like the best method for this task. Thus, I carefully reviewed the following books and papers in preparation: *Critical Thinking in Clinical Practice: Improving the Quality of Judgments and Decisions, 2nd Ed* (Gambrill, 2005); the *Report of the 2005 Presidential Task Force on Evidence-*

Based Practice (American Psychological Association, 2006); *Formulation in Psychology and Psychotherapy: Making Sense of People's Problems* (Johnstone & Dallos, 2005); *Case Formulation in Cognitive Behaviour Therapy: The Treatment of Challenging and Complex Cases* (Tarrier, Ed., 2006), *Methodological Issues and Strategies in Clinical Research, 3rd Ed.* (Kaskin, 2003), *Behavioral Interventions in Cognitive Behavior Therapy: Practical Guidance for Putting Theory into Action* (Farmer & Chapman, 2008), *Ethical Principles of Psychologists and Code of Conduct* (APA, 2002), to name a few.

In brief, evidence-based practice is the integration of research and practice, along with a structure for clinicians to develop and use critical thinking skills to arrive at well-reasoned decisions. Case formulation is a cornerstone of evidence-based practice for cognitive behavioral therapy and other practices, and makes a bridge between practice, theory, and research (Kuyken, 2006). Case formulation aims to describe a person's presenting problems and use theory to make explanatory inferences about causes and maintaining factors that can inform interventions (ibid.). A case formulation is "a hypothesis about the causes, precipitants, and maintaining influences of a person's psychological, interpersonal, and behavioral problems" (Eells, 1997, p.1) and allows a "flexible and idiosyncratic understanding of each patient's individual problems irrespective of their diagnostic classification (Tarrier, 2006, p. 11). The case formulation procedure from a cognitive perspective can make explanatory inferences about causes and maintaining factors that can inform interventions (Persons, 1989).

The main issues that were important for me to keep in mind for the creation of this assessment were: Is the process of describing repetitive behaviors associated with PPN origins going to be reliable? Could the case formulation be cross-validated to (or triangulated with) other measures (client's experience, therapist's clinical impressions, psychological tests)? In what way(s) would an alternative perspective to a PPN assessment be more compelling?

The PPN Case Formulation Rational

The case conceptualization strategy, based on the PPN theory and literature, was to begin with the psychological problem in the present (i.e., identifying the repetitive emotional and behavioral patterns) and gather specific information toward finding its origin within the client's PPN memories. The level of conscious recall would be important, but

hypotheses around unconscious imprints would necessarily be a part of the process. Additionally, covering a range of functional domains (personal, medical, educational, employment, social) would make for a more accurate understanding of where the early repetitive patterns appear in the client's life. Critical also is that the client verify the assessment outcomes, to provide additional checks and balances to the model. (Determining a diagnosis using the *Diagnostic and Statistical Manual* [American Psychiatric Association, 2000] is standard practice in most settings and should be done in concert with the PPN case formulation offered here). The case formulation method, which is able to assess complex issues, was reasoned to be the best option precisely because of the unconscious components, the nature of early memory, and the infinite number of possible traumas during pregnancy and birth that could impact the developing child. It is also a method that utilizes both quantifiable indices of subjective experience, and qualitative questions to discover the rich, clinical detail. A variety of methods for assessment have been identified in the literature developed by individual PPN practitioners, but there is a gap in the literature when it comes to consolidating what is known, and conducting clinical research with an eye on practical utility.

The PPN Case Formulation Model

The following are the questions determined useful in extrapolating the origins of PPN–based repetitive patterns in adults. The questions in this model were used along with a detailed case history. The interviewer paid careful attention to the client's (or for this research, the participant's) level of awareness or consciousness present around the origin of her presenting problem as well. (Note: The rationale for each question is offered as well.)

- What problem or issue would you like to talk about today? And what changes do you want to make (your goal)? (*Being respectful around addressing the client's concern with the focus being on a solution from the start.*)
- Have you noticed in your life a pattern related to your current issue that tends to repeat over and over? Please describe: (*If no, go to Axis I diagnostic criteria intake questions. If yes, start working backward through the client's life around the pattern, noting level of consciousness or self-awareness present.*)
- Have significant others (close friends/associates) noticed and spoken to you about this pattern that tends to repeat over and

over? If yes, describe: (*Verification that the problem is one that is observable and not imaginary.*)

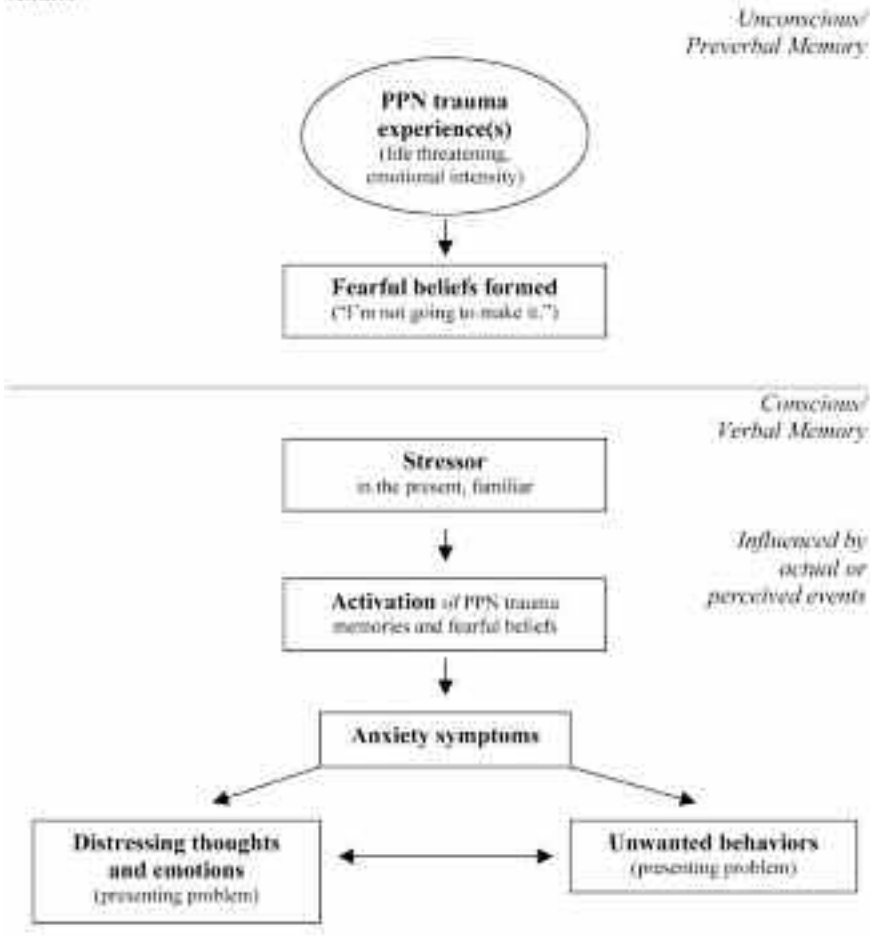
- How many times each day or each week does this pattern occur in your life? (*A quantitative self-report measure of the frequency of the problem that can also be used to evaluate whether future therapy is having positive effects.*)
- What emotion is connected with this pattern? On a scale of 1 ["least I've ever felt"] to 10 ["most I've ever felt"], how would you rate this emotion? (*Another quantitative measure for monitoring the client's degree of emotional intensity or level of distress.*)
- What body sensation is connected with this pattern? On a scale of 1 ["least I've ever felt"] to 10 ["most I've ever felt"], how would you rate your discomfort or distress with this sensation? (*Same as above*.)
- What tends to happen that precedes or triggers the pattern? And, when (or in what situation) does it NOT happen? (*Clarification of the pattern by identifying antecedents and associations.*)
- What other environmental factors impact your pattern? (*Rule in/out situational determinants vs. a PPN pattern.*)
- What cultural factors (if any) influence your pattern? (*Rule in/out culturally-based values.*)
- What other genetic/family history (medical/psychological issues) may be part of your pattern? (*Rule in/out biological or genetic origins of the behavior.*)
- In what ways have you tried to change this pattern? (*Clarifying the pattern further.*)
- What is the earliest memory of this emotion (or body sensation) related to this pattern that you have? (*Asking the question in a different way for verification. A common response may be, "As long as I can remember."*)
- (*Interviewer draws a diagram of the repetitive pattern.*) Does this look like your pattern (conscious portion of the PPN pattern)? If no, what would be different (client's corrective feedback)? (*After this pattern is clearly identified…*) Now how many times a day does this pattern occur in your life? (*Another frequency count for validation.*)
- What would you say are your greatest resources that you can bring to changing this pattern? (*Assessing the client's capabilities for deep psychotherapy interventions.*)
- What would you say are some challenges that would affect your being able to change this pattern? (*Assessing the client's*

capabilities for change.)

- How would your life be different if this problem was solved? Or, how would changing these behaviors impact on your everyday life? (*Assessing the client's capabilities for visualizing change and generating hope.*)

A visual depiction of the prenatal and perinatal case formulation model can be seen in Figure 1. Prior to the description of the research using this model a brief explanation as to why an integrated approach using cognitive behavioral principles with PPN theory is offered.

Figure 1: A Prenatal and Perinatal Case Formulation for Repetitive Behaviors in Adults*



*Adapted from A. Wells (1997) General schema model of anxiety disorders.

A PPN and Cognitive-Behavioral Integration

This assessment model combines PPN theory and aspects of the cognitive behavior therapy (CBT) model for trauma. Primarily CBT was selected because it is the most efficacious method in evidencebased research for PTSD/trauma (Besson & Andrew, 2007). Further, the CBT exposure based assessment and treatment that guides clients to recall traumatic memories in a safe fashion to eventually regain mastery of the event is similar to the PPN methods of regressing the client into their early traumatic memories. Another technique that CBT and PPN have in common is stress-inoculation training where therapists use psychoeducational methods to manage and reduce anxiety. Breathing techniques are typically offered as well. Yet a traditional cognitive behavioral assessment would not go as far back into the client's history as PPN practice would.

Method

This section begins with a brief overview of the qualitative method selected, a description of the participants, the instruments utilized, and the procedure. A qualitative descriptive approach was indicated for this study. Qualitative methods are particularly well suited for subjective life experiences, such as narratives about long-standing personal challenges. Descriptive research describes the attributes of a characteristic of interest or to provide an overview of data without needing to draw causal inferences (American Psychological Association, 2007). Two rating scales were also utilized within this context.

Participants

Participants were 6 female adults, 28-58 years of age, who chose to complete the in-person or telephone interview, described as "a study of early memory metaphors in life stories." All were Caucasian, all came from blended or intact families with siblings. Religious affiliations were stated as Jewish (1), Catholic (2), Episcopalian (1), Christian (1), and "eclectic" (1). All six participants were highly educated, and reported their employment status as ranging from "not working presently" (2), part-time (2), to "working full time" (2). All were aware of prenatal and perinatal psychology either as a passing interest (3) or a full-immersion in the discipline (3). (Note: The participants for this preliminary study were recruited from a convenience sample, see below for more specific details.)

Measures and Instruments

The PPN Case Formulation Model. (described previously)

The Subjective Units of Distress Scale (SUDS). The SUDS is a self-report scale that ranges from 0 (peace and serenity) to 10 (feeling unbearably bad) for assessing the level of subjective intensity of discomfort a person feels. In this research a SUDS rating was taken in response to a recalled memory. SUDS was developed by Joseph Wolpe in 1968 and adapted by Shapiro (1989) within the EMDR protocol. The SUDS has been widely used (i.e., with Trauma-Focused Therapy, Emotional Freedom Technique and for research) and has been shown to correlate with several physiological measures (Thyer, Papsdorf, David, & Vallecorsa, 1994; Wilson, Becker, & Tinker, 1993).

The Historical Questionnaire (HQ). The HQ is an in-depth personal history. Categories of information were demographic (age, gender,birth order, ethnicity, religious background, education, occupation, SES, and family support), developmental (knowledge of parent's preconception status, conception information, first/second/third trimester events, perinatal impacts), adult self-report information related to stress, previous psychotherapy, immediate and extended family physical or psychological problems, number and type of traumatic psychological events lifelong, medical problems, medications, legal actions, current/former substance use/abuse, and suicidal ideation or attempts.

Procedure

An invitation for study participants was made by posting an announcement in the Santa Barbara Graduate Institute's monthly e-Newsletter sent to approximately 2,400 people or by word of mouth. The readership primarily consists of people from a worldwide community who support PPN or somatic psychology, as well as, alumnae, current students, and faculty. When an individual expressed interest, an appointment was set up either in person or by telephone depending on their preference or geographical location. An informed consent was reviewed and signed and the Historical Questionnaire completed. Participants gave their agreement to be videotaped or audiotaped prior to the interview as well. Each participant was asked to describe a current concern and then any memories that had an important enduring theme or conflict in their lives, using the PPN case

formulation described above. In order to test the protocol, all participants were asked the same questions with each having as much time as necessary to respond.

Ethical Protections

The Institutional Review Board (IRB) of Santa Barbara Graduate Institute (SBGI) reviewed this research project prior to its start. Potential participants were informed of the purpose of the study and requested to have their video/audio available to students at SBGI and in publication (anonymously). For this interview, and for the safety of the participants, it was suggested that they confine their memory narrative to a SUDs level of 4-6 (7-9 is considered high). In order to preserve anonymity, changes were made in demographic information as well as repetitive pattern profiles. Participants were informed that they could withdraw from the study at any time and refuse to answer questions they found intrusive or uncomfortable. All the individuals were debriefed.

Results

A review of hand written notes and the audio or videotape interviews by the researcher was done to identify the current problem identified by the participant, to discern the repetitive pattern, to determine what maintained the recurrent pattern, the cognitive, emotional, and statements that typified the PPN trauma beliefs, and finally, anything regarding the unconscious nature (somatic cues, transference material, non-verbal beliefs). The results section is organized as follows:

1) a review of the research questions/ hypotheses,
2) a description of each participant's repetitive behaviors and the case formulation
3) a summary and analysis

A Prenatal and Perinatal Case Formulation Model of Assessment. This investigation focused on the two research questions. The first one asked whether an evidence-based practice model of assessment could be created for adults reporting repetitive behaviors, and this was described (above). The second question was whether such a model could be tested reliably, and the data collected related to the second question follows. In an effort to reduce the data,

only the most salient points related to this case formulation around the prenatal and perinatal issues from each participant's interview were included.

Participant #1 - *"Amy"[none of the participants' real names are used]*

Presenting problem. "I impede my progress every time I want to work on a creative project. [and] I have feelings of panic."

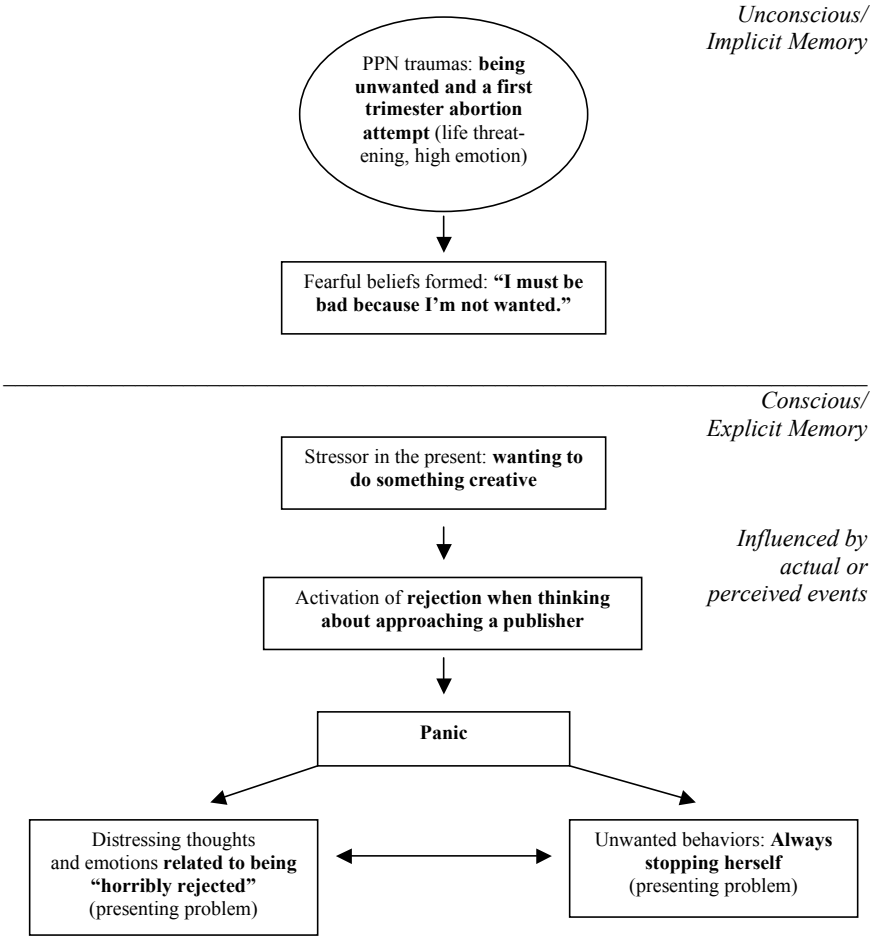
Repetitive pattern description. "I always stop myself … I get a creative idea, for a book for example, … I get excited about it, and ideas flow easily. I keep all the ideas inside and don't tell anyone … that's an important part of my pattern. But when I begin thinking about approaching a publisher, that's when the trouble starts. The panic and anxiety get so intense that I talk myself out of it [the project]. This happens with anything I really want, I guess, so I end up not pursuing my ideas. That leaves me frustrated … I want to know the truth about me."

The meaningful statement that best fits the emotion from the interview. "I desperately don't want to be … horribly rejected."

Predominant emotion. "(Horribly) rejected." SUD rating. For the emotion of "horribly rejected" Amy rated this as being "between 9 and 10" and this pattern or feelings probably happens a "couple of time a day."

Case formulation. Hypothesizing that there are early origins to Amy's thoughts/emotions, historical information cross-validated her current repetitive cycle as follows. She was unwanted and unplanned and her mother experienced depression and physical problems during her pregnancy. Most importantly, near the end of the first trimester her mother attempted to terminate the pregnancy herself. At birth Amy was taken away from her mother and put into a hospital nursery and bottle-fed. Taken together, that is, the repetitive pattern, the intense emotion with high SUDS ratings, and the kinds of events that occurred during this participant's prenatal and perinatal periods, suggests the appropriateness of a PPN case formulation. Both her earliest memories and beliefs from those experiences and the emotions perpetuate the unresolved trauma each time she had a potential for rejection as an adult. A visual depiction of Amy's prenatal and perinatal case formulation is shown in Figure 2.

Figure 2: Amy's Prenatal and Perinatal Case Formulation for Repetitive Behaviors



Participant #2 – "Bess"

Presenting problem. "I have ambivalence in romantic relationships."

Repetitive pattern description. "I feel loving, yet conflicted about being with someone. I will want distance, [as] I don't trust my feelings about intimacy … a feeling of being trapped (or something). [This happens] at quiet times … at home, sitting down together where it's very … constructed, you know, something two people are supposed to do. All at once, I just want to 'be out.' Then I get a feeling 'this isn't me,' that 'this is wrong somehow,' and 'this won't work' even though at first

I really try to do things 'his way.'

The meaningful statement that best fits the emotion from the interview. "He doesn't understand who I am."

Predominant emotion. "All I can describe it as is this 'violent turn' and then I cry. A turn in my feelings, disappointment mixed with anger at him for being a certain way. But I'm definitely not conscious of it in the moment. First it's sadness, then charged into anger, or contempt. I feel almost betrayed or not real. But I also get a strange feeling of calm." SUD rating. "… maybe 8 and really powerful … extreme and this pattern or feelings probably happens once or twice a week, at a low level it's everyday."

Case formulation. Bess did not know about any events or health issues her mother may have had during her pregnancy. She had been told that she was birthed via a planned C-section. She described having a number of fearful beliefs, "becoming helpless," "being a failure," and a "feeling that something is missing." She described a temporary dependence on alcohol during stressful periods as well. As the prenatal and perinatal literature would predict, early traumatic events would serve as the exact or very similar template to the current problem … the expectation of being born into a mother/child relationship was taken away with a planned C-section and the use of anesthetic. The repetitive pattern, the intensity and range of emotions could be said to reflect what the newborn was going through at birth. This is hypothesized as where being misunderstood originates, and the "something that was missing" was the vaginal ("normal") birth itself. Any meaningful relationship would bring up these early imprints, thus distant relationships would be chosen most of the time.

Participant #3 – "Carol"

Presenting problem. "Loneliness (and stress)."

Repetitive pattern description. "I find myself alone. As much as I value connection, partnership, community, and family, I have been alone most of my adult life. This 'being alone in the world' has created perpetual stress and anxiety, which has resulted in physical problems too. I seem to need to go off by myself, to make my way by my own wits … The pattern is that I start to feel lonely (or bored or tired) then I think "I would like to share my life with someone." But then something stressful happens, like I have a bad day at work or financial problems. From there I go into this dark, victim's place (loneliness). That's the 10. I try to alter my mood with activities, read something inspirational, go to a movie, or walk. But mostly I feel sorry for myself and so feeling better always takes a lot longer. I feel better for a while but then it

starts all over again. There is a deep wounded place where I was abandoned by my mother."

The meaningful statement that best fits the emotion from the interview. "Being alone in the world."

Predominant emotion. Loneliness. SUD rating. "8 to 10" ("…and late afternoon to evening, probably everyday.")

Case Formulation. From the HQ, Carol was unplanned. "During a hypnosis session I remembered that I was ignored during the pregnancy" I've been aware of this for a long time. Her mother was reported as not wanting to get pregnant and that both she and her father were disappointed with having another girl. She moved 10 times as a child due to her dad's work, which had the effect of "always losing friends." Carol was able to recall the earliest memory at age three where she broke her leg and "the doctor cut me when he cut the cast off" and "I was traumatized." She feared losing her temper, going crazy, being helpless, being a failure, being abandoned. I have a "hole in my soul still, [and] I have tried lots of things to fill it." A number of hypotheses could be generated for PPN issues but more important is the stabilization of Carol's "loneliness" or depressive mood (based on DSM-IV criteria). Worthy of note also is Carol's report that her siblings had medical and psychological issues similar to her own, so the genetic predisposition for these conditions cannot be ruled out with the information given in the research interview. The other alternative is that the repetitive events happened after the prenatal or perinatal periods. The "dark victim place" that predominates does have PPN implications, in that it, and the pervasive loneliness, could have been learned early through the feelings of unwantedness by the mother. No prenatal attachment was likely present, nor a mother-infant one.

Participant #4 – "Dalia"

Presenting problem. "Failure, feeling paralyzed, if anyone asks me to do something and it's always, I can't do it. I fear that I'll be judged. I just don't think I can do it."

Repetitive pattern description. "If something was too scary for me, I would find a way to not do it, or my body would find a way like getting sick or hurt, and then I have a way to not do it. Then I can relax because I avoided it or else I'm relieved when it's over. If I had to do it, I would get anxious with physical symptoms like a rapid heart rate. I might even faint, then I think, 'Somebody get me out of this'."

The meaningful statement that best fits the emotion from the interview. "I'm not going to make it out (or through) this."

Predominant emotion. Fear SUD rating. The emotion of fear was

between "1 and 10 …depending on the particular event and these probably happen every day."

Case formulation. Dalia reported being planned and wanted. She stated that no catastrophic events occurred during her mother's pregnancy. She was born full term in a hospital where her mother was given general anesthesia as a result of labor not progressing after 12 hours (her cervix didn't dilate). Dalia stated that her mother's fear of dying in childbirth was likely what kept labor from progressing. Dalia was also lying in a breech position and a Cesarean section was performed. Dalia reported that in the present that she reacts to stress with immobilization, confusion, anxiety, anger, and sadness. The repetitive pattern, driven by the emotion of fear, is hypothesized as being a single incident event during birth. Lack of labor progressing, perhaps due to the general anesthetic, the breech presentation, and the inability of Dalia as an unborn child to literally "get out" of the birth canal, or "get through" to be born likely was experienced as a life and death event (verified by the high SUDS rating). Her need to have someone "get her out of this" is directly related to the "rescue" of the C-section – someone literally did have to get her out. Birth patterns of this kind are commonly seen in regressed clients, along with fearful symptoms of "not being able to make it." These are then generalized from the birth experience into any stressful situation where the perception of going through a situation is required.

Participant #5 – "Eileen"

Presenting problem. "When there's a chance of being separated from my boyfriend when I'm not prepared for it, I tend to panic. This has always been the case when I can't be with the people I care about the most. It has affected all my relationships."

Repetitive pattern description. "If my boyfriend plans to go somewhere, what I feel is scared and unsafe. I start thinking 'He doesn't love me anymore.' But if I can get into physical contact, like with my boyfriend, I begin to feel safe again, I can believe that he's not getting rid of me."

The meaningful statement that best fits the emotion from the interview. "He/They don't love/want me anymore."

Predominant emotion. "Panic and fear over being abandoned, deep sadness, wanting to die." SUD rating. "From a 3 when my boyfriend goes to work, but I have been at a 10."

Case formulation. Eileen describes that she was not planned or wanted, as there were already 5 children in her family. Her life reflected a number of significant losses as well. In psychotherapy she

explored a number of modalities, and during a number of regressions had the memory of a twin lost while in utero. "I also wanted to die and go with him. It's the deepest feeling of sadness where there's just no words to adequately explain it." Repetitive losses are hypothesized for Eileen beginning in utero with her twin, into an unwanted pregnancy, a family that one more child added more hardship, and multiple losses into adulthood. Any losses in the present, no matter how small, reverberate the early prenatal imprint of loss and subsequent experiences that add to the feeling of anxiety and lack of safety.

Participant 6 – "Felissa"

Presenting problem. "I can't do things where I think I'll get trapped … I avoid everything, from elevators to … even going on trips. It's a body sensation of compression, and being pushed too. Emotionally I feel out of control, and very afraid that my vulnerability will be exposed."

Repetitive pattern description. "If I plan to travel, for example, I begin to feel vulnerable … then all of a sudden I see something terrible happening. That's where I'm certain I'll feel panicky, and out of control. Finally, I realize what is happening to me, or someone who knows me does, and helps me regain control of myself. But honestly, the feeling I have all the time is that I'm not going to make it… "

The meaningful statement that best fits the emotion from the interview. "I didn't see what was coming, violently … and I know I'm not going to make it." Or "The feeling comes up, I can't get out or away from others, there's no place to go to escape it."

Predominant emotion. "Uncontrollable, panic … and sadness, but I don't notice that in the moment." SUD rating. Sadness "7 and 8" and this pattern or feelings happens every day, and all the time.)

Case Formulation. Felissa described what she knew about her own prenatal and perinatal history as being quite normal in that her mother was excited and happy to have a child. The main risk factor was that her mother smoked one-and-a-half packs of cigarettes a day during the pregnancy. "I recall the cigarette smoking as very contaminating and I breathed as shallowly as possible while in the womb." At birth, she reported that the doctor decided to induce with Pitocin before she had even dropped into the birth canal or begun labor. In reexperiencing this event as an adult Felissa reported that "I have very clear memories of practically dying at my birth because of the extreme violence of the Pitocin …." She was full term and born vaginally. Felissa also stated when asked about her family history that her mother was prone to uncontrollable rages, "unstoppable, off the

charts … and, I feel like I have that in me." What is interesting to hypothesize here is the apparent single risk factor (smoking) that presents, nonetheless, as such a critical one to survival, compounded by the events of birth. Another clue that there is an early trauma is the high rating on SUDS and the pervasive nature of the repetitive problem. Of interest is the role of the maternal rages in the mix. Regardless, additional information is needed to yield a clearer formulation, but early events can/should be considered in Felissa's case.

Discussion

The potential for creating a PPN empirically based case formulation model that can reliably assess long-term problems is worthy of study, even though the association between early events and current symptoms is not well understood. What can be gleaned here is that identifying how the early traumatic experience is woven into the current repetitive pattern using case conceptualization methods may be a reliable way to detect the origins of long-standing problems in adults. With the repetitive cycle and the intense emotions and the unconscious memories uncovered, more thorough assessments can be offered. If we consider the current PPN case formulation model in light of existing research studies, it supports Rank's (1929/1993) early observations that emotions, such as anxiety, may be a repetition of birth. This is similarly consistent with the seminal authors and foundational clinicians in this field as well, specifically, that early learning takes place and that trauma memories influence later behaviors.

Implications of this study for current theory suggest that there appears to be a way to measure the prenatal and perinatal clinical principles in a testable way. Also demonstrated was that through targeted inquiry methods early material can be assessed reliably. The limitations of this study still remain, namely, that this single research study only begins to validate the case formulation model offered here. However, it does provide a method of replication for all the important elements of a complex conceptual approach such as found in trauma during the PPN period. Beyond the two research questions posed, another obvious goal of this article was to argue the need for prenatal and perinatal psychology to examine itself and critique its assertions with appropriate methodological rigor. This was for the purpose of providing services that are in the best interest of our clients and to begin to dialogue with our mainstream psychology colleagues about what we have learned about the origins of human behaviors. Further,

we should be able to offer guidelines around the kind of client who might not benefit and the clinician who might not be comfortable with this developmental domain. In an environment of accountability, working toward this kind of collaborative approach was seen vital for not only the health of the discipline, but also to provide the tools necessary for the next generation of prenatal and perinatal practitioners.

Recommendations for Future Research

The proposed model provides a useful context for future research. The most obvious next step is to investigate if this model will demonstrate reliability using inner-observer agreement around assessment. Persons, et al. (1995) asked 46 practitioners to listen to audiotapes of initial interviews with two clients and identify the presenting problems and underlying core beliefs. For PPN practitioners, the goal would be to identify the presenting problem (symptoms), the intense emotions, and the origins of the repetitive behaviors in the early trauma experiences. Additionally, with a reliable case formulation in hand, applying interventions to inform and improve psychotherapy outcomes in adult clients' long-standing repetitive behaviors would follow next. A similarly rigorous evaluation of the effects of PPN interventions based on the above case formulation protocol might utilize single-case methods (Katzdan, 1985). These recommendations for research around PPN practice could confirm, refine, or even challenge the model of PPN psychotherapy. Finally, it is hoped that future PPN research will contribute to mainstream psychology by being able to confidently answer the question: What is the most effective way of helping the client with long standing repetitive patterns?

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