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Analysis of Factors Involved in Ratings of Treatment Acceptability for Trichotillomania

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ANALYSIS OF FACTORS INVOLVED IN RATINGS OF TREATMENT ACCEPTABILITY FOR TRICHOTILLOMANIA

by

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Based on the literature, trichotillomania (or chronic hair pulling) appears to be responsive to behavioral interventions, with habit reversal as the most promising intervention. Habit reversal has been shown effective with children and adults of varying levels of severity, but some have questioned the generality and acceptability of the procedure. Little is known about the acceptability of interventions for habit disorders. These two research studies were designed to answer questions regarding the acceptability of behavioral and pharmacological interventions for trichotillomania and to expand the conceptual knowledge of treatment acceptability.

Study 1 compared the acceptability of four interventions targeting trichotillomania. The four treatments included habit reversal, a punishment-based procedure, medication, and hypnosis. Age of the analogue client and severity level of the hair pulling was also manipulated to assess the effect of these variables on ratings of treatment acceptability. Results showed significant differences between the four treatment conditions, with hypnosis and habit reversal rated the most acceptable. Age of the case and severity level did not significantly influence acceptability ratings.

Study focused upon methodological and conceptual issues involved in treatment acceptability research. Currently, standard practice is to provide participants with a brief description of the procedures involved in an intervention before asking the subjects to making a rating of treatment acceptability. Rarely are participants given explanation of why interventions have been selected and how they are likely to work. In the past, rationale and efficacy has been manipulated through one sentence explanation stating the therapists intentions or general statements as to the effectiveness of the interventions. Study 2 investigated the potential ramifications of providing more thorough descriptions of the rationale behind the intervention, and specific technical data on effectiveness. Results showed significant increased in treatment acceptability ratings across treatments when a rationale statement was provided. Also, efficacy influenced treatment acceptability ratings, with higher effectiveness associated with higher treatment acceptability ratings.

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INTRODUCTION

Trichotillomania (TCM), a term first used in the late 1880's, refers to a condition characterized by chronic hair pulling (Hallopeau, 1889). Individuals qualify for a diagnosis of TCM if they 1) exhibit recurrent hair pulling that results in noticeable hair loss (alopecia), and 2) experience either a sense of tension before pulling, or relief/pleasure when pulling hair. The hair pulling must not be the result of another mental or medical condition, such as a dermatological condition, and it must cause "significant distress or impairment in social, occupational, or other areas of functioning" (American Psychiatric Association, 1994, p. 621). When these diagnostic criteria are strictly applied, the lifetime prevalence of TCM is approximately 0.6% for both males and females. However, when only alopecia is necessary for diagnosis, this rate increases to 1.5% in males and to 3.4% in females (Christenson, Pyle, & Mitchell, 1991; Hansen, Tishelman, Hawkins, & Doepke, 1990). A more serious form of TCM includes not only hair pulling, but also the ingestion of hair (trichophagy). Estimates of trichophagy range from 5 to 18% of individuals with TCM (Christenson et al., 1991; Mansueto, 1991; Schlosser, Black, Blum, & Goldstein, 1994). Complete ingestion of hair can lead to potentially serious medical complications, such as intestinal trichobezoars (hair balls) or trichophytobezoars (clots of hair and vegetable matter; Christenson & Mansueto, 1999).

The prevalence of chronic hair-pulling has been frequently underestimated among practitioners and the general public, perhaps because of the secretive nature of the disorder (Swedo, 1993). Hair-pulling is typically a private behavior and individuals with TCM will often go to great lengths to hide the effects of this "peculiar" behavior from friends, family, and healthcare providers (Stein & Christenson, 1999; Swedo, 1993).

The secretive nature of TCM may also inhibit individuals from seeking treatment. From a sample of 123 self-identified hair pullers, 58% reported they had never received any type of treatment (Cohen et al., 1995). The reasons for this underutilization of treatment are not well understood. Some have speculated there is a lack of awareness about potential interventions for hair pullers and where to obtain services (Stein & Christenson, 1999). Other factors that may contribute to the failure to pursue treatment for TCM include embarrassment about the behavior, minimization of the severity of the problem, or perhaps problems with the acceptability of the treatments that are available.

Treatment of Trichotillomania

Although many treatments are available for TCM, there has been much debate about which treatment is the most appropriate for this disorder. Until Friman, Finney, and Christophersen (1984) summarized the success of behavioral interventions for TCM, the disorder was almost exclusively conceptualized as a psychiatric disturbance and treated accordingly (i.e., primarily with medication). Friman and colleagues

(1984) promoted a view of TCM as a "relatively isolated symptom comparable to other habit disorders such as thumb sucking, nose picking, or fingernail biting" (p. 250). This was a sharp contrast to the regnant psychiatric view. This alternative model and its associated treatments evoked debate over the fundamental nature of the disorder, as well as the appropriate treatment of TCM (e.g., Ames, 1985; Friman, 1992; Friman, Rostain, Parrish, & Carey, 1990). Subsequent reviews have updated and confirmed the efficacy of behavioral interventions for TCM (e.g., Elliott & Fuqua, 2000; 2001). Nevertheless, controversy continues regarding the most appropriate treatment strategy for TCM. Because of the continuing controversy about treatment strategies, a brief description of available pharmacological, behavioral, and other interventions will be provided.

Pharmacological Interventions

The psychiatric literature typically characterizes TCM as a complex psychopathological disorder that is relatively resistant to treatment (Graber & Arndt, 1993). Among pharmacological treatments for TCM, antidepressants have been the most thoroughly researched, particularly the tricyclic antidepressant clomipramine (Christenson & O'Sullivan, 1996; O'Sullivan, Christenson, & Stein, 1999; Swedo et al., 1989). Clomipramine is often used to treat Obsessive Compulsive Disorder (OCD) and the rationale behind the use of this drug with TCM lies in a presumed relationship between the two disorders (Himle, Bordnick, & Thyer, 1995; King et al., 1995; Mouton & Stanley, 1996; Swedo & Leonard, 1992).

Most recently, clomipramine was compared to cognitive-behavioral therapy in a 9-week, placebo-controlled, randomized trial to treat TCM (Ninan, Rothbaum, Marsteller, Knight, & Eccard, 2000). Efficacy was evaluated by self-report and clinician rating scales. A strength of the study was that the assessments were administered and completed by an independent assessor blinded to treatment condition. Twenty-three patients entered the study, with only 16 completers. Four of the 10 participants assigned to the clomipramine group failed to complete the study (40%). Those in the cognitive behavioral therapy group (i.e., complete habit reversal package, stimulus control procedures, and a stress management component) had statistically significant reductions on the outcome measures, while both clomipramine and placebo groups had non-significant reductions (Ninan et al., 2000). Results indicate while significant reductions have been found with medication in some studies (e.g., Swedo et al., 1989), these results are confounded by relatively high drop-out rates (Ninan et al., 2000). Maintenance of effects after discontinuing the medication is also a concern (Swedo, Lenane, & Leonard, 1993).

Behavioral Interventions

Behavioral interventions typically rely on the manipulation of one or more environmental factors in an effort to reduce or eliminate hair pulling. Many of the interventions are characterized by the arrangement of a contrived consequence (e.g., some type of "aversive" event or an effortful behavior) for instances of hair pulling. Over recent years, an impressive array of research has emerged demonstrating the

validity of a behavioral approach to treat hair pulling. Positive results have been found with many behavioral interventions, however, habit reversal has the strongest empirical support (Elliott & Fuqua, 2000; 2001; Friman et al., 1984).

Punishment-Based Procedures

Punishment procedures have been used primarily to treat chronic hair pulling in both children and adults with developmental disabilities. A number of aversive consequences have been used to produce dramatic results in reducing hair pulling. The list of aversive consequences used includes: electric shock (Corte, Montrose, & Locke, 1971; Crawford, 1988; Deshpande & Mehta, 1989), aromatic ammonia (Altman, Haavik, & Cook, 1978), facial screening (Barmann & Vitali, 1982), pain sensitizing topical cream (Ristvedt & Christenson, 1996), response prevention (Rapp et al., 2000), and snapping a rubber band (Rodolfa, 1986). The majority of the studies mentioned above document the efficacy of punishment procedures for hair pulling in children and adults with developmental disabilities.

Fewer studies have been done using punishment procedures with typically developing adults and children. This raises concerns about the acceptability and generality of punishment treatment protocols (Elliott & Fuqua, 2001). To date, only two studies have collected acceptability information on the use of a punishment procedure to decrease hair pulling (Barmann & Vitali, 1982; Rapp et al., 2000). In both studies, the participants had severe developmental disabilities, therefore, the treatment acceptability ratings were completed by parents and caregivers. Barmann

and Vitali (1982) found the parents and care providers were generally in support of facial screening (i.e., briefly covering face with a terrycloth bib contingent on hair pulling) to reduce hair pulling for all three children in this study, particularly with respect to its ease of use. Rapp et al. (2000) received high treatment acceptability ratings from a parent of a young woman (19 year-old) for both the application of hand splints and the combination of response interruption (hold hands at side for 20 sec) and differential reinforcement of other behaviors. These data indicate punishment procedures have been acceptable to the parents or care providers of individuals with severe developmental disabilities. However, the data were collected after treatment effects were apparent, so there is no information on the pretreatment acceptability of such procedures.

Habit Reversal

The behavioral intervention with the strongest empirical support for decreasing chronic hair pulling is habit reversal (Elliott & Fuqua, 2000; 2001; Friman et al., 1984). Habit reversal is a multi-component intervention that has been used to treat many repetitive behaviors, such as motor tics, vocal tics, thumb-sucking, nail-biting, and even stuttering (see reviews by Woods & Miltenberger, 1995; 1996). Habit reversal is currently listed as a "probably efficacious" treatment for habit behaviors on the American Psychological Association's list of empirically validated treatments (Chambless et al., 1998). As originally conceptualized by Azrin and Nunn (1973), habit reversal contains four phases: awareness training, competing response

training, motivation enhancement, and generalization training. In recent years, research has concentrated on a simplified habit reversal treatment package that includes three of the four phases (awareness training, competing response training, and social support).

In general, habit reversal appears to be effective in decreasing and even eliminating chronic hair pulling in both children and adults (Elliott & Fuqua, 2000; 2001). Although many studies have reported achieving and maintaining zero levels of hair pulling with the use of habit reversal (e.g., Tarnowski, Kelly, & Mendlowitz, 1987), not all respond in such a manner (Long, Miltenberger, & Rapp, 1999; Mouton & Stanley, 1996; Rapp, Miltenberger, Long, Elliott, & Lumley, 1998; Vitulano, King, Scahill, & Cohen, 1992). Some have speculated that these nonresponders have unique controlling variables for their hair pulling that differ from those of the responders (Elliott & Fuqua, 2000). Another possibility is that nonresponders fail to adhere to or complete the treatment protocol, possibly because they do not find habit reversal an acceptable treatment for TCM and this may influence adherence to the treatment protocol or early withdrawal from treatment (Keuthen, Aronowitz, Badenoch, & Wilhelm, 1999; Rothbaum & Ninan, 1999).

Only one study has assessed the acceptability of habit reversal as a treatment for TCM (Tarnowski, Rosen, McGrath, & Drabman, 1987). In this study, an 11-year-old girl with severe TCM was treated successfully with habit reversal. A parent rated the procedure a "5" on a five-point Likert Scale, reflecting high acceptability. The treatment acceptability data were collected after treatment implementation, therefore,

it is not known how acceptable the treatment was viewed after its initial presentation to the parent and child.

Hypnosis/Relaxation Procedures

Habit behaviors have often been conceptualized as maintained by negative reinforcement, because the behaviors reportedly produce reductions in tension, anxiety, or some aversive condition experienced by the individual (see Miltenberger, Fuqua, & Woods, 1998). The necessity of a tension/relief symptom in the diagnostic criteria also supports this view. One potential treatment avenue for decreasing tension, thus reducing or eliminating the motivation for hair pulling, involves training in relaxation procedures. This training may take the form of progressive muscle relaxation (e.g., DeLuca & Holborn, 1984) or a combination of relaxation along with suggestions for behavior change. This latter technique has been referred to as hypnobehavioral treatment (Robiner, Edwards, & Christenson, 1999). Although the exact mechanisms underlying hypnobehavioral treatment are unclear, this treatment often uses relaxation to relieve tension along with suggestions for behavior change (Fabbri & Dy, 1974; Galski, 1981; Rodolfa, 1986). The studies investigating the efficacy of this treatment for hair pulling consist primarily of uncontrolled case studies without quantifiable data. However, despite their limitations these reports document success in reducing hair pulling, primarily in normal functioning adults.

Hypnotic induction has been used both to increase awareness of hair pulling and increase perceptions of associated pain (Friman & O'Connor, 1984; Hall &

McGill, 1986; Rodolfa, 1986). Hypnobehavioral techniques are typically used with normally-functioning adults and given the verbal nature of the techniques, use may be limited to those with highly developed verbal repertoires. Three studies investigating the use of hypnosis have reported rapid decreases in self-reported hair pulling with maintenance of these improvements over two (Fabbri & Dy, 1974; Friman & O'Connor, 1984), six (Hall & McGill, 1986), and eight months (Rodolfa, 1986). Relative to other treatments, hypnosis requires little effort from the recipient and it may be well accepted by some individuals.

Cognitive-Behavioral Procedures

In the past decade, cognitive-behavioral conceptualizations and treatments for hair pulling have emerged. The emergence of cognitive-behavioral models is likely a reflection of the general movement within mainstream psychology, but it may also reflects concerns regarding the efficacy and acceptance of the habit reversal treatment package. The treatment success of habit reversal stems largely from work completed in academic settings, rather than private treatment facilities. In the literature, concerns about habit reversal have targeted the heterogeneity of individuals with hair pulling (Mansueto, Golomb, Thomas, & Stemberger, 1999), the lack of attention habit reversal pays to cognitive variables (e.g., maladaptive thoughts; Stanley, 1999), as well as the lack of acceptability of the procedure to adolescents and adults (Keuthen et al., 1999; Robleck, Detweiler, Fearing, & Albano, 1999). Although there is no empirical support for these concerns, cognitive-behavioral conceptual models

(Mansueto et al., 1999) and treatment manuals (Rothbaum & Ninan, 1999) have been published in recent years. These models and manuals typically include habit reversal, but also target the role of maladaptive thoughts and feeling states as triggers for hair pulling.

The cognitive-behavioral treatment model proposed by Mansueto et al. (1999) includes four general phases, comprising a total of ten different steps. This model encourages the use of a functional assessment to help identify "triggers" for hair pulling that could be altered, avoided, or responded to with a more adaptive behavior thereby reducing hair pulling. The second phase divides the functional analysis information into five different modalities: cognitive, affective, motoric, sensory, and environmental. After the information has been categorized in such a way, the most prominent modality is identified and treatments targeting that modality are implemented in phase three (Mansueto et al., 1999). According to this model, most habit reversal components (e.g., awareness and competing response training) are relevant to the "motoric modality." The final phase of treatment is to evaluate treatment progress through self-monitoring. Relapse prevention strategies are also discussed, with an emphasis on a gradual fading of therapist support (Mansueto et al., 1999).

In the only controlled empirical work on the efficacy of cognitive-behavioral therapy to decrease hair pulling, Ninan et al. (2000) compared cognitive-behavioral therapy to serotonin-norepinephrine reuptake inhibitors (clomipramine) and a pharmaceutical placebo. The cognitive-behavioral treatment package included many

components, including habit reversal, stimulus control, coping skills training, cognitive restructuring, and relapse prevention techniques. The cognitive-behavioral treatment package was demonstrated significantly more effective than either clomipramine or placebo. There was not a statistically significant difference in hair pulling between clomipramine and placebo. Efficacy of treatment outcome was measured by self-report ratings of severity and impairment, as well as clinician ratings of treatment improvement, which were completed by a clinician blinded to the treatment condition (Ninan et al., 2000).

These results represent the first published account comparing a psychological to a pharamcological intervention for hair pulling (Ninan et al., 2000). However, the cognitive-behavioral treatment package contained numerous components, making it difficult to delineate which components were necessary. The necessity of including additional treatment components to habit reversal has been mentioned in the literature (e.g., Miltenberger, 2001), but determination of when additional components are necessary has not been empirically determined. Although dissatisfaction with the acceptability and universality of habit reversal has been reported anecdotally, it has not been empirically demonstrated that additional cognitive components enhance either of these variables. Furthermore, there is no evidence that cognitive variables cause, contribute to, or maintain hair pulling. Empirical work demonstrating that the addition of cognitive-behavioral techniques to habit reversal significantly enhances outcome is necessary before adoption of these techniques can be universally recommended.

Treatment of Trichotillomania – Conclusions

The literature on the treatment of TCM has been highly variable with respect to clinical presentation and prognosis. The psychiatric literature presents TCM as a complex psychopathological disorder (see Graber & Arndt, 1993), whereas the behavioral researchers tend to conceptualize TCM as a habit, without reference to underlying psychopathology or even significant comorbidity (Elliott & Fuqua, 2000; Friman et al., 1984). This discrepancy in the literature may have fostered confusion among practitioners and potential consumers regarding the appropriate treatment for a person with TCM.

Based on the literature, hair pulling appears to be responsive to behavioral interventions, with habit reversal the most promising intervention. Habit reversal has been shown effective with children and adults of varying levels of severity, but the limits of this treatment intervention have yet to be established. Some have questioned the generality and acceptability of the procedure and have begun supplementing the procedure with additional treatment components (Rothbaum & Ninan, 1999), without experimental evidence for the necessity of these additional components.

Social Validity

Traditionally, behavior therapists have concentrated great effort on validating the efficacy of behavioral techniques. Although efficacious, many behavior modification techniques were initially perceived by society as manipulative, noxious, and unacceptable (Parloff, 1983). Many have argued that such negative perceptions

had potential ramifications for dissemination and adoption of behavioral interventions, correct implementation of the procedures, approval from various advocacy groups, and funding opportunities for research scientists (Kazdin, 1980; Parloff, 1983; Wolf, 1978). It was soon realized that it is not enough for behavioral treatments to be effective, they must also be deemed acceptable (Kazdin, 1977; Wolf, 1978).

In response to this gap in applied behavioral research, Kazdin (1977) and Wolf (1978) suggested evaluations of social validity be included in all applied behavioral research. Wolf (1978) broke the concept of social validity into three levels of analysis:

1. The social significance of the *goals*. Are the specific behavioral goals really what society wants?
2. The social appropriateness of the *procedures*. Do the ends justify the means? That is, do the participants, caregivers, and other consumers, consider the treatment procedures acceptable?
3. The social importance of the *effects*. Are consumers satisfied with the results? *All* the results, including any unpredicted ones? (p. 207)

Since that time, numerous researchers have developed and validated instruments measuring the various components of social validity. In this review, concentration will focus on the second level of social validity, the validation of treatment procedures, otherwise referred to as treatment acceptability (Kazdin, 1981).

Treatment Acceptability

Treatment acceptability was originally defined by Kazdin (1981) as "judgments by lay persons, clients, and others of whether treatment procedures are

appropriate, fair, and reasonable for the problem or client" (p. 493). Psychologists may use different criteria to evaluate a treatment, compared with consumers or society at-large (Kazdin, 1980). Although treatment decisions should not be based solely on treatment acceptability ratings, this type of information may have ramifications for the likelihood that treatment will be implemented correctly (Kelley, Heffer, Gresham, & Elliott, 1989; Reimers, Wacker, Cooper, & DeRaad, 1992; Witt, Martens, & Elliott, 1984). Furthermore, when several interventions are deemed effective for treating a given problem, treatment choice should be influenced by variables other than efficacy, such as client preference (Heffer & Kelley, 1987).

The empirical study of treatment acceptability may have implications for treatment selection and outcome. For example, research on treatment acceptability may help identify variables related to premature withdrawal from therapy, client compliance, and motivation (Cross-Calvert & Johnston, 1990; Kazdin, 1980; Witt & Elliott, 1985). This research can also help identify the factors that influence judgments of treatment acceptability, such as severity of the problem, complexity of the treatment, the rationale behind the treatment, and presumed efficacy of the treatment.

Measuring Treatment Acceptability

Treatment acceptability can be measured through a variety of direct and indirect means (Fuqua & Schwade, 1986). For example, frequency of premature withdrawal from treatment (e.g., McLean & Hakstian, 1979; Tracy, 1977) may be

used as an indirect index of treatment acceptability. Other indirect means of assessing treatment acceptability include anecdotal comments from treatment participants, referrals of friends for treatment, or institutional adoption of treatment procedures (Fuqua & Schwade, 1986). However, the most common means of assessing treatment acceptability is through self-report.

Two self-report instruments have served as the foundation for measuring treatment acceptability. These instruments include the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and the Intervention Rating Profile (IRP; Witt & Martens, 1983).

Treatment Evaluation Inventory (TEI)

Kazdin (1980) was the first to develop and evaluate a self-reportmeasure of treatment acceptability. The TEI was created to assess the degree to which treatment procedures for child behavior problems were viewed as "...appropriate for the problem, whether treatment is fair, reasonable, and intrusive, and whether treatments meet the conventional notions about what treatment should be" (Kazdin, 1980, p. 259). The scale contains 15 items that are rated on a seven-point Likert-type scale, with total scores ranging from 15 to 105. Items are summed to provide a total index of treatment acceptability. Kazdin (1980) selected items for the TEI through factor analytic procedures and reported that all 15 items produced high loadings (range .67 to .94) on a single factor (acceptability). However, more recent factor analyses of TEI items have shown variability in the number of factors present (e.g., Kelley et al.,

1989). One study found the number of emerging factors (2 to 4) varied depending upon the treatment it was used to assess (Spirrison, Noland, & Savoie, 1992). Despite discrepancies in the TEI's dimensionality, it represents the single most common measure employed in treatment acceptability research (Wilson & Wilson, 1991).

Problems with the TEI include the time required to complete the measure, particularly when studying multiple interventions, as well as the reading level of the items. Kelley and colleagues (1989) attempted to shorten the completion time by shortening the TEI to 9 items. This modified measure was called the TEI-Short Form (TEI-SF). The researchers documented that the TEI-SF differentiated between treatments and was highly reliable, similar to the TEI. However, the TEI-SF took less time to complete, had a lower reading level, and was preferred by research subjects (Kelley et al., 1989). Even though the TEI-SF had many advantages, recent criticisms of the measure lend doubt to its efficacy in treatment acceptability studies.

In particular, the criticisms have centered on the methodology used to develop the TEI-SF. Spirrison and Noland (1991) compared data from the original TEI and extracted the items that comprise the TEI-SF. They found that the TEI-SF produced higher acceptability ratings for differential reinforcement of other behaviors (DRO) and lower acceptability ratings for overcorrection when compared with the original scale (Spirrison & Noland, 1991). This group of researchers warns that the TEI-SF is likely to exhibit systematic measurement error when used to compare different treatments, with a bias in favor of less restrictive treatments (Spirrison & Noland, 1991; Spirrison et al., 1992).

Intervention Rating Profile (IRP)

Witt and Martens (1983) developed the IRP to assess teachers' perceptions of treatment acceptability. The IRP contains 20 items that are rated on a six-point Likert-type scale, with scores ranging from 20 to 120. Items were selected through factor analytic procedures and all items loaded on one primary factor (general acceptability), that accounted for 41% of the variance, and four secondary factors. The four secondary factors were risk, time, effects on other children, and teacher skill (Witt & Martens, 1983). The measure suffers from the same limitations as the TEI in terms of time intensiveness and limited utility with disadvantaged respondents (Cross-Calvert & Johnston, 1990).

The IRP was later modified to decrease the amount of time required to complete the measure. The IRP-Modified (IRP-15) contains seven original IRP items, plus eight new items (Witt & Elliott, 1985). Research on the IRP-15 showed item loadings ranging from 0.82 to 0.95 on a single general acceptability factor. The measure has also demonstrated excellent internal consistency, with a Cronbach's alpha of 0.98 (Witt & Elliott, 1985). However, even with these modifications, the IRP-15 remained time-intensive when multiple treatments were investigated (Tarnowski & Simonian, 1992).

Tarnowski and Simonian (1992) revised the IRP-15 in two ways and named this modified measure the Abbreviated Acceptability Rating Profile (AARP). First, the IRP-15 was abbreviated to eight items based on content validity data. Factor analysis data demonstrated that all items loaded on a unitary factor (acceptability) that

accounted for 85% of the variance. The item loadings ranged from 0.89 to 0.96 (Tarnowski & Simonian, 1992). Tarnowski and Simonian (1992) cross validated these findings with a different sample and obtained virtually identical results. Second, they reworded the items to improve readability. The resulting AARP contained eight items that are rated on a six-point Likert-type scale that yields a range of scores from eight, indicating low acceptability, to 48, indicating high acceptability (Tarnowski & Simonian, 1992). The AARP is easily modifiable for use with various populations (e.g., Arndorfer, Allen, & Aljazireh, 1999), and requires only two minutes to complete (Tarnowski & Simonian, 1992).

Other treatment acceptability rating scales have been derived from the IRP-15 and the TEI, but have not been used as extensively. For example, the Behavior Intervention Rating Scale (BIRS) includes all of the IRP-15 items to measure acceptability, as well as nine additional items to measure treatment effectiveness (Von Brock & Elliott, 1987). A version of the IRP was also developed for use with children (CIRP) and research demonstrated loadings on a single factor (Elliott, 1986; Witt & Elliott, 1985). Reimers and Wacker (1988) modified the TEI to produce the Treatment Acceptability Rating Profile (TARF) to assess the relationships between acceptability and other variables (e.g., disruption, effectiveness, time, and willingness). The other composite variables were derived rationally, based on previous investigations, rather than empirically. The TARF was later modified further to include questions measuring problem severity, understanding, and

compliance (Reimers et al., 1992). The result is each composite variable consists of only one to three questions, making reliability somewhat tenuous.

Methodology Used to Study Treatment Acceptability

Kazdin was the first to systematically study treatment acceptability and the methodology he employed in those first studies greatly influenced subsequent research (Kazdin, 1980; 1981). Kazdin (1980) gave college students case vignettes of two children with oppositional and disruptive behavior, as well as descriptions of four behavioral treatments. The treatment vignettes included a description of the intervention and an example of the treatment being applied to the specific child. Each of the treatments and their descriptions were derived from versions previously reported in the literature. After participants read each treatment description, they rated the treatment acceptability of the described intervention. This methodology is now referred to as an analogue method and it represents the most common means of studying treatment acceptability (Miltenberger, 1990).

Since Kazdin's seminal work in the early eighties (1980; 1981), treatment acceptability research has targeted numerous subject groups. These various groups include college students (Banken & Wilson, 1990), parents (Bennett, Power, Rostain, & Carr, 1996), children (Blankenship, Eells, Carlozzi, Perry, & Barnes, 1998), teachers (Fairbanks & Stinnett, 1997), group home workers (Foxx, McHenry, & Bremer, 1996), psychologists (Eckert, Hintze, & Shapiro, 1997), and pediatricians (Arndorfer et al., 1999). These groups have included actual consumers of behavior

management services (e.g., Miltenberger, Parrish, Rickert, & Kohr, 1989), as well as potential consumers (Cross-Calvert & McMahon, 1987).

The analogue method pioneered by Kazdin (1980) allows the researcher to vary the independent variable in order to evaluate the impact of selected factors of the treatment (e.g., efficacy, side effects) or the recipient of the treatment (e.g., age, severity of problem) on ratings of treatment acceptability. This type of design also allows researchers to compare ratings from various interventions while holding constant other influencing factors (Miltenberger, 1990). Researchers can use a between subjects design where each subject is exposed to only one level of an independent variable (e.g., severity of problem behavior) or a within subjects design where each is exposed to more than one level of the independent variable (e.g., different treatment vignettes). The most common research design in treatment acceptability research is a mixed design, where both between subject and within subject variables are manipulated.

Factors Related to Treatment Acceptability

A number of factors have been found to influence ratings of treatment acceptability. Factors related to the problem behavior, characteristics of the proposed client, and varying treatments have been investigated.

Although data from numerous subject pools have been reported in the literature, the majority of problems investigated consist of childhood externalizing acting-out behaviors (e.g., aggression) and self-injurious behaviors (Cross-Calvert &

Johnston, 1990). A few novel applications of treatment acceptability methodology have investigated treatment options for depression (Banken & Wilson, 1992), geriatric externalizing acting-out behaviors (Burgio & Sinnott, 1990; Burgio, Hardin, Sinnott, Janosky, & Hohnman, 1995; Sinnott et al., 1998), procrastination (Hunsley, 1993), sexual offenses and disorders (Lundervold & Young, 1992; Wilson & Wilson, 1991), and anorexia nervosa (Sturmey, 1992). In a comprehensive review of the literature, Cross-Calvert and Johnston (1990) encouraged researchers to determine the acceptability of interventions applied to a broad range of problems, particularly anxiety, depression, and habit disorders.

In terms of characteristics of the problem behavior that influence treatment acceptability, severity of the problem behavior has been the most widely investigated (Miltenberger, 1990). The majority of studies report that acceptability ratings increase in conjunction with severity level (Burgio et al., 1995; Elliott, Witt, Galvin, & Moe, 1986; Lindeman, Miltenberger, & Lennox, 1992; Tarnowski et al., 1989a; Witt et al., 1984). In fact, severity is now routinely manipulated in treatment acceptability research. An exception to this relatively robust finding was a study where parents, presenting at a behavior management clinic, rated their child's problem behavior severity and then rated the acceptability of the offered treatment (Reimers et al., 1992). This study found that treatment acceptability ratings were higher when the child's behavior problems were less severe (Reimers et al., 1992). This is opposite of the typical findings in this area and may reflect characteristics of the subject pool worthy of further examination. This study included only positive

treatments, as used by that particular clinic, but the findings suggest a severity by subject interaction not previously identified.

Aside from problem severity, few other factors relevant to the problem behavior have been empirically manipulated. One group of researchers found that showing a video vignette of an aggressive developmentally delayed individual, compared with a written description of that same individual influenced ratings of treatment acceptability (Foxx et al., 1996). They found the video increased acceptability ratings for negative consequence treatments (restraint, shock) and slightly decreased acceptability ratings for reinforcement-based procedures (DRO, DRI; Foxx et al., 1996).

Client Characteristics

Factors relevant to the analogue client represent the least researched of the three above-mentioned categories. The influence of gender of the proposed client has been studied. The small number of studies that have systematically manipulated age of the analogue client have yielded inconsistent results. Burgio and Sinnott (1989) reported a treatment by age interaction, with medication judged to be more acceptable for a 75-year-old woman and behavioral interventions more acceptable for a five-year-old girl for treating disruptive behaviors. Another group of researchers did not find a significant influence on acceptability ratings of interventions for self-injurious behaviors (Tarnowski et al., 1989b). Two other studies included age among nine other manipulated descriptor variables and attempted to predict acceptability ratings

through a regression equation (Spreat, Lipinski, Dickerson, Nass, & Dorsey, 1989; Spreat & Walsh, 1994). Age (alone or in combination with other variables) was not a significant predictor of the acceptability of electric shock treatments (Spreat et al., 1989; Spreat & Walsh, 1994). Further research may reveal that age is a predictor of treatment acceptability only for certain types of behavior problems and for more intrusive interventions.

Researchers have also manipulated the "cognitive capacity" of the analogue client on evaluations of treatment acceptability. The most common comparison is between analogue clients characterized as having "normal intelligence" versus those described as having developmental delays such as mental retardation. In two studies, researchers found no relationship between cognitive status and treatment acceptability of various interventions (Kazdin, 1980; Sinnott et al., 1998). In contrast, one study (Lundervold & Young, 1992) found that social skills training for sexual offenders received higher acceptability ratings when the perpetrator was presented as mentally retarded, compared with a perpetrator presented with normal intelligence. As with client age comparisons, the acceptability may be specific to the behavior problem and the type of intervention under consideration.

Treatment Characteristics

The influence of treatment characteristics on acceptability ratings has been studied more systematically than the above-mentioned categories. For example, the type of intervention has been shown to affect acceptability ratings. Typically, drug

interventions are rated lower than behavioral interventions for a wide range of problem behaviors, including oppositional behaviors (Heffer & Kelley, 1987; Mittle & Robin, 1987), aggression (Burgio et al., 1995; Tarnowski, Simonian, Bekeny, & Park, 1992) depression (Hall & Robertson, 1998; Tarnowski et al., 1992), hyperactivity (Kazdin, 1981; Power, Hess, & Bennett, 1995), and anorexia nervosa (Sturmey, 1992). In general, reinforcement-based procedures, such as positive reinforcement, positive practice, and differential reinforcement receive highly acceptable ratings compared to pharmacological or punishment-based procedures. An exception is response cost, which has also been found acceptable for treating childhood externalizing disorders (Cross-Calvert & Johnston, 1990; Heffer & Kelley, 1987). Interventions generally rated as unacceptable are punishment-based procedures that contain an aversive stimulus, such as spanking or shock, while time-out, overcorrection, ignoring, token systems, stimulus control, and medication receive mixed acceptability ratings.

The presence of adverse side effects have been thought to decrease treatment acceptability ratings (Reimers et al., 1987). However, only one study has looked at side effects systematically. As expected, Kazdin (1981) reported that including the potential for strong adverse side effects reduced acceptability ratings for a variety of interventions for childhood disorders.

The impact of treatment effectiveness on treatment acceptability rating's has also been studied. Effectiveness information has been operationalized in several ways, including reports of consumer satisfaction, documented empirical support for

particular interventions, and descriptions of treatment outcome with the described case. Kazdin (1981) provided subjects with statements that addressed the rapidity, magnitude, and durability of treatment effects. Strong effects were rapid and virtually eliminated the disruptive behavior problem, whereas weak effects took longer and the improvements were not as pronounced. There were no differences in acceptability ratings as a function of strong versus weak treatment effects. Sturmey (1992) also provided descriptions of two possible treatment outcomes to college students and that manipulation also had no significant effect on acceptability ratings. It is possible that manipulating efficacy statements solely through descriptive effects on the analogue client has no influence on treatment acceptability ratings.

Von Brock and Elliott (1987) studied the influence of treatment effectiveness by manipulating how the information was presented. They compared consumer satisfaction indices of efficacy, research-based outcome data, and a control condition where no effectiveness information was provided. They found research-based information affected acceptability ratings from teachers for mild problems, while consumer satisfaction information had no effect (Von Brock & Elliott, 1987). Effectiveness information did not influence acceptability ratings for severe problems, regardless of the type of information (Von Brock & Elliott, 1987). Although interesting, it is questionable whether the consumer satisfaction and research-based efficacy statements both relate to the same construct, namely treatment effectiveness.

Although some have hypothesized that treatment acceptability and treatment effectiveness are closely related constructs (Bihm, Sigelman, & Westbrook, 1997;

Reimers et al., 1992; Spreat & Walsh, 1994), the extent and nature of this hypothesized relationship merits scrutiny. A treatment is deemed effective if it changes a problem behavior in the desired direction, ideally by a magnitude that produces clinically significant improvements (Von Brock & Elliott, 1987). An effective treatment may not be acceptable (e.g., electric shock) for a particular client or problem behavior, and acceptable treatments are not necessarily the most effective or even guaranteed to be effective at all (Cross-Calvert & Johnston, 1990). In fact, the relationship between treatment acceptability and treatment effectiveness has been a controversial area in the literature. Some studies have shown a relationship between the two constructs (Bihm et al., 1997; Reimers et al., 1992; Spreat & Walsh, 1994), while others have not found such a relationship (Kazdin, 1981; Spirrison & Mauney, 1994; Sturmey, 1992; Spreat et al., 1989).

Treatment Acceptability versus Consumer Satisfaction

Treatment acceptability research has also been conducted during actual clinical situations, with consumers of treatment procedures rating the intervention they (or their children) were receiving at various points in the treatment process. One of the problems with the analogue model is that ratings are based on a description of the intervention, rather than actually receiving the intervention or seeing it applied. This raises concern for the validity of the data from analogue measures. For example, one group of researchers had parents rate recommended treatment procedures after first discussing the procedures and again one month later after they had been exposed

to the treatment (Reimers & Wacker, 1988). They found ratings of effectiveness had the largest influence on acceptability at the one-month assessment. Disruption and willingness, two variables related to acceptability initially, had less of a relationship to acceptability once the treatment had been attempted (Reimers & Wacker, 1988). This type of research has the potential to provide valuable information about the relation between treatment acceptability, implementation, and efficacy of behavioral interventions.

Analogue and clinical situation research counter each others' weaknesses, but questions exist regarding if they are actually measuring the same construct. Cross-Calvert and Johnston (1990) defined consumer satisfaction as the clients' attitude towards treatment once it has been initiated or completed. Consumer satisfaction may be related to treatment acceptability as Kazdin (1980) originally defined it, but not necessarily. For example, parents may find response contingent electric shock procedures highly unacceptable before treatment and then become advocates for the procedure after witnessing immediate decreases in their child's life-threatening self-injurious behaviors. When treatment acceptability data are collected after a person has been exposed to a treatment, it is no longer possible to discern if a positive evaluation represents a true opinion of the intervention procedures, or a reaction to other variables (Cross-Calvert & Johnston, 1990).

Purpose of Proposed Research

These two research studies were designed to answer questions regarding the acceptability of interventions for TCM and to expand the conceptual knowledge of treatment acceptability. Little is known about the acceptability of interventions for habit disorders. Study 1 compared the acceptability of four interventions targeting TCM. These four treatments represented a broad range of interventions mentioned in the literature. Age of the client and severity level of the hair pulling were manipulated to assess the effect of these variables on ratings of treatment acceptability.

Study 2 focused on methodological and conceptual issues involved in treatment acceptability research. Currently, standard practice is to provide participants with a brief description of the procedures involved in an intervention before asking the subjects to make a rating of treatment acceptability (e.g., Lindeman et al., 1992). Rarely are participants given an explanation of why an intervention has been selected and how likely it is to work. In the past, rationale and efficacy have been manipulated through one sentence explanations stating the therapists intentions (e.g., Cavell, Frentz, & Kelley1986) or general statements as to the effectiveness of the interventions (e.g., Von Brock & Elliott, 1987). Study 2 investigated the potential ramifications of providing more thorough descriptions of the rationale behind the intervention, as well as specific technical data on effectiveness on ratings of treatment acceptability for four interventions targeting TCM.

STUDY 1

Purpose of Study 1

The primary purpose of study 1 was to assess the influence of age of the client and severity level on ratings of treatment acceptability for four treatments targeting TCM. The four treatments included habit reversal, a punishment-based procedure, medication, and hypnosis. These four treatments were selected because each had documented efficacy in the literature and represented diverse treatment options. Padula, Conoley, and Garbin (1998) recommended selecting treatments for inclusion in acceptability research based on their popularity and widely contrasting approaches to change.

Participants

Two hundred, thirty-three introductory psychology undergraduate students participated in this study for extra credit. The mean age of the participants was 19.1 years (Range: 17 to 33 years). Information from eight participants was not used because of incomplete data, resulting in 228 participants (139 females & 89 males).

To determine the sample's familiarity with TCM, participant's answered questions about their familiarity with and exposure to hair pulling (see Appendix A). As can be seen in Table 2, participants did not report a great deal of direct experience with friends or family with TCM. Only 10.1% of the participants knew someone with

such problems and only 0.9% reported personally having problems with hair pulling. Neither of the individuals who had difficulty with hair pulling had ever received treatment.

Table 1

Study 1 – Exposures to Hair Pulling

	YES	NO
Friends/Relatives who chronically pull their hair?	23	205
Do you chronically pull your hair?	2	226

Along with the participant's lack of direct experience with TCM, they also had limited knowledge of the disorder. When asked, with one corresponding with virtually no knowledge of TCM and five representing "quite a bit" of knowledge about the disorder, the mean knowledge rating was 2.3 (SD=1.1). Only two participants (0.9%) endorsed knowing "quite a bit" about TCM (see Table 2).

Table 2

Study 1 – Knowledge of Hair Pulling

Rating	# of Participants
1 (None at all)	78 (34.2%)
2	30 (13.2%)
3 (Heard of it)	100 (43.9%)
4	18 (7.9%)
5 (Quite a bit)	2 (0.9%)

Experimental Design

This study used a 2 (severity level) X 3 (age of client) X 4 (intervention) mixed design. Severity level and age of client were between-groups variables and treatment intervention was a within-group variable. Severity level was manipulated by varying the percentage of hair loss, percentage of life engaged in hair pulling, and if trichophagy (hair swallowing) was present. Levels of severity could be categorized as "mild" versus "severe". Age of the client was manipulated by including vignettes of three separate age groups: child (age 6), adolescent (age 16), and adult (age 26; see Appendix B). These ages were selected to represent the various groups that had been discussed in the literature. Age six for the childhood vignette was selected because early onset TCM has been defined as chronic hair pulling before age seven. The adolescent age was based on the mean age of onset for TCM, which is 13.1 years (Christenson, 1995). The adult age was selected based on when people typically present for treatment. The majority present for treatment in their late twenties to early thirties (Christenson et al., 1991). The age 26 was selected because it fell within the age range of average presentation for treatment and it created equal distances between the three age groups. The number of participants randomly assigned to each cell is indicated in Table 3.

Table 3

Study 1 - Number of Participants in Each Experimental Condition

	Age		
Severity	Child	Adolescent	Adult
Mild	N = 39	N = 37	N = 38
Severe	N = 38	N = 38	N = 38

Each participant received descriptions of four potential interventions for TCM. The interventions included habit reversal, hypnosis, a punishment-based procedure, and medication (see Appendix C).

Procedure

Development of Stimulus Materials

Case Vignette

The case vignette used in this study was based on the Diagnostic and Statistical Manual of Mental Disorders – 4th Edition (DSM-IV; American Psychiatric Association, 1994) diagnostic criteria for TCM, as well as clinical experience (see Appendix B). Before use, the case vignette was mailed to six professionals who specialize in the area of TCM. The list of professionals was constructed based on research productivity with TCM.

Each professional received one randomly selected case vignette and rated how representative the case was of an individual with TCM, the severity level, and if they would diagnosis that individual with TCM (see Appendix D). The professional raters were also asked to make suggestions for improvements to the case vignettes. The suggestions received were then incorporated into the case vignettes to improve their accuracy.

On average, the six professional's rated the case vignettes as representative portrayals of individuals with TCM. On a 7-point Likert scale, with 1 representing "strongly disagree" and 7 representing "strongly agree," the average rating was 5.0 (SD=1.6). Four of the six agreed they would diagnose the case they received with TCM. The two that would not diagnose TCM both received a mild severity scenario and indicated concerns with the degree of tension/pleasure associated with pulling. Revisions were made to the mild case vignette to better describe tension when resisting the urge to pull hair (i.e., "...many times she feels as if she just has to pull out one more hair."). The severity rating differed for the mild and the severe vignettes. On a 7-point Likert scale, with 1 representing "not at all severe" and 7 representing "very severe," the average rating for the mild vignette was 5.2 (SD=1.3) and 6.0 (SD=0.0) for the severe vignette. Raters suggested decreasing the amount of hair loss in the mild vignette to increase the disparity between the two severity conditions.

Treatment Vignettes

Similar to previous studies in treatment acceptability, the interventions were derived from versions reported in the literature and represented diverse means of treating TCM (e.g., Kazdin, 1980). The description and rationale for each treatment was based on seminal articles published on the use of that intervention with TCM. Before use, the treatment vignettes were mailed to the same professionals who rated the case vignettes. Each professional received one or two treatment vignettes depending on the specific treatments used in their research. Ratings were obtained on the accuracy of the treatment description and rationale (see Appendix E).

On average, the professionals rated the vignettes as accurate descriptions of the treatments. On a 7-point Likert scale, with 1 representing "strongly disagree" and 7 representing "strongly agree," the mean rating was 4.6 (SD=1.8). The hypnosis and medication vignettes received the lowest ratings, 3.0 (SD=0.0) and 3.3 (SD=1.2), respectfully. These vignettes were significantly altered to incorporate suggestions from the professional raters.

The professionals also rated the rationales for each treatment vignette as accurately described. On a 7-point Likert scale, with 1 representing "strongly disagree" and 7 representing "strongly agree," the mean rating was 4.8 (SD=1.7). Again, the hypnosis and medication vignettes received the lowest ratings, 4.0 (SD=1.7) and 3.0 (SD=0.0), respectfully. The rationales for these vignettes were significantly altered to incorporate suggestions from the professional raters.

Setting

All aspects of this study were completed in a university research laboratory.

Data Collection

After reading and signing the informed consent form, each participant was randomly assigned to one of six case vignettes describing an individual with chronic hair-pulling (see Appendix B). Each participant was given a packet containing the randomly selected case vignette, four treatment vignettes (in random order), a ranking form, a qualitative questionnaire, and a background information questionnaire. A research assistant explained each page of the materials and encouraged the participant to underline the main points in the case and treatment vignettes. A research assistant was available to answer any questions as the participant completed the stimulus materials. Participants were encouraged not to return to previously completed pages as they worked through the materials. A research assistant provided a prompt to stay on the current page if a participant was seen returning to a previous page.

Participants first read the case vignette (see Appendix B), followed by four descriptions of potential treatment interventions for chronic hair pulling (see Appendix C). The order of treatment descriptions was counterbalanced to control for sequence effects. After reading each treatment description, the participant completed a modified version of the Abbreviated Acceptability Rating Profile (AARP; Tarnowski & Simonian, 1992; see Appendix F). Next, the participant ranked the treatments from the most acceptable (1) to the least acceptable (4; see Appendix G).

Participants were then asked to provide written explanations describing why they ranked a treatment as the "most" acceptable and why they ranked a treatment the "least" acceptable (see Appendix I). Finally, each participant completed a background questionnaire soliciting basic demographic information and information regarding general exposures to TCM (see Appendix A).

Instrumentation

Abbreviated Acceptability Rating Profile (AARP)

A measure of treatment acceptability was given to assess the degree to which each treatment intervention was viewed as fair, reasonable, and appropriate for TCM. The Abbreviated Acceptability Rating Profile (AARP) was modified slightly to accommodate the varying ages of the case vignettes (Tarnowski & Simonian, 1992). The AARP consists of 8 items that are rated on a 6-point scale ranging from "strongly disagree" to "strongly agree" (see Appendix F). The AARP yields an overall acceptability score that ranges from 8 (low) to 48 (high). Acceptability has traditionally been defined as a score greater than the midpoint of the scale (AARP midpoint = 24; Tarnowski & Simonian, 1992).

The AARP was created as an abbreviated and simplified alternative to the Intervention Rating Profile-15 (IRP-15; Witt & Martens, 1983). The IRP-15 has been widely used to evaluate consumers' or potential consumer's acceptance of a treatment, but the utility of the instrument is limited by its time-intensiveness (especially when rating multiple treatments) and readability (Tarnowski & Simonian,

1992). A principal components analysis indicated that all items loaded on a unitary factor (acceptability) and this factor accounted for 88% of the variance (Tarnowski & Simonian, 1992). Tarnowski and Simonian (1992) also showed that the AARP had greater readability than the IRP-15 and the Treatment Evaluation Inventory – Short Form (Kelley et al., 1989), another commonly used acceptance measure.

Intervention Ranking Form

After reading the four treatment vignettes and completing the AARP for each treatment, participants ranked the treatments according to the "most" acceptable (1) to the "least" acceptable (4; see Appendix G). A description of each treatment was provided on the ranking form to keep participants from referring to their previous acceptability ratings. The order of the treatment descriptions on the ranking was identical to the order of original presentation.

Narrative Questionnaire

After the participants ranked the treatments from "most" to "least" acceptable, they were asked to provide written responses why they ranked a treatment first and why they ranked a treatment last (see Appendix I). The responses were coded into various content areas (see Appendix J). The content codes were derived from examination of the responses. Each sentence received one content code.

The reliability of the response coding was determined by randomly selecting 33.7% of the participants and having a second rater code those responses. An

interobserver agreement percentage was calculated by comparing whether both scorers gave a response the same code. The agreement percentage was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. The mean interobserver agreement percentage for coding responses was 83.1%. The likelihood of the two rater's agreeing on a response code by chance was unlikely given the large number of possible codes. Therefore, a kappa correction to control for chance agree was not calculated.

Integrity of the Independent Variable

In order to provide support that participants read the case and treatment vignettes, they underlined key words or phrases as they read the material. A scoring template (see Appendix H) was used and each word or section underlined was tabulated.

Results

AARP Findings

As can be seen in Figure 1, the four treatment conditions received varying ratings of acceptability. The majority of participants rated all four treatments as acceptable. Hypnosis and Habit Reversal received the highest acceptability ratings (mean = 34.4, SD = 8.5; and, mean = 33.8, SD = 8.1 respectfully), while Punishment and Medication were rated less acceptable (mean = 30.4, SD = 10.0; and, mean = 28.0, SD = 9.7 respectfully).

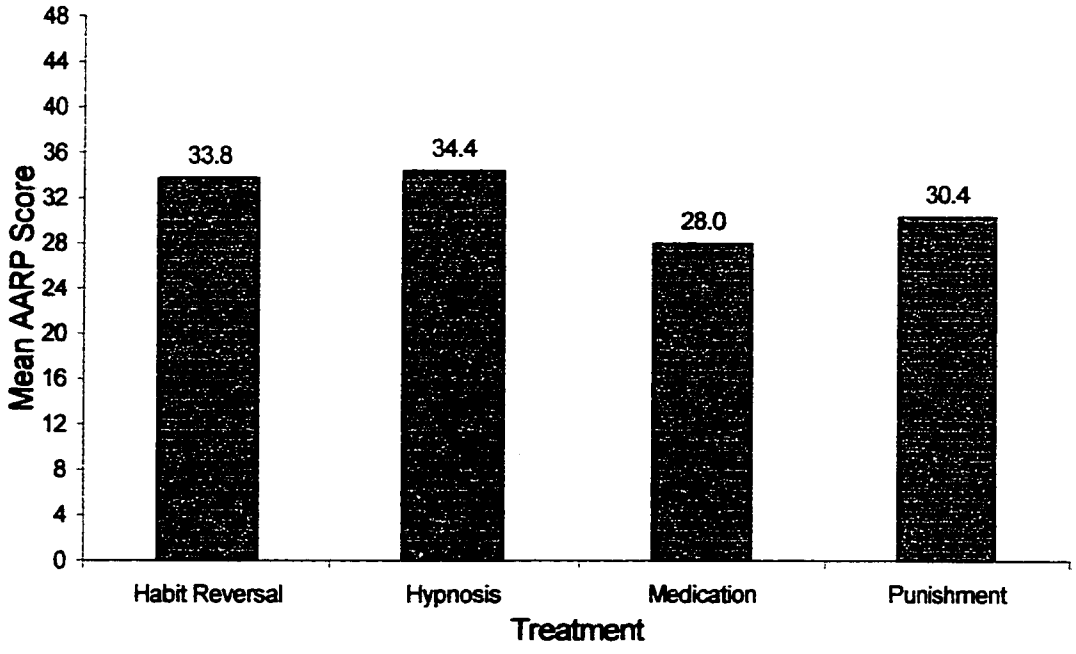

Figure 1. Study 1 – Mean AARP Scores by Treatment Type (N = 228)

The age of the case had no consistent effect on acceptability ratings across interventions (see Figure 2). Hypnosis and Medication both showed patterns of increased acceptability as the recipient of treatment got older, but this same pattern was not seen with the Habit Reversal and Punishment ratings.

The severity of TCM also did not have a consistent effect on acceptability ratings across interventions (see Figure 3). Habit Reversal was slightly less acceptable for the severe case, whereas the Punishment procedure was slightly more acceptable for the severe case. There was no discernible difference in ratings for Hypnosis and Medication as a function of severity.

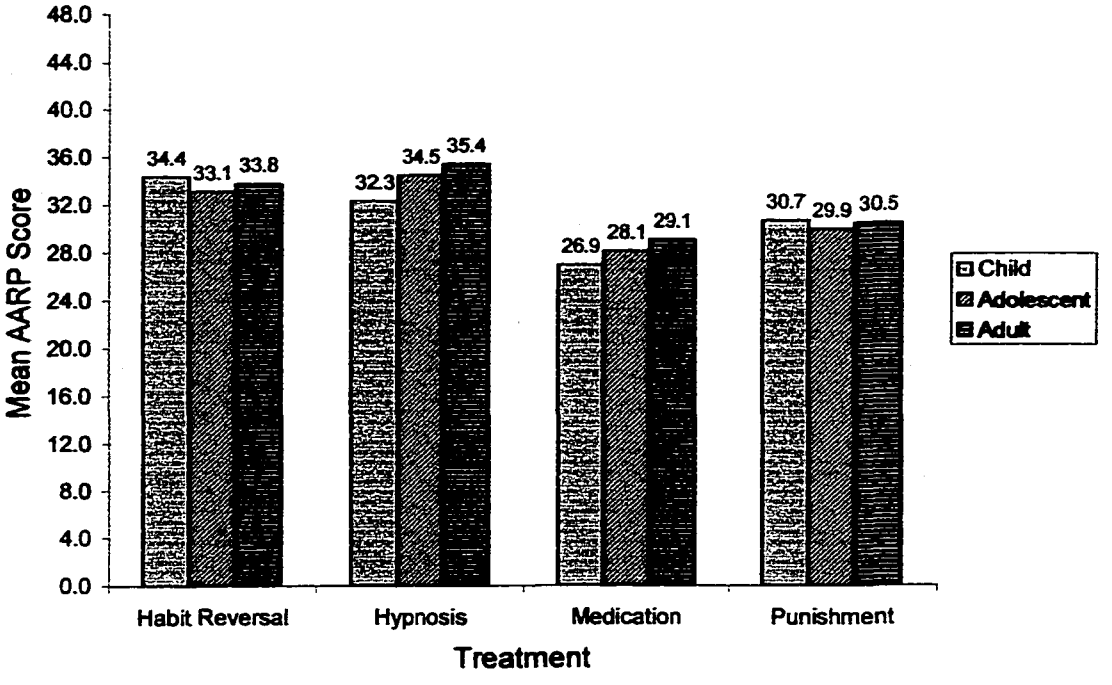

Figure 2. Study 1 – Effect of Age on Mean AARP Scores (N = 228)

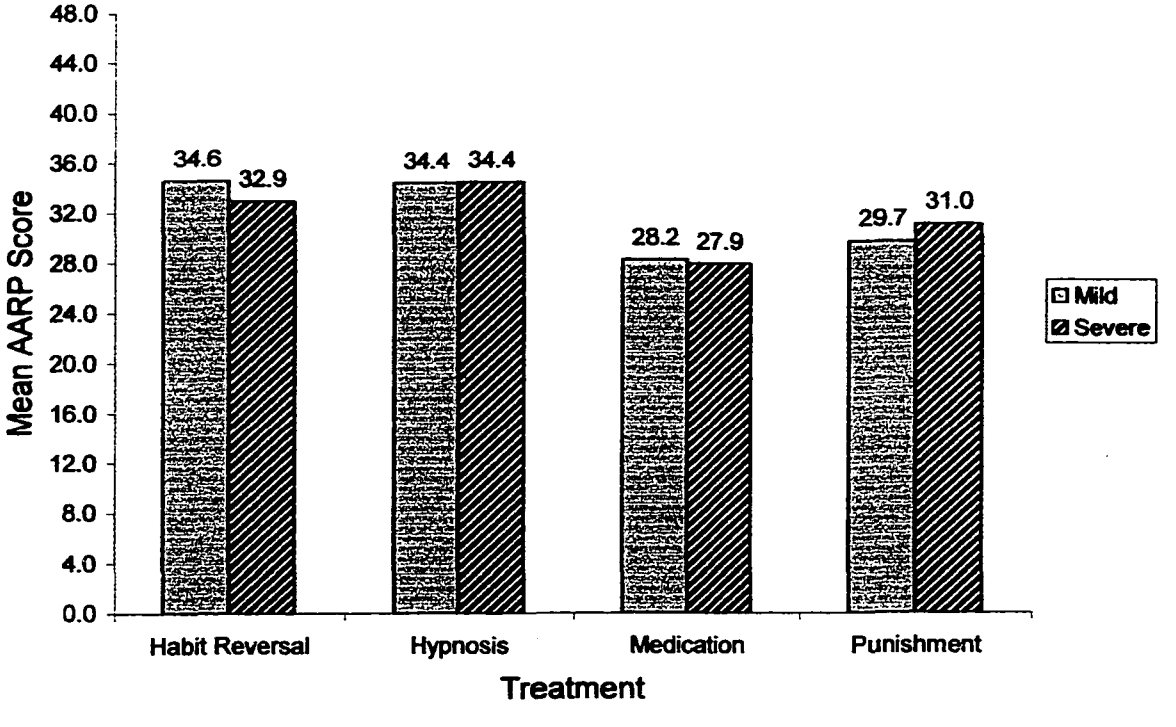

Figure 3. Study 1 - Effect of Severity on Mean AARP Scores (N = 228)

There was not a significant three-way interaction for treatment by age of case by severity, F (6, 666) = 0.90, p. = 0.50. There were also no significant interaction effects found for treatment by age of case, F (6, 666) = 0.67, p. = 0.67, or treatment by severity of hair pulling, F (6, 666) = 1.14, p. = 0.33. However, there was a significant main effect for type of treatment intervention, F (3, 666) = 27.53, p<.00 (see Figure 1). Paired sample T-tests, with a Bonferroni correction, were conducted to determine between which variables there were significant differences (see Table 4). There were significant differences between four variable pairs: Habit Reversal vs. Medication (t = 6.84, p.<.00); Habit Reversal vs. Punishment (t = 4.22, p.<.00); Hypnosis vs. Medication (t = 8.54, p.<.00); and, Hypnosis vs. Punishment (t = 4.93, p.<.00). Two pairs were not significant: Habit Reversal vs. Hypnosis (t = -.89; p. = 3.75) and Medication vs. Punishment (t = -2.65, p = .01).

Table 4

Study 1 - Mean Differences of AARP Data for Treatment Type

	Habit Reversal (33.8; 8.1)	Hypnosis (34.4; 8.5)	Medication (28.0; 9.7)	Punishment (30.4; 10.0)
Habit Reversal (33.8; 8.1)	-	0.6	5.8 *	3.4 *
Hypnosis (34.4; 8.5)		-	6.4 *	4.0 *
Medication (28.0; 9.7)			-	2.4
Punishment (30.4; 10.0)				-

* denotes significant difference between the group means (mean and standard deviations in parentheses), with a bonferroni correction (N = 228)

Integrity of the Independent Variable

Participants were instructed to underline main points as they read the case and treatment vignettes. This was done to provide support that the participants actually read the material, and thereby contacted the independent variables. Twenty-four participants did not underline any words in the case vignette (10.5%). Forty-four participants did not underline any words in the treatment vignettes (19.3%).

Analyses comparing those who underlined (n = 164) and those who failed to underline either the case vignette and/or treatment vignettes (n = 64) were conducted to determine if there were significant differences between the two groups. There were no significant differences between groups for any of the analyses reported above. Therefore, no participants were excluded.

Treatment Rankings

As can be seen in Figure 4, the four interventions received rankings that closely corresponded to the AARP data. Hypnosis and Habit Reversal received the highest mean rankings (mean = 2.1, SD = 1.0; and, mean = 2.3, SD = 1.1, respectfully), while Punishment and Medication were ranked less acceptable (mean = 2.7, SD = 1.1; and, mean = 2.9, SD = 1.1, respectfully). A repeated measures ANOVA was used to determine if significant differences existed amongst the four treatment conditions in how acceptable they were ranked by the participants. Again,

a significant main effect was found for the type of treatment, F (3, 666) = 17.58, p. < 0.00 (see Figure 4).

Paired sample t-tests, with a bonferroni correction were conducted to determine between which variables there were significant differences (see Table 5). There were significant differences between four variable pairs: Habit Reversal vs. Medication (t = -3.58, p. <0.00); Habit Reversal vs. Punishment (t = -3.58, p. <0.00); Hypnosis vs. Medication (t = -7.36, p. <0.00); and, Hypnosis vs. Punishment (t = -4.59, p. < 0.00). Two variable pairs were not significant: Habit Reversal vs. Hypnosis (t = 1.27, p. = 0.21) and Medication vs. Punishment (t = 1.68, p. = 0.09). It is of particular interest that the same relationship between treatments was found with both the ranking and the AARP data.

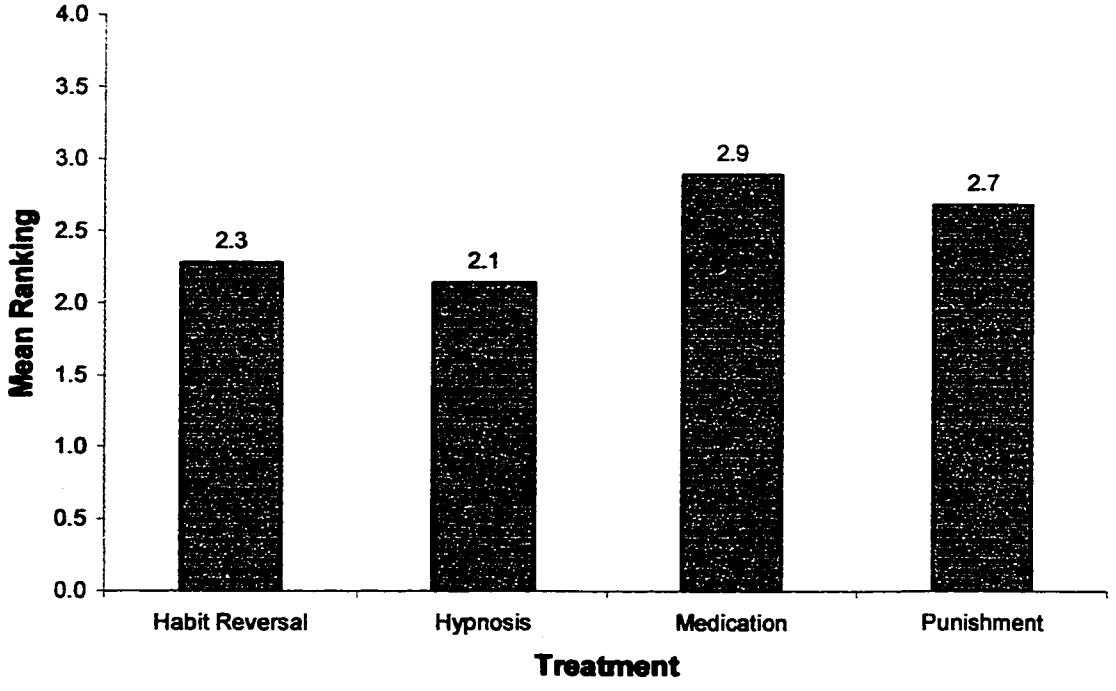

Figure 4. Study 1 – Mean Ranking by Treatment Type (N = 228)

Table 5

Study 1 - Mean Differences on Ranking Data for Treatment Type

	Habit Reversal (2.3; 1.1)	Hypnosis (2.1; 1.0)	Medication (2.9; 1.1)	Punishment (2.7; 1.1)
Habit Reversal (2.3; 1.1)	-	0.2	0.6 *	0.4 *
Hypnosis (2.1; 1.0)		-	0.8 *	0.6 *
Medication (2.9; 1.1)			-	0.2
Punishment (2.7; 1.1)				-

* denotes significant difference between the mean rankings (mean and standard deviation in parentheses), with a bonferroni correction (N = 228)

Narrative Data

The participants' responses to why they ranked a treatment as "most acceptable" and why they ranked a treatment as "least acceptable" were coded into various content areas (see Appendix J). Each sentence was assigned one response code, however, many participants wrote more than one sentence. When there were numerous sentences, each sentence was equally weighted so the total equaled 1.0. For example, if a participant wrote four sentences why they ranked a treatment "most" acceptable, each sentence was given a weight of 0.25. If a participant wrote only one sentence, that sentence was weighted 1.0.

Coded Responses for Most Acceptable Treatment

Overall, participants made reference to the procedural issues (16.0%) and anticipated effectiveness of the treatment (16.0%) as reasons they ranked a treatment as the "most" acceptable (see Figure 5). Next most common responses included lack of side effects (12.1%), reference to other treatments (10.9%), and addressing underlying problems (9.1%). The reasons mentioned the least were age of the client (0.4%) and the client's anticipated compliance with treatment (0.4%).

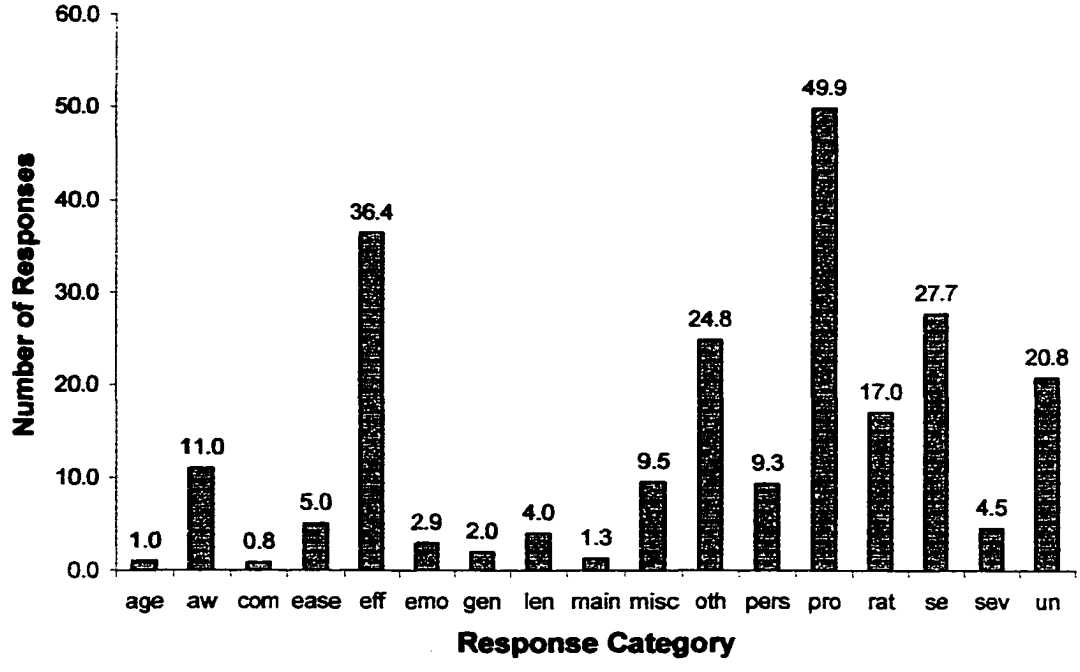

Figure 5. Study 1 – Aggregate Responses for Why Treatment Ranked "Most" Acceptable (N = 228)

As can be seen in Table 6, each treatment was ranked "most" acceptable for different reasons. Procedural issues were mentioned most frequently for both Habit Reversal (35.5%) and Punishment (27.3%), whereas efficacy was most frequently

mentioned for Medication (23.8%), and addressing an underlying problem was most frequently noted for Hypnosis (18.2%). Interestingly, efficacy was mentioned quite frequently for Hypnosis (15.0%), Medication (23.8%), and Punishment (24.5%), but not for Habit Reversal (6.5%).

Table 6

Study 1 - Reasons Treatment Ranked "Most" Acceptable

	Habit Reversal (n = 67)	Hypnosis (n = 47)	Medication (n = 39)	Punishment (n = 47)
Age	0.0%	0.0%	2.6%	0.0%
Awareness	4.5%	6.4%	4.8%	2.8%
Compliance	1.2%	0.0%	0.0%	0.0%
Ease	1.2%	0.0%	9.6%	1.0%
Efficacy	6.5%	15.0%	23.8%	24.5%
Emotional	0.5%	1.3%	2.6%	1.2%
Generalization	1.5%	0.7%	0.0%	1.0%
Length of Tx	2.6%	2.2%	0.9%	0.5%
Maintenance	0.0%	0.0%	3.5%	0.0%
Misc.	5.0%	3.3%	5.4%	3.3%
Other Tx Ref	15.9%	11.8%	3.9%	8.0%
Personal Exp	1.7%	3.3%	5.4%	7.4%
Procedural	35.5%	12.2%	10.2%	27.3%
Rationale	5.8%	8.6%	13.9%	2.8%
Side-Effect	11.1%	14.9%	4.8%	15.2%
Severity	0.0%	2.0%	5.2%	2.1%
Underlying Prob	6.7%	18.2%	3.5%	2.8%

Coded Responses for Least Acceptable Treatments

The reasons why participants ranked a treatment as the "least" acceptable were more varied than why they ranked a treatment the "most" acceptable (see Figure 6). Concerns regarding side-effects were mentioned the most frequently (13.0%), followed closely by emotional responses (12.6%), and references to other treatments

(12.4%). The reasons mentioned the least frequently were ease of use (0.2%), length of treatment (1.4%), and age of the analogue client (1.6%).

As can be seen in Table 7, each treatment was ranked "least" acceptable for different reasons. Efficacy concerns were the most frequently explanation for low ranking's of both Habit Reversal (23.1%) and Hypnosis (26.3%). References to other treatments were made most often for ranking Medication the "least" acceptable (25.0%) and procedural concerns were mentioned most frequently for Punishment (21.7%). Interestingly, concerns regarding the analogue client's lack of hair pulling awareness and compliance with the treatment were mentioned frequently for Habit Reversal (15.3% and 15.1%, respectfully), but rarely for the other three treatments.

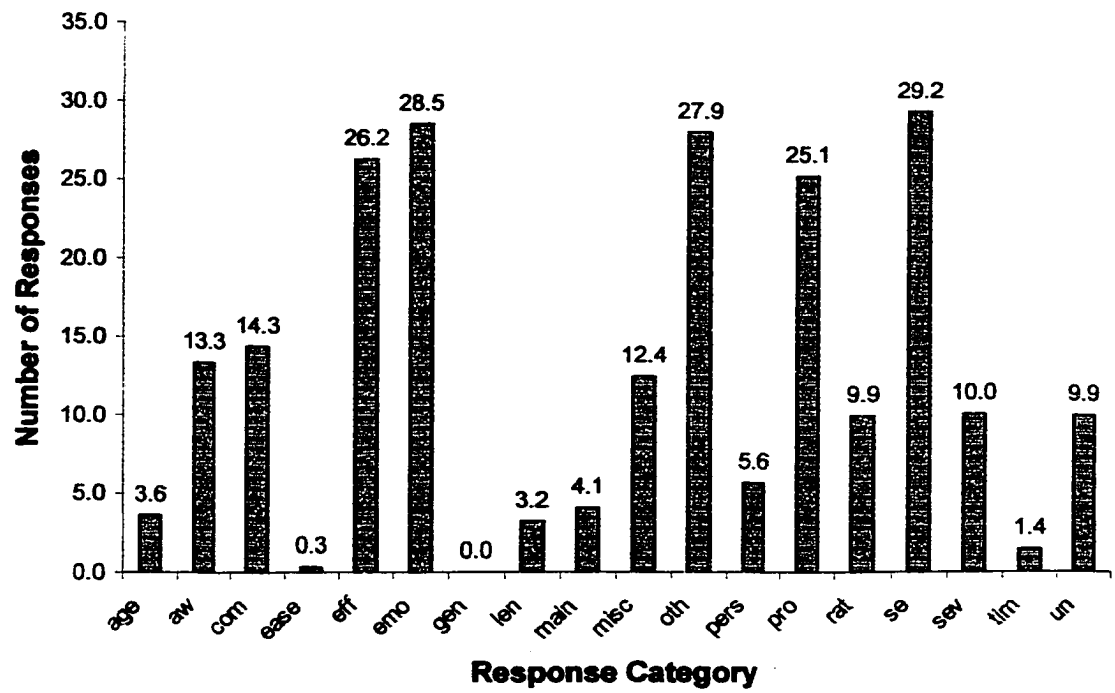

Figure 6. Study 1 – Aggregate Responses for Why Treatment Ranked "Least" Acceptable (N = 228)

Table 7

Study 1 - Reasons Treatment Ranked "Least" Acceptable

	Habit Reversal (n = 43)	Hypnosis (n = 21)	Medication (n = 95)	Punishment (n = 69)
Age	1.8%	1.9%	2.3%	0.5%
Awareness	15.3%	2.4%	0.7%	8.3%
Compliance	15.1%	4.8%	0.4%	9.6%
Ease of Use	0.8%	0.0%	0.0%	0.0%
Efficacy	23.1%	26.3%	1.4%	14.1%
Emotion	4.0%	20.1%	15.9%	11.3%
Generalization	0.0%	0.0%	0.0%	0.0%
Length of Tx	0.8%	0.0%	2.2%	1.2%
Maintenance	1.3%	4.0%	2.4%	0.7%
Misc	4.0%	0.0%	6.8%	6.3%
Other Tx Ref	0.0%	4.0%	25.0%	5.6%
Personal Exp	2.4%	7.1%	1.9%	1.9%
Procedural	13.5%	10.9%	2.4%	21.7%
Rationale	3.2%	4.8%	7.2%	1.2%
Side-Effect	5.1%	4.0%	19.5%	11.7%
Severity	6.2%	8.7%	4.4%	2.2%
Time Until Eff	0.0%	0.0%	1.5%	0.0%
Underlying Prob	3.5%	1.2%	6.0%	3.8%

Discussion

All four treatments were rated as acceptable interventions to decrease chronic hair pulling across age groups and severity levels. Hypnosis and Habit Reversal were rated significantly more acceptable than either Punishment or Medication. Consistent with previous research, this study found the pharmacological and punishment-based procedures received lower acceptability ratings (Miltenberger, 1990). Interestingly, habit reversal was rated as quite acceptable despite the competing response component, which functions as a self-administered punisher (Miltenberger et al.,

1998). However, the emphasis on solicitation of social support from a friend or family member (ie.., a reinforcement-based strategy), may have increased the overall acceptability of the Habit Reversal procedure.

Neither age of the analogue client or severity of the hair pulling influenced treatment acceptability ratings. While it is possible these variables do not play a role in acceptability of interventions for TCM, it is also possible that the vignettes used in this study did not clearly differentiate the various levels of age and severity. For example, comparing treatment acceptability ratings between a five year-old and a 75 year-old may have yielded different results.

The familiarity of the participant pool with TCM may have also negated any effects of age or severity of treatment acceptability ratings. In this study, the participant pool was relatively unfamiliar with TCM and may have viewed any case where someone was pulling hair as severe. Because participants read only one case vignette, thereby were exposed to only one age and severity level, it is unknown how exposure to a greater variety of case presentations would have affected acceptability ratings.

Procedural issues may have also had an effect on the acceptable ratings for all four treatments. In this study, participants were also asked to read only one treatment vignette at a time and immediately answered questions about acceptability. Although presentation of the treatment vignettes was counterbalanced to control for sequence effects, participants may have responded differently if they had read all the treatment vignettes before completing the acceptability measures. This point relates to a

methodological issue that requires further exploration in treatment acceptability research.

Participants were asked to write why they ranked treatments as the "most" and the "least" acceptable. The majority of respondents identified procedural issues as the reason for ranking a treatment the "most" acceptable. Procedural issues were mentioned quite frequently for ranking Habit Reversal and Punishment high. This is interesting because both are quite behavioral and function, in part, as self-administered punishers. Presumed efficacy was also frequently noted as reasons for "most" acceptable rankings. However, presumed efficacy was noted much more frequently for Hypnosis, Medication, and Punishment, compared to Habit Reversal. Perhaps the procedures of Habit Reversal outweigh concerns regarding efficacy. However, a clinical subject population may weigh efficacy over procedural issues, as they are directly experiencing the disorder.

This study had many limitations that must be taken into account. First, there are inherent flaws with an analogue design to study treatment acceptability (see Miltenberger, 1990). These include the participant's exposure to the case and treatment solely through written materials. Individuals who experience the effects of the behavior under question or the treatment more directly may respond differently. Furthermore, college students were used as raters in this study and they may represent different views than society at large. Because of the prevalence and secretive nature of TCM, obtaining large enough sample sizes to manipulate more than one variable could be quite difficult. Furthermore, previous research has documented numerous

habit behaviors in college student populations (e.g., Hansen, Tishelman, Hawkins, & Doepke, 1990; Woods, Miltenberger, & Flach, 1996), thus the argument could be made that college student represent potential consumers.

Another limitation relates to how the case and treatment vignettes were constructed. Typically, researchers have not used other professionals to help develop vignettes. While this is a strength of this study, ratings from the professional raters were not obtained after revisions were made to the vignettes. In the research on treatment acceptability, great care should be taken in the development of the vignettes, as these are the stimuli participants respond too. The inclusion of other means of exposure (e.g., photographs; video clips) should also be investigated.

While all the interventions to decrease hair pulling were rated as acceptable, this study did not assess if the addition of cognitive-behavioral procedures increased the acceptability ratings, particularly when added to Habit Reversal. Increasing the acceptability and efficacy of the intervention have been reasons cited for the inclusion of additional procedures (see Mansueto et al., 1999). As of yet, neither of these reasons has been established empirically.

Despite these limitations, this study represents the first systematic evaluation of treatment acceptability for a habit behavior. Future research should expand this line of research to different habit behaviors, as well as different populations of raters (e.g., practitioners, actual consumers). The results from this study suggest that psychological interventions, particularly Habit Reversal and Hypnosis are acceptable procedures for treating TCM across age and severity levels. Given the weight of

empirical research in support of Habit Reversal, the combination of efficacy and acceptability made this the treatment of choice for treating hair pulling.

STUDY 2

Purpose of Study 2

The purpose of study 2 was to examine the influence of providing participants with rationale and efficacy statements on ratings of treatment acceptability.

Participants

One hundred forty eight introductory psychology undergraduate students participated in this study for extra credit. Individuals were not allowed to participate in this study if they were involved in study 1. The mean age of the participants was 19.3 years (Range: 18 to 42 years). Information from four participants was not used because of incomplete data; resulting in a total of 144 participants (99 females and 45 males).

Participants completed a Background Questionnaire to determine their familiarity with and exposures to TCM (see Appendix A). As can be seen in Table 8, participants did not report a great deal of direct experience with friends or family experiencing TCM. Only 8.3% knew someone with such problems and only 2.1% reported personally having problems with hair pulling. One of the three who had difficulty with hair pulling had received treatment, but was unsure of the type of treatment.

Table 8

Study 2 – Exposures to Hair Pulling

	YES	NO
Friends/Relatives who chronically pull their hair?	12	132
Do you chronically pull your hair?	3	141

Along with the participant's lack of direct experience with TCM, they also had limited knowledge of the disorder. When asked, with one corresponding to virtually no knowledge and five representing quite a bit of knowledge, the mean knowledge rating was 2.2 (SD = 1.1). Only three participants (2.1%) endorsed knowing "quite a bit" about TCM (see Table 9).

Table 9

Study 2 - Knowledge of Hair Pullling

Rating	Number of Participants
1 (None at all)	58 (40.3%)
2	21 (14.6%)
3 (Heard of it)	52 (36.1%)
4	10 (6.9%)
5 (Quite a bit)	3 (2.1%)

Experimental Design

This study used a 2 (rationale) x 4 (efficacy) x 4 (intervention) mixed design. Rationale was a between-groups variable and efficacy statements and treatment interventions were within-group variables. This study was not a truly crossed design, because participants were not exposed to all efficacy levels for each treatment condition. Rationale was manipulated by inclusion or exclusion of a paragraph describing the underlying reasons the practitioner selected that particular treatment (see Appendix B). Participants were randomly assigned to rationale or no rationale groups. Seventy-two participants received procedural and rationale statements and 72 received only procedural statements.

The within subject manipulation included efficacy statements and treatment interventions. Efficacy was manipulated by including a sentence at the end of the treatment vignette stating efficacy as unknown, low, or high (see Appendix K). As a control condition, one of the treatment descriptions did not include an efficacy statement. The presentation of efficacy statements was counterbalanced, so that each participant received treatment vignettes with varying degrees of efficacy. Similar to study 1, each participant received descriptions of four potential interventions for TCM (habit reversal, hypnosis, medication, and a punishment-based procedure).

Procedure

Development of Stimulus Materials

One case vignette and the four treatment vignettes used in Study 1 were used in this study. The adolescent case with severe hair pulling was selected for this study because it represented the middle age range and described an individual clearly in need of treatment.

The treatment vignettes were the same as described above in Study 1 (see Appendix C), with the exception of manipulating access to rationale statements and of research-based efficacy statements added to the treatment descriptions (see Appendix K). The rationale group received a paragraph describing the reasoning behind each intervention. The no rationale group did not receive such a paragraph for any of the treatments. The efficacy statements were written to represent unknown supporting evidence, low evidence, and high evidence conditions (see Appendix K). One treatment did not include a statement pertaining to efficacy. Efficacy statements were counterbalanced across treatments, so participants read treatment vignettes with varying degrees of stated efficacy. This counterbalancing ensured that the efficacy statements were evenly distributed across different treatment descriptions.

Setting

All aspects of this study were completed in a university research laboratory.

Data Collection

After reading and signing the informed consent form, participants were randomly assigned to a rationale or no rationale condition. Each participant was given a packet containing a case vignette, four treatment vignettes (in random order), a ranking form, a qualitative questionnaire, and a background information questionnaire. A research assistant explained each page of the materials and encouraged the participant to underline the main points in the case and treatment vignettes. A research assistant was available to answer any questions as the participant completed the stimulus materials. Participants were encouraged not to return to previous pages as they worked through the materials. A research assistant provided a prompt to stay on the current page if a participant returned to a previous page.

Participants first read the case vignette (see Appendix B), followed by four descriptions of potential treatment interventions for chronic hair-pulling (see Appendix C). The order of treatment descriptions was counterbalanced to control for sequence effects. After reading each treatment description, the participant completed a modified version of the Abbreviated Acceptability Rating Profile (AARP; Tarnowski & Simonian, 1992; see Appendix F). Next, the participant ranked the treatments from the most acceptable (1) to the least acceptable (4; see Appendix G). Finally, each participant completed a background questionnaire soliciting basic demographic information and information regarding general exposure to TCM (see Appendix A).

Instrumentation

Abbreviated Acceptability Rating Profile (AARP)

This scale was the same as described above in Study 1 (see Appendix F).

Intervention Ranking Form

The intervention ranking form was the same as described above in Study 1 (see Appendix G).

Narrative Questionnaire

The narrative questionnaire was the same as described in Study 1 (see Appendix I).

The reliability of the response coding was determined by randomly selecting 32.1% of the participants and having a second rater code the responses. An interobserver agreement percentage was calculated by comparing whether both scorers gave a response the same code. The agreement percentage was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. The mean interobserver agreement percentage for coding responses was 87.6%. the likelihood of the two treatment raters agreeing on a response code by chance was unlikely given the large number of possible codes. Therefore, a kappa correction to control for chance agreement was not needed.

Integrity of the Independent Variable

Similar to Study 1, as participants read the case and treatment vignettes, they were asked to underline key words or phrases to provide support that they actually read the materials. The scoring procedure was the same as described above for Study 1.

Results

AARP Findings

First, the effect of providing rationale statements on acceptability ratings for the four interventions was analyzed. As can be seen in Figure 7, the participants who received rationale paragraphs consistently gave higher ratings of treatment acceptability (average, 1.7 points higher). There was not a significant interaction between treatment type and provision of rationale statements, F (3, 426) = 0.15, $p.$ = 0.93, however there was a significant between subjects effect for rationale, F (1, 142) = 4.67, $p.$ = 0.32.

As can be seen in Figure 8, the four treatment conditions received varying ratings of acceptability. Similar to Study 1, participants found Habit Reversal and Hypnosis the most acceptable (mean = 34.7, SD = 8.5; and, mean = 33.5, SD = 8.3 respectfully), with Medication and Punishment the least acceptable (mean = 26.7, SD = 9.7; and, mean = 29.6, SD = 10.1, respectfully).

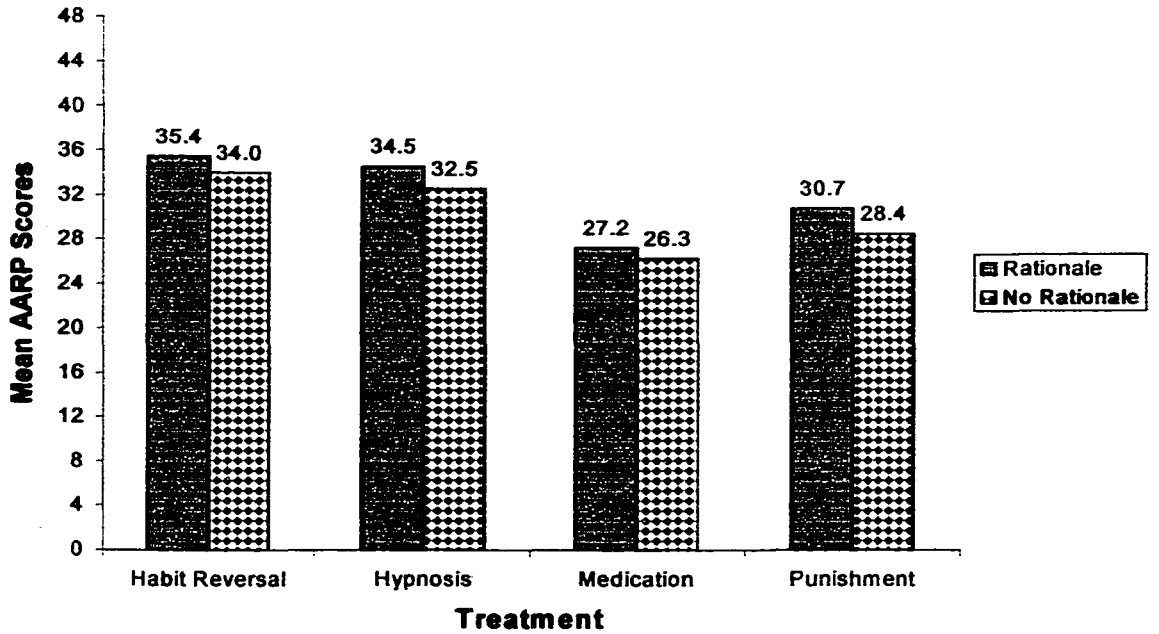

Figure 7. Study 2 - Effect of Rationale on Mean AARP Scores (N = 144)

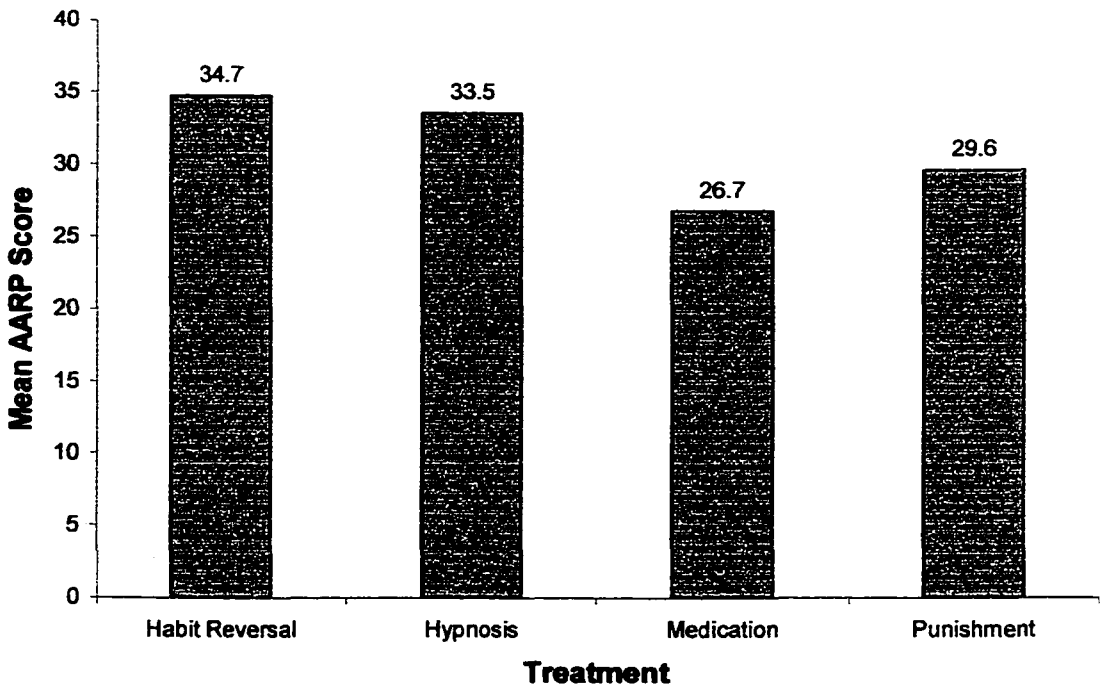

Figure 8. Study 2 – Mean AARP Scores by Treatment Type (N = 144)

There were significant differences between treatment conditions, as indicated by a significant main effect for treatment type, F (3, 426) = 23.37, $p. < 0.00$. Paired sample T-tests, with a bonferroni correction, were conducted to determine if there were significant differences between variables (see Table 10). There were significant differences between five variable pairs: Habit Reversal vs. Medication ($t = 7.47$, $p. < 0.00$); Habit Reversal vs. Punishment ($t = 5.06$, $p. < 0.00$); Hypnosis vs. Medication ($t = 6.67$, $p. < 0.00$); Hypnosis vs. Punishment ($t = 3.71$, $p. < 0.00$); and, Medication vs. Punishment ($t = -2.30$, $p. = 0.23$). One variable pair, Habit Reversal vs. Hypnosis, was not significant ($t = 1.20$, $p. = 0.23$).

Table 10

Study 2 – Mean Differences on AARP Data for Treatment Type

	Habit Reversal (34.7; 8.5)	Hypnosis (33.5; 8.3)	Medication (26.7; 9.7)	Punishment (29.6; 10.1)
Habit Reversal (34.7; 8.5)	-	1.2	8.0 *	5.1 *
Hypnosis (33.5; 8.3)		-	6.8 *	3.9 *
Medication (26.7; 9.7)			-	2.9 *
Punishment (29.6; 10.1)				-

* denotes a significant difference between the group means (mean and standard deviation in parentheses), with a bonferroni correction (N = 144)

The degree of efficacy assigned to a treatment also affected ratings of treatment acceptability, with high efficacy statements evoking the highest ratings (see Figure 9). Efficacy was analyzed by collapsing treatment conditions and looking at the mean AARP ratings for each type of efficacy (none, unknown, low, and high). A repeated measures ANOVA yielded a non-significant two-way interaction between efficacy statements and rationale provision, F (3, 411) = 0.92, p. 43, and a statistically significant main effect for efficacy, F (1, 137) = 22.58, p. < 0.00.

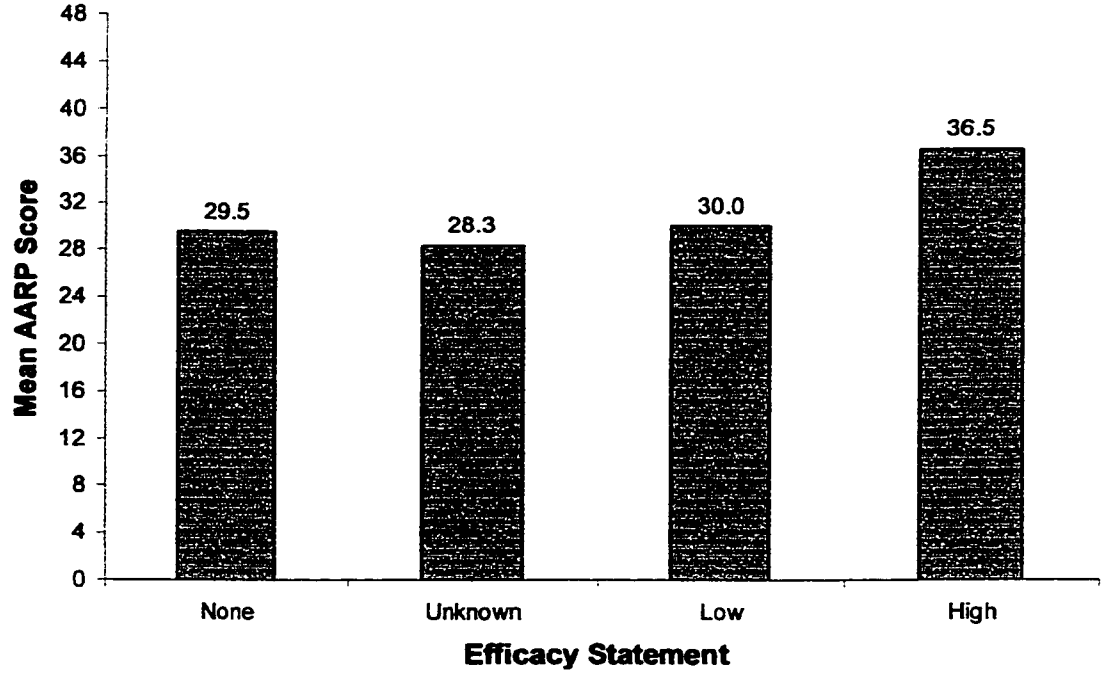

Figure 9. Study 2 - Effect of Efficacy on Mean AARP Scores (N = 144)

Paired sample T-tests, with a bonferroni correction, were conducted to determine if there were significant differences between variables (see Table 11). There were significant differences between three of the following variable pairing's: None vs. High ($t = -5.82$, $p. < 0.00$); Unknown vs. High ($t = -6.77$, $p. < 0.00$); and, Low vs. High ($t = -6.82$, $p. < 0.00$). Three variable pairing's were not significant: None vs. Unknown ($t = 1.12$, $p. = 0.26$), None vs. Low ($t = -0.33$, $p. = 0.74$); and, Unknown vs. Low ($t = -1.43$, $p. = 0.16$).

Table 11

Study 2 – Mean Differences on AARP Data by Efficacy Statement

	None (29.5)	Unknown (28.3)	Low (30.0)	High (36.5)
None (29.5)	-	1.2	0.5	7.0 *
Unknown (28.3)		-	1.7	8.2 *
Low (30.0)			-	6.5 *
High (36.5)				-

* denotes a significant difference between the group means (means in parentheses), with a bonferroni correction (N = 144)

Integrity of the Independent Variable

As in Study 1, participants were instructed to underline main points as they read the case and treatment vignettes. This was done to provide support that the

participants actually read the material, and thereby contacted the independent variables. Sixteen participants did not underline any words in the case vignette (11.1%) and 2 did not underline any words in the treatment vignettes (1.4%).

Analyses comparing those who underlined (n = 126) and those who failed to underline either the case vignette and/or treatment vignettes (n=18) were conducted to determine if there were significant differences between the two groups. There were no significant differences between groups for any of the analyses reported above. Therefore, no participants were excluded.

Treatment Rankings

As can be seen in Figure 10, Habit Reversal and Hypnosis were ranked the more acceptable (mean = 2.0, SD = 0.9; and, mean = 2.3, SD = 1.0, respectfully), with Punishment and Medication ranked less acceptable (mean = 3.0, SD = 1.1; and, mean = 2.7, SD = 1.1, respectfully). A repeated measures ANOVA was used to determine if significant differences existed amongst the four treatment conditions in how acceptable they were ranked by the participants. Again, a significant main effect was found for the type of treatment, F (3, 429) = 17.92, p. < 0.00.

Paired sample t-tests, with a bonferroni correction, were conducted to determine if there were significant differences between conditions (see Table 12). There were significant differences between four variable pairs: Habit Reversal vs. Medication (t = -6.76, p. < 0.00); Habit Reversal vs. Punishment (t = -4.71, p. < 0.00); Hypnosis vs. Medication (t = -5.24, p. < 0.00); and, Hypnosis vs. Punishment (t

= -2.68, p. < 0.00). Two variable pairs were not significant: Habit Reversal vs. Hypnosis (t = -1.77, p. = 0.08) and Medication vs. Punishment (t = 2.11, p. = 0.04).

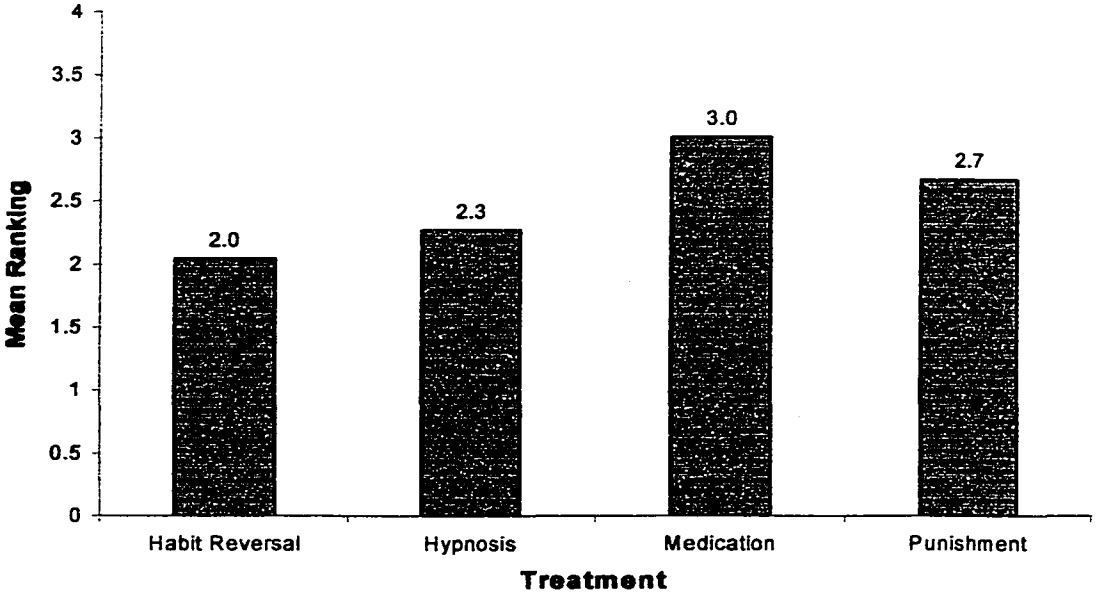

Figure 10. Study 2 - Mean Ranking by Treatment Type (N = 144)

Table 12

Study 2 – Mean Differences on Ranking Data for Treatment Type

	Habit Reversal (2.0; 0.9)	Hypnosis (2.3; 1.0)	Medication (3.0; 1.1)	Punishment (2.7; 1.1)
Habit Reversal (2.0; 0.9)	-	0.3	1.0 *	0.7 *
Hypnosis (2.3; 1.0)		-	0.7 *	0.4 *
Medication (3.0; 1.1)			-	0.3
Punishment (2.7; 1.1)				-

* denotes significant difference between the mean rankings (mean and standard deviation in parentheses), with a bonferroni correction (N = 144)

Narrative Data

The responses to why participant's ranked a treatment the "most" acceptable and why they ranked a treatment the "least" acceptable were coded into various content areas (see Appendix J). Many participants wrote more than one sentence responses. When there were numerous sentences, each sentence was equally weighted so the total would equal 1.0. for example, if a participant wrote four sentences why a treatment was ranked "most" acceptable, each sentence was given a weighting of 0.25.

Coded Responses for Most Acceptable Treatment

Overall, the participants most frequently made reference to efficacy (29.0%) and procedural issues (26.9%) explaining why they ranked a treatment as "most acceptable (see Figure 11). Next most common responses included lack of side-effects (14.2%) and mention of the rationale behind the intervention (8.3%). The reasons mentioned the least frequently were maintenance of treatment effects (0.0%), age of the analogue client (0.5%), compliance with the treatment protocol (0.5%), and generalization of treatment effects (0.5%).

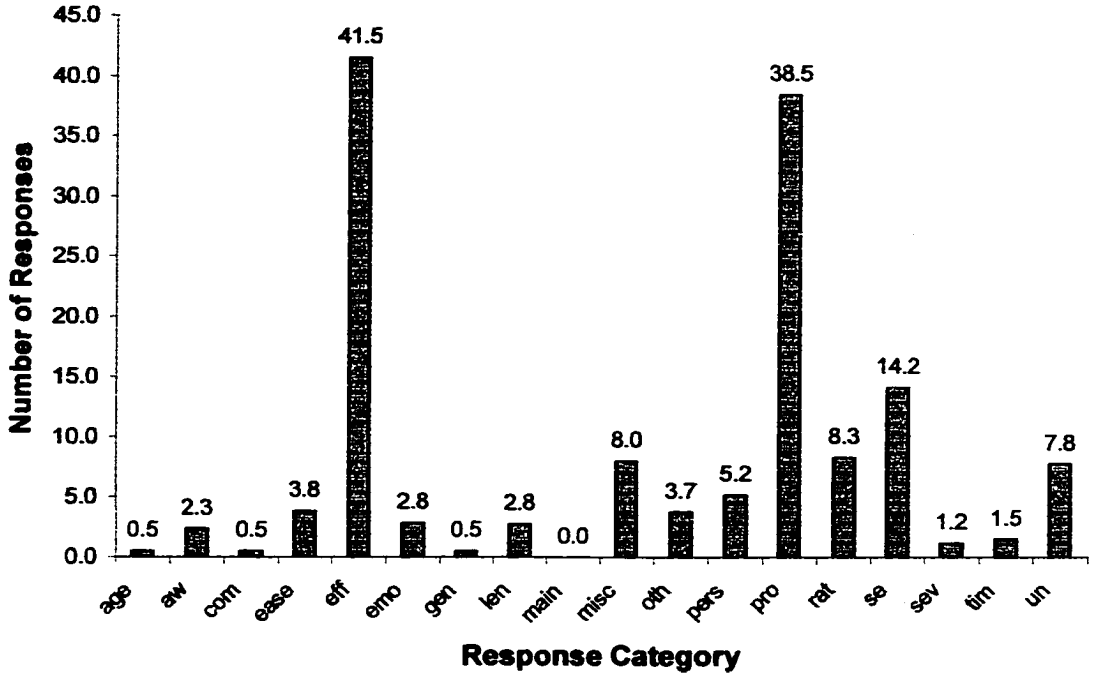

Figure 11. Aggregate Responses for Why Treatment Ranked "Most" Acceptable (N = 144)

As can be seen in Table 13, each treatment was ranked "most" acceptable for different reasons. Efficacy was mentioned the most frequently for Hypnosis (30.8%), Medication (43.2%), and Punishment (33.6%). Procedural issues were noted most frequently for ranking Habit Reversal the "most" acceptable (46.2%). Interestingly, mention of an underlying problem was mentioned frequently for Hypnosis (12.3%), but rarely for the other three interventions.

Table 13

Study 2 – Reasons Treatment Ranked "Most" Acceptable

	Habit Reversal (n = 51)	Hypnosis (n = 38)	Medication (n = 22)	Punishment (n = 33)
Age	0.0%	0.0%	0.0%	1.6%
Awareness	2.0%	2.2%	0.0%	1.6%
Compliance	0.0%	0.0%	0.0%	1.6%
Ease of Use	1.5%	4.8%	2.3%	2.3%
Efficacy	18.7%	30.8%	43.2%	33.6%
Emotion	1.6%	0.0%	4.5%	3.1%
Generalization	1.0%	0.0%	0.0%	0.0%
Length of Tx	2.3%	3.5%	1.1%	0.0%
Maintenance	0.0%	0.0%	0.0%	0.0%
Misc	4.3%	4.4%	10.2%	6.0%
Other Tx Ref	1.6%	3.1%	5.7%	1.6%
Personal Exp	2.5%	5.7%	2.6%	3.6%
Procedural	46.6%	12.7%	2.3%	29.2%
Rationale	5.4%	6.4%	9.1%	3.7%
Side-Effect	11.9%	12.1%	9.8%	4.2%
Severity	0.6%	0.9%	2.3%	0.0%
Time Until Eff	0.0%	1.3%	0.0%	3.1%
Underlying Prob	0.0%	12.3%	6.8%	4.9%

Coded Responses for "Least" Acceptable Treatments

As can be seen in Figure 12, there were four primary reasons why a treatment was ranked the "least" acceptable: efficacy (24.7%), reference to other treatments (21.2%), potential side-effects (20.6%), and procedural issues (20.0%). The reasons mentioned least frequently were age of the analogue client (0.6%), ease of treatment implementation (1.6%), and time until the treatment became effective (1.8%). Caution must be taken when interpreting these results because only nine people

ranked Habit Reversal the "least" acceptable, whereas 71 ranked Medication the "least" acceptable.

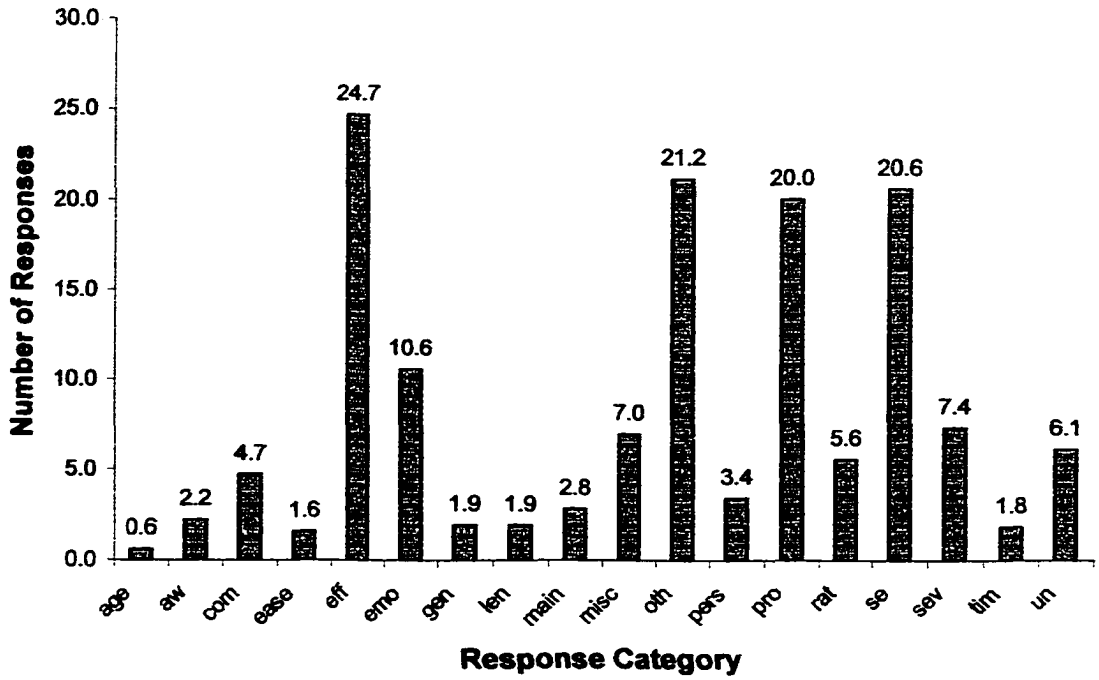

Figure 12. Study 2 – Aggregate Responses for Why Treatment Ranked "Least" Acceptable (N = 144)

Each treatment was ranked "least" acceptable for different reasons (see Table 14). Procedural issues were mentioned the most frequently for Habit Reversal (38.9%) and Punishment (29.4%). Efficacy was also mentioned at a relatively high rate for all four interventions: Habit Reversal (28.8%), Hypnosis (25.2%), Medication (13.3%), and Punishment (17.2%).

Table 14

Study 2 – Reasons Treatment Ranked "Least" Acceptable

	Habit Reversal (n = 9)	Hypnosis (n = 21)	Medication (n = 71)	Punishment (n = 43)
Age	0.0%	0.0%	0.8%	0.0%
Awareness	5.6%	0.0%	0.0%	3.9%
Compliance	3.7%	1.0%	0.7%	8.6%
Ease of Use	0.0%	1.9%	0.7%	1.5%
Efficacy	28.8%	25.1%	13.3%	17.2%
Emotion	3.7%	16.7%	1.9%	12.6%
Generalization	0.0%	5.2%	0.0%	1.9%
Length of Tx	0.0%	5.7%	0.7%	0.5%
Maintenance	2.8%	6.3%	1.4%	0.6%
Misc	5.6%	3.6%	7.8%	0.5%
Other Tx Ref	0.0%	14.3%	22.4%	5.2%
Personal Exp	0.0%	8.8%	1.2%	1.7%
Procedural	38.9%	3.3%	4.5%	29.4%
Rationale	5.6%	0.0%	5.4%	2.9%
Side-Effect	0.0%	4.8%	21.5%	10.1%
Severity	2.8%	0.0%	9.3%	1.2%
Time Until Eff	0.5%	0.0%	2.3%	0.0%
Underlying Prob	0.0%	3.3%	6.4%	2.1%

Discussion

Study 2 found differential treatment acceptability results across the four interventions, thereby, replicating the results of Study 1. However, the provision of rationale statements and efficacy information had a significant influence on ratings of treatment acceptability.

When participants were provided with information about the rationale behind the intervention, treatment acceptability ratings routinely increased. In treatment acceptability research, participants are traditionally given only a brief description of

an intervention. This contrasts with good clinical practice, where practitioners often provide the rationale for a treatment as well as a description of the specific procedures (Barlow, 1993). This discrepancy in the type of information given has likely widened the gap between analogue treatment acceptability research and data collected in clinical practice. This result also supports the provision of rationale information to consumer's in clinical practice, because it increases the acceptability of the intervention procedures. In the future, researchers should consider including rationale statements in treatment acceptability research to more closely approximate a clinical situation.

Significant effects were also obtained when research-based information was provided to participants. When an intervention had a history of "high" effectiveness, it was rated more acceptable. There were no differences in acceptability ratings between treatments with unknown, low, or no efficacy statements given. These results support previous research that found research-based information affected acceptability ratings for mild problems (Von Brock & Elliott, 1987).

Similar to Study 1, this study found differential ratings of treatment acceptability and treatment rankings amongst the four interventions. Habit Reversal and Hypnosis were again rated significantly more acceptable than either Medication or Punishment. The rankings of the four interventions again mirrored the findings obtained from the acceptability measure. Interestingly, despite the efficacy manipulation, the pattern of treatment acceptability was virtually identical across interventions to the pattern obtained in Study 1. This lends support that the

participant's were responding to information contained in the treatment descriptions, rather than responding to supplementary information.

Participants were again asked to explain why they ranked a treatment the "most" or the "least" acceptable. Efficacy and procedural issues were most frequently mentioned for ranking a treatment the "most" acceptable. Efficacy, reference to other treatments, potential side-effects, and procedural issues were noted for "least" acceptable rankings. The inclusion of efficacy on both lists is not surprising given the provision of effectiveness information was manipulated.

Previous research has found that the occurrence or mention of side-effects can decrease treatment acceptability ratings (e.g.,Kazdin, 1981). It is possible that a relative lack of potential side-effects contributed to higher acceptability ratings and the participants neglected to mention that issue. Virtually all interventions have some type of side-effect associated with their implementation, but perhaps not all side-effects are viewed equally. This would be worthy of further exploration. It is also possible that mention of side-effects can serve to decrease acceptability ratings, but other issues, such as perceived efficacy and procedural issues, are more involved in obtaining higher acceptability ratings.

The category procedural issues occurred at a high frequency as an explanation for both high and low rankings. Further examination of this category and the specific procedural issues that evoke higher rankings versus lower rankings would be worthy of further study. The effects of the individual's level of participation in the

implementation of the treatment protocol and the number of treatment components included in an intervention would be interesting areas for future research.

Many of the limitations noted for Study 1 are also applicable to this study. These limitations include the use of an analogue research design, failure to obtain professional ratings on the revised vignettes, and use of a college student population. Despite these limitations, this study helped expand the knowledge base about the role provision of rationale information and efficacy information can have on ratings of treatment acceptability.

GENERAL DISCUSSION

These two studies represent the first work examining treatment acceptability for interventions targeting a habit behavior, namely TCM. Previous acceptability work has typically targeted childhood externalizing behaviors and little had been done examining more methodological and conceptual issues. These findings illustrated that all treatments for TCM (habit reversal, hypnosis, medication, and punishment) were rated acceptable. Given the documented success of behavioral interventions for treating TCM, this provides further support for their regular use. In particular, concerns regarding the acceptability of habit reversal have been mentioned in the literature (Keuthen et al., 1999; Mansueto et al., 1999; Robleck et al., 1999). These results suggest that potential consumers find the treatment acceptable, particularly when information regarding the rationale behind the procedure is provided.

These two studies examined four diverse treatments for TCM. Future research should include treatments more similar in nature (e.g., habit reversal and cognitive-behavioral interventions) to determine if differences in acceptability arise.

Research is also needed to examine the methodology used to study treatment acceptability. Typically, participants complete the acceptability measure after reading each treatment vignette. Having the participant's read all the vignettes before responding may allow them to differentially rate each intervention with respect to one

another. Although this methodology would lose some validity, as those presenting for clinical services typically receive only one treatment option, it would allow for more comparisons between interventions. This type of methodology may be more useful in determining if differences exist between similar interventions.

It is also necessary to examine the contextual stimuli that may influence the results. Typically, participants complete the acceptability ratings in an academic department that may suggest which treatments "should" be rated more acceptable. These two studies were conducted in a behavioral psychology laboratory. One behavioral treatment, the punishment-based procedure, received relatively low ratings compared with two of the other treatments. Although this suggests the surrounding's may not have had an influence on the results, this should be empirically studied. For example, would the results differ if data was collected in a college health center or an outpatient medical clinic?

Although these two studies leave many questions unanswered, they contain methodological improvements that should be incorporated in future research. First, professionals knowledgeable about TCM were used to develop the stimulus materials. Second, participants were required to rank the interventions, thereby forcing a choice between two equally acceptable treatments. Third, a narrative questionnaire was used to evoke responses about why participants ranked a treatment the "most" or the "least" acceptable. This type of data can suggest further areas of empirical study.

The role treatment acceptability plays in treatment selection and adherence to treatment protocols remains unclear. The role that treatment acceptability plays in

actual daily practice is desperately needed. For example, rarely have practitioners been asked how acceptable they find an intervention for a given behavior problem. These ratings may have more influence on treatment selection issues than the acceptability ratings of the potential consumers. This may be particularly true in an area filled with controversy, such as the treatment of TCM.

Appendix A

Background Questionnaire

Background Questionnaire

Presentation Order: _____ Participant #: _____

General Information

1. Gender: _____ MALE _____ FEMALE

2. Age: _____

3. How much knowledge do you have about hair-pulling (also called trichotillomania)?

1	2	3	4	5
None at all		heard of it		know quite a bit

4. Do you have any friends or relatives who have a problem with hair-pulling? YES NO

5. Do you have a problem with hair-pulling? YES NO

If yes to #5

a. Have you ever received treatment for hair-pulling? YES NO
b. What types of treatment have you received for hair-pulling? (check all that apply)
   - ☐ Behavior Therapy
   - ☐ Hypnosis
   - ☐ Medication
   - ☐ Unsure
   - ☐ Other: _____
c. Would you be interested in receiving information about treatment options available in the Western Michigan area? YES NO

Appendix B

Case Vignettes

Case Vignettes

Vignette #1: Child / Mild

Sarah is an 8-year-old girl who has pulled her hair for the past 3 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She pulls primarily from her head and has a bald spot the size of a nickel behind one ear.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair.

Vignette #2: Child / Severe

Sarah is an 8-year-old girl who has pulled her hair for the past 30 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She has pulled out approximately 50% of the hair on the top of her head and she also pulls from her eyebrows.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair. Sarah will sometimes run a pulled hair along her lips, bite off the end of the hair that contains the root, and swallow it.

Vignette #3: Adolescent / Mild

Sarah is a 16-year-old young woman who has pulled her hair for the past 3 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She pulls primarily from her head and has a bald spot the size of a nickel behind one ear.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair.

Vignette #4: Adolescent / Severe

Sarah is a 16-year-old young woman who has pulled her hair for the past 30 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She has pulled out approximately 50% of the hair on the top of her head and she also pulls from her eyebrows.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair. Sarah will sometimes run a pulled hair along her lips, bite of the end of the hair that contains the root, and swallow it.

Vignette #5: Adult / Mild

Sarah is a 26-year-old woman who has pulled her hair for the past 3 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She pulls primarily from her head and has a bald spot the size of a nickel behind one ear.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair. Sarah will sometimes, although she does not do this all the time.

Vignette #6: Adult / Severe

Sarah is a 26-year-old woman who has pulled her hair for the past 30 months and is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. She has pulled out approximately 50% of the hair on the top of her head and she also pulls from her eyebrows.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair. Sarah will sometimes run a pulled hair along her lips, bite of the end of the hair that contains the root, and swallow it.

Appendix C

Treatment Vignettes

Treatment Vignette #1

The therapist discussed with Sarah the suffering that she has endured as a result of her hair pulling and had her describe all the sensations and movements involved in the behavior. Sarah and her therapist then selected a behavior for her to engage in each time she caught herself pulling or wanting to pull her hair. Sarah selected balling her hands into fists at her sides as alternative behaviors to hair pulling. The therapist then instructed Sarah to engage in this alternative behavior for 2 minutes each time she pulled or wanted to pull her hair. Finally, Sarah identified a person that she is around frequently to give her positive feedback each time she engaged in the alternative response and to remind her in case she forgot. This treatment took 3 sessions to implement and her therapist will check back with Sarah at regular intervals over the next year to see how she is doing.

Treatment #1 Rationale:

The therapist believes that Sarah's hair pulling has become a habit. It may have begun as a response to certain stimulation, such as an itchy scalp, but the behavior has continued and become quite problematic for her. By learning a response that is incompatible with hair-pulling (e.g., clenching fists), Sarah will have a way to counteract her hair-pulling. This treatment will help Sarah become more aware of when and where she pulls her hair so that she is better able to engage in a competing response.

Treatment Vignette #2

After describing Sarah's problem behavior to a psychiatrist, Sarah is placed on the medication Anafranil to help her reduce her hair pulling. This medication prescribed has been utilized for cases like Sarah's in the past and is given at clinically acceptable doses. Sarah will take this medication once a day at bedtime. Her medication dosage may need to be gradually increased depending on her response and tolerance level. Furthermore, Sarah's psychiatrist provided educational materials to Sarah about trichotillomania and her prescribed medication. The treatment required only one session visit, but will take approximately 5 weeks to become effective. Sarah's psychiatrist asked her if to call if she experiences any medication side-effects or has any other questions about trichotillomania or her treatment.

Treatment #2 Rationale:

Sarah's psychiatrist feels that her hair pulling is the result of a biochemical or structural abnormality in her brain. It is this abnormality that is causing Sarah to repeatedly pull her hair. Sarah also reports experiencing recurrent thoughts about pulling her hair and being periodically unable to resist these urges. The psychiatrist feels the prescribed medication will help Sarah decrease these recurrent thoughts and urges about pulling her hair, with the ultimate goal of decreasing her hair pulling.

Treatment Vignette #3:

After discussing her hair-pulling problem with a therapist, Sarah was given a rubber band to place over her wrist. Sarah was then instructed to raise the rubber band approximately 2 inches and snap it against her wrist every time she caught herself pulling her hair or wanting to pull her hair. While snapping the rubber band would produce a stinging sensation, it would not do any tissue damage. Because Sarah did not typically pull her hair in the presence of other people, the therapist specified that Sarah only needed to wear the rubber band when she was at home. She did not need to wear the rubber band when she was around other people. This treatment took approximately 1 session to implement and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing.

Treatment #3 Rationale:

The therapist believes that instituting a negative consequence after each hair pull will decrease how much time Sarah pulls her hair. While snapping the rubber band is not a physically damaging consequence, it will likely produce enough stimulation to be unpleasant. Taking the time to snap the rubber band will also interrupt Sarah's actual hair pulling or her thoughts about pulling her hair. This may prevent her from pulling out a large quantity of hair, or from pulling her hair altogether.

Treatment Vignette #4:

Sarah's therapist decided to use hypnosis to help Sarah with her problem. During the session, Sarah was encouraged to set in a comfortable position and was then systematically instructed to relax various muscle groups. Hypnotic induction was then implemented using a hand levitation technique. While Sarah was in a hypnotic trance the therapist had her visualize the motor responses leading up to and including a hair pull. She was then instructed to feel the tension accompanying the motor responses and squeeze it out through her thumb and forefinger. Sarah was also instructed to imagine pleasure resulting from not pulling her hair. Sarah was given exercises to complete at home to help her gain further mastery with these techniques. This treatment took 2 sessions to implement and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing.

Treatment #4 Rationale:

The therapist believes that Sarah's hair-pulling can be best helped by helping her develop more self-control. The therapist thinks that Sarah's hair-pulling is maintained by a process of gradually increasing tension before hair-pulling, tension reduction after hair-pulling, and then a gradual increasing in tension again. This vicious cycle can best be interrupted by giving Sarah tools to deal with her tension through relaxation and increasing her awareness about the behaviors that come before each hair pulling episode. The homework exercises were intended to help decrease hair pulling in places outside of the clinic setting.

Appendix D

Professional Rater Questionnaire – Case Vignette

Professional Rater Questionnaire - Case Vignette

1. This case vignette is <u>representative</u> of an individual that age with trichotillomania.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

If you gave question 1 a rating of 3 or lower, please explain what could be changed to make this case more representative of an individual with trichotillomania.

2. How would you rate the severity level of this individual's trichotillomania?

1	2	3	4	5	6	7
Not at all Severe						Very Severe

3. Based on the information provided, would you diagnose this individual with trichotillomania?

___ Yes
___ No

Appendix E

Professional Rating Questionnaire – Treatment Vignettes

Professional Rating Questionnaire - Treatment Vignettes

1. The procedures are accurately described with respect to my understanding of the treatment.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

If you gave this question a rating of 3 or lower, please explain what could be changed to make this treatment description more accurate.

2. The rationale is accurately described with respect to my understanding of the treatment.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

If you gave this question a rating of 3 or lower, please explain what could be changed to make this treatment rationale more accurate.

Appendix F

Abbreviated Acceptability Rating Profile (AARP)

Abbreviated Acceptability Rating Profile (AARP)

Presentation Order: _____ Participant #: _____

Please answer these questions that deal with your reactions to the treatment you just read. Circle the number that best describes your reactions.

		Strongly Disagree					Strongly Agree
1.	This is an acceptable treatment for the problem.	1	2	3	4	5	6
2.	The treatment should be effective in changing the problem.	1	2	3	4	5	6
3.	The problem is severe enough to justify the use of this treatment.	1	2	3	4	5	6
4.	I would be willing to use this treatment with a loved one.	1	2	3	4	5	6
5.	This treatment would *not have* bad side effects.	1	2	3	4	5	6
6.	I liked this treatment.	1	2	3	4	5	6
7.	The treatment was a good way to handle the problem.	1	2	3	4	5	6
8.	Overall, the treatment would help the individual.	1	2	3	4	5	6

Appendix G

Intervention Ranking Form - Example

Intervention Ranking Form - Example

Presentation Order: _____ Participant #: _____

Please rank the treatment interventions according to which you find the most acceptable (1) to the least acceptable (4). Each intervention must receive a different ranking. Feel free to turn back to the intervention descriptions when making your ratings, however, please do not refer back to your ratings of each intervention.

1 = Most Acceptable
4 = Least Acceptable

_____ The therapist discussed with Sarah the suffering that she has endured as a result of her hair pulling and had her describe all the sensations and movements involved in the behavior. Sarah and her therapist then selected a behavior for her to engage in each time she caught herself pulling or wanting to pull her hair. Sarah selected balling her hands into fists at her sides as alternative behaviors to hair pulling. The therapist then instructed Sarah to engage in this alternative behavior for 2 minutes each time she pulled or wanted to pull her hair. Finally, Sarah identified a person that she is around frequently to give her positive feedback each time she engaged in the alternative response and to remind her in case she forgot. This treatment took 3 sessions to implement and her therapist will check back with Sarah at regular intervals over the next year to see how she is doing.

The therapist believes that Sarah's hair pulling has become a habit. It may have begun as a response to certain stimulation, such as an itchy scalp, but the behavior has continued and become quite problematic for her. By learning a response that is incompatible with hair-pulling (e.g., clenching fists), Sarah will have a way to counteract her hair-pulling. This treatment will help Sarah become more aware of when and where she pulls her hair so that she is better able to engage in a competing response.

_____ After describing Sarah's problem behavior to a psychiatrist, Sarah is placed on the medication Anafranil to help her reduce her hair pulling. This medication prescribed has been utilized for cases like Sarah's in the past and is given at clinically acceptable doses. Sarah will take this medication once a day at bedtime. Her medication dosage may need to be gradually increased depending on her response and tolerance level. Furthermore, Sarah's psychiatrist provided educational materials to Sarah about trichotillomania and her prescribed medication. The treatment required only one session visit, but will take approximately 5 weeks to become effective. Sarah's psychiatrist asked her if to call if she experiences any medication side-effects or has any other questions about trichotillomania or her treatment. There is no documented evidence regarding the effectiveness of this treatment for problems like Sarah's.

Sarah's psychiatrist feels that her hair pulling is the result of a biochemical or structural abnormality in her brain. It is this abnormality that is causing Sarah to repeatedly pull her hair. Sarah also reports experiencing recurrent thoughts about pulling her hair & being periodically unable to resist these urges. The psychiatrist feels the prescribed medication will help Sarah decrease these recurrent thoughts & urges about pulling her hair, with the ultimate goal of decreasing her hair pulling.

_____ After discussing her hair-pulling problem with a therapist, Sarah was given a rubber band to place over her wrist. Sarah was then instructed to raise the rubber band approximately 2 inches and snap it against her wrist every time she caught herself pulling her hair or wanting to pull her hair. While snapping the rubber band would produce a stinging sensation, it would not do any tissue damage. Because Sarah did not typically pull her hair in the presence of other people, the therapist specified that Sarah only needed to wear the rubber band when she was at home. She did not need to wear the rubber band when she was around other people. This treatment took approximately 1 session to implement and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing. Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment. This treatment intervention has been shown to help approximately 20% of those who use it; 5% more than those who receive no treatment at all.

The therapist believes that instituting a negative consequence after each hair pull will decrease the how much Sarah pulls her hair. While snapping the rubber band is not a physically damaging consequence, it will likely produce enough stimulation to be unpleasant. Taking the time to snap the rubber band will also interrupt Sarah's actual hair pulling or her thoughts about pulling her hair. This may prevent her from pulling out a large quantity of hair, or from pulling her hair altogether.

_____ Sarah's therapist decided to use hypnosis to help Sarah with her problem. During the session, Sarah was encouraged to set in a comfortable position and was then systematically instructed to relax various muscle groups. Hypnotic induction was then implemented using a hand levitation technique. While Sarah was in a hypnotic trance the therapist had her visualize the motor responses leading up to and including a hair pull. She was then instructed to feel the tension accompanying the motor responses and squeeze it out through her thumb and forefinger. Sarah was also instructed to imagine pleasure resulting from not pulling her hair. Sarah was given exercises to complete at home to help her gain further mastery with these techniques. This treatment took 2 sessions to implement and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing. Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment. This treatment intervention has been shown to help approximately 70% of those who use it; 55% more than those who receive no treatment at all.

The therapist believes that Sarah's hair-pulling can be best helped by helping her develop more self-control. The therapist thinks that Sarah's hair-pulling is maintained by a process of gradually increasing tension before hair-pulling, tension reduction after hair-pulling, and then a gradual increasing in tension again. This vicious cycle can best be interrupted by giving Sarah tools to deal with her tension through relaxation and increasing her awareness about the behaviors that come before each hair pulling episode. The homework exercises were intended to help decrease hair pulling in places outside of the clinic setting.

Appendix H

Scoring Templates

Scoring Templates

Case Vignette

Sarah is an <8, 16, 26> -year-old girl/woman[1] who has pulled her hair for the past <3 months vs. 30 months>[2] & is now in treatment for this problem. Sarah typically pulls hair from the top of her head and her eyebrows. *<She pulls primarily from her head and has a bald spot the size of a nickel behind one ear[3]. She has pulled out approximately 50% of the hair on the top of her head[4]* and she also pulls from her eyebrows.

Sarah makes many efforts to hide her hair-pulling and bald patches from others. She will often wear a hat over her head or arrange her hair to cover the bald patches. She is often fearful that others will discover her secret and will think less of her. Sarah has tried many times to stop pulling her hair, however, many times she feels as if she just has to pull out one more hair. Sarah has tried many things, such as putting gloves over her hands and cutting her hair short, to keep from pulling, however, nothing has been successful for longer than a week.

There are also times when Sarah is unaware she is pulling out hair. This most frequently happens when she is watching television and looks down to notice a pile of hair sitting next to the chair. *<Sarah will sometimes run a pulled hair along her lips, bite of the end of the hair that contains the root, and swallow it[5].>*

Treatment Vignette #1

The therapist discussed with Sarah the suffering that she has endured as a result of her hair pulling[1] and had her describe all the sensations and movements involved in the behavior.[2] Sarah & her therapist then selected a behavior for her to engage in each time she caught herself pulling or wanting to pull her hair[3]. Sarah selected balling her hands into fists at her sides[4] as alternative behaviors to hair pulling. The therapist then instructed Sarah to engage in this alternative behavior for 2 min each time she pulled or wanted to pull her hair[5]. Finally, Sarah identified a person that she is around frequently to give her positive feedback each time she engaged in the alternative response and to remind her in case she forgot[6]. This treatment took 3 sessions[7] to implement and her therapist will check back with Sarah at regular intervals over the next year to see how she is doing.

Therapist #1 Rationale:

The therapist believes that Sarah's hair pulling has become a habit[8]. It may have begun as a response to certain stimulation[9], such as an itchy scalp, but the behavior has continued and become quite problematic for her. By learning a response that is incompatible with hair-pulling (e.g., clenching fists), Sarah will have a way to counteract her hair-pulling[10]. This treatment will help Sarah become more aware of when and where she pulls her hair so that she is better able to engage in a competing response[11].

Treatment Vignette #2

After describing Sarah's problem behavior to a psychiatrist, Sarah is placed on the medication Anafranil[1] to help her reduce her hair pulling. This medication prescribed has been utilized for cases like Sarah's in the past and is given at clinically acceptable doses.[2] Sarah will take this medication once a day at bedtime[3]. Her medication dosage may need to be gradually increased depending on her response and tolerance level[4]. Furthermore, Sarah's psychiatrist provided educational materials[5] to Sarah about trichotillomania and her prescribed medication. The treatment required only one session visit[6], but will take approximately 5 weeks to become effective[7]. Sarah's psychiatrist asked her if to call if she experiences any medication side-effects or has any other questions[8] about trichotillomania or her treatment.

Treatment #2 Rationale:

Sarah's psychiatrist feels that her hair pulling is the result of a biochemical or structural abnormality in her brain[9]. It is this abnormality that is causing Sarah to repeatedly pull her hair. Sarah also reports experiencing recurrent thoughts about pulling her hair and being periodically unable to resist these urges. The psychiatrist feels the prescribed medication will help Sarah decrease these recurrent thoughts and urges about pulling her hair[10], with the ultimate goal of decreasing her hair pulling.

Treatment Vignette #3:

After discussing her hair-pulling problem with a therapist, Sarah was given a rubber band to place over her wrist[1]. Sarah was then instructed to raise the rubber band approximately 2 inches and snap it against her wrist[2] every time she caught herself pulling her hair or wanting to pull her hair[3]. While snapping the rubber band would produce a stinging sensation, it would not do any tissue damage[4]. Because Sarah did not typically pull her hair in the presence of other people, the therapist specified that Sarah only needed to wear the rubber band when she was at home[5]. She did not need to wear the rubber band when she was around other people. This treatment took approximately 1 session[6] to implement and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing.

Treatment #3 Rationale:

The therapist believes that instituting a negative consequence after each hair pull will decrease the how much Sarah pulls her hair[7]. While snapping the rubber band is not a physically damaging consequence, it will likely produce enough stimulation to be unpleasant[8]. Taking the time to snap the rubber band will also interrupt Sarah's actual hair pulling or her thoughts about pulling her hair[9]. This may prevent her from pulling out a large quantity of hair, or from pulling her hair altogether[10].

Treatment Vignette #4:

Sarah's therapist decided to use hypnosis to help Sarah with her problem. During the session, Sarah was encouraged to sit in a comfortable position[1] & was then systematically instructed to relax various muscle groups[2]. Hypnotic induction was then implemented using a hand levitation technique[3]. While Sarah was in a hypnotic trance the therapist had her visualize the motor responses leading up to and including a hair pull[4]. She was then instructed to feel the tension accompanying the motor responses and squeeze it out through her thumb and forefinger[5]. Sarah was also instructed to imagine pleasure resulting from not pulling her hair[6]. Sarah was given exercises to complete at home[7] to help her gain further mastery with these techniques. This treatment took 2 sessions to implement[8] and her therapist plans on checking back with Sarah at regular intervals over the next year to see how she is doing.

Treatment #4 Rationale:

The therapist believes that Sarah's hair-pulling can be best helped by helping her develop more self-control[9]. The therapist thinks that Sarah's hair-pulling is maintained by a process of gradually increasing tension before hair-pulling, tension reduction after hair-pulling, and then a gradual increasing in tension again[10]. This vicious cycle can best be interrupted by giving Sarah tools to deal with her tension through relaxation and increasing her awareness about the behaviors that come before each hair pulling episode[11]. The homework exercises were intended to help decrease hair pulling in places outside of the clinic setting[12].

Efficacy Statements

No Efficacy Statement: There is no documented evidence[1] regarding the effectiveness of this treatment for problems like Sarah's.

Low Efficacy Statement: Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment[1]. This treatment intervention has been shown to help approximately 20% of those who use it[2]; 5% more than those who receive no treatment at all[3].

High Efficacy Statement: Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment[1]. This treatment intervention has been shown to help approximately 70% of those who use it[2]; 55% more than those who receive no treatment at all[3].

Appendix I

Narrative Questionnaire

Narrative Questionnaire

Please provide a brief explanation of your reasoning for the treatment that you ranked first (1).

Please provide a brief explanation of your reasoning for the treatment that you ranked last (4).

Appendix J

Narrative Questionnaire Coding Instructions

Narrative Comments
Scoring Instructions

1. For each sentence code the sentence, in its entirety, according to one of the provided labels.
2. If you have any questions or are uncertain about a response, please make your best guess.
3. If you find a sentence that does not fit into an existing code, please label it as MISC If many similar sentences fall under this category, a new code may be developed.

Code #	Name	Definition
SE	Side-Effects	Unwanted and undesirable physical, emotional, and/or behavioral effects of treatment that may be unrelated to their therapeutic effects.
EFF	Efficacy (or effectiveness)	The likelihood of the treatment to produce desirable effects.
RAT	Rationale	Note rationale regarding a treatment
PRO	Procedure	Procedural issue regarding treatment
AW	Awareness	Mention awareness (or lack of)
UN	Underlying problem	Reference made to problem being something other than the overt behavior.
AGE	Age of case	Reference made to acceptability of treatment in regards to age of case.
SEV	Severity	Reference made to acceptability of treatment in regards to severity of the problem behavior
LEN	Length of treatment	Number of sessions or length of time the case is in treatment.
TIM	Time until treatment takes effect	Length of time until treatment becomes effectiveness
GEN	Generalizability	Likelihood the treatment will generalize to other settings or problems
MAIN	Maintenance	Likelihood the treatment will maintain it effectiveness
EASE	Ease of treatment implementation	Amount of time and energy the individual would need to invest in implementing the treatment
EMO	Emotional	Statement of personal feelings regarding the treatment (no specific reason provided)
COM	Compliance	Likelihood of person engaging in treatment protocol
PER	Personal Experience	Relating personal experience regarding one of the treatments
OTH	Other Treatment	Relate this treatment to another
MISC	Miscellaneous	Does not fit into another category

Appendix K

Efficacy Statements

Efficacy Statements

** *The efficacy statement was included after the first paragraph of each intervention vignette.*

No Efficacy Statement:

There is no documented evidence regarding the effectiveness of this treatment for problems like Sarah's.

Low Efficacy Statement:

Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment. This treatment intervention has been shown to help approximately 20% of those who use it; 5% more than those who receive no treatment at all.

High Efficacy Statement:

Research suggests that 15% of individuals with problems similar to Sarah's will get better without treatment. This treatment intervention has been shown to help approximately 70% of those who use it; 55% more than those who receive no treatment at all.

Appendix L

Protocol Clearance From the Human Subjects Institutional Review Board

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-5162
616 387-8293

WESTERN MICHIGAN UNIVERSITY

Date: 4 April 2000

To: R. Wayne Fuqua, Principal Investigator
Amy J. Elliott, Student Investigator for dissertation

From: Sylvia Culp, Chair Sylvia Culp

Re: HSIRB Project Number 00-03-04

This letter will serve as confirmation that your research project entitled "Expansion Of Methodological And Practical Issues In The Study Of Treatment Acceptability" has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 4 April 2001

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-5162
616 387-8293

WESTERN MICHIGAN UNIVERSITY

Date: 30 March 2000

To: R. Wayne Fuqua, Principal Investigator
Amy J. Elliott, Student Investigator for dissertation

From: Sylvia Culp, Chair Sylvia Culp

Re: HSIRB Project Number 00-03-03

This letter will serve as confirmation that your research project entitled "Analysis of Factors Involved in Ratings of Treatment Acceptability" has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 30 March 2001

BIBLIOGRAPHY

American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders (4th Ed). Washington, DC: American Psychiatric Association.

Altman, K., Haavik, S., & Cook, W. (1978). Punishment of self-injurious behavior in natural settings using contingent aromatic ammonia. Behaviour Research and Therapy, 16, 85-96.

Ames, S. M. (1985). Trichotillomania: A reaction to Friman, Finney, and Christophersen (1984). Behavior Therapy, 16, 328, 332.

Arndorfer, R. E., Allen, K. D., & Aljazireh, L. (1999). Behavioral health needs in pediatric medicine and the acceptability of behavioral solutions: Implications for behavioral psychologists. Behavior Therapy, 30, 137-148.

Azrin, N. H., & Nunn, R. G. (1973). Habit reversal: A method of eliminating nervous habits and tics. Behaviour Research and Therapy, 11, 619-628.

Banken, D. M., & Wilson, G. L. (1992). Treatment acceptability of alternative therapies for depression: A comparative analysis. Psychotherapy, 29, 610-619.

Barlow, D. H. (1993). Clinical Handbook of Psychological Disorders (2nd Ed.). Guilford Press: New York.

Barmann, B. C., & Vitali, D. L. (1982). Facial screening to eliminate trichotillomania in developmentally disabled persons. Behavior Therapy, 13, 735-742.

Bennett, D. S., Power, T. J., Rostain, A. L., & Carr, D. E. (1996). Parent acceptability and feasibility of ADHD interventions: Assessment, correlates, and predictive validity. Journal of Pediatric Psychology, 21, 643-657.

Bihm, E. M., Sigelman, C. K., & Westbrook, J. P. (1997). Social implications of behavioral interventions for persons with mental retardation. American Journal on Mental Retardation, 101, 567-578.

Blankenship, B. L., Eells, G. T., Carlozzi, A. F., Perry, K., & Barnes, L. B. (1998). Adolescent client perceptions and reactions to reframe and symptom prescription techniques. Journal of Mental Health Counseling, 20, 172-182.

Burgio, L. K., Hardin, M., Sinnott, J., Janosky, J., & Hohnman, M. J. (1995). Acceptability of behavioral treatments and pharmacotherapy for behaviorally disturbed older adults: Ratings of caregivers and relatives. Journal of Clinical Geropsychology, 1, 19-32.

Burgio, L. D., & Sinnott, J. (1989). Behavioral treatments and pharmacotherapy: Acceptability ratings for elderly individuals. Journal of Gerontology: Psychological Sciences, 44, P3-8.

Cavell, T. A., Frentz, C. E., & Kelley, M. L. (1986). Acceptability of paradoxical interventions: Some nonparadoxical findings. Professional Psychology: Research and Practice, 17, 519-523.

Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Cristoph, P., Daiuto, A., DeRubeis, R., Detweiler, J., Haaga, D. A. F., Johnson Bennett, S., McCurry, S., Mueser, K. T., Pope, K. S., Sanderson, W. C., Shoham, V., Stickle, T., Williams, D. A., & Woody, S. R. (1998). Update on empirically validated therapies II. The Clinical Psychologist, 51, 3-21.

Christenson, G. A., & Mansueto, C. S. (1999). Trichotillomania: Descriptive characteristics and phenomenology. In D. J. Stein, G. A. Christenson, & E. Hollander (Eds.). Trichotillomania. Washington, DC: American Psychiatric Press.

Christenson, G., & O'Sullivan, R. (1996). Trichotillomania: Rational treatment options. CNS Drugs, 6, 23-34.

Christenson, G. A., Pyle, R. L., & Mitchell, J. E. (1991). Estimated lifetime prevalence of trichotillomania in college students. Journal of Clinical Psychiatry, 52, 415-417.

Cohen, L. J., Stein, D. J., Simeon, D., Spadaccini, E., Rosen, J., Aronowitz, B., & Hollander, E. (1995). Clinical profile, comorbidity, and treatment history in 123 hair pullers: A survey study. Journal of Clinical Psychiatry, 56, 319-326.

Corte, H. E., Montrose, M. W., & Locke, B. J. (1971). A comparison of procedures for eliminating self-injurious behavior of retarded adolescents. Journal of Applied Behavior Analysis, 4, 201-213.

Crawford, D. A. (1988). Aversion therapy in the treatment of trichotillomania: A case study. Behavioural Psychotherapy, 16, 57-63.

Cross-Calvert, S., & Johnston, C. (1990). Acceptability of treatments for child behavior problems: Issues and implications for future research. Journal of Clinical Child Psychology, 19, 61-74.

Cross-Calvert, S., & McMahon, R. (1987). The treatment acceptability of a behavioral parent training program and its components. Behavior Therapy, 18, 165-179.

DeLuca, R. V., & Holborn, S. W. (1984). A comparison of relaxation training and competing response training to eliminate hair pulling and nail biting. Journal of Behavior Therapy and Experimental Psychiatry, 15, 67-70.

Despande, S. N., & Mehta, M. (1989). Aversion therapy in the treatment of trichotillomania. Journal of Personality & Clinical Studies, 5, 242-244.

Dorsett, P. G., & Hobbs, S. A. (1985, November). Acceptability of treatments for oppositional behavior. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy, Houston.

Eckert, T. L., Hintze, J. M., & Shapiro, E. S. (1997). School psychologists' acceptability of behavioral and traditional assessment procedures for externalizing problem behaviors. School Psychology Quarterly, 12, 150-169.

Elliott, A. J., & Fuqua, R. W. (2000). Trichotillomania: Conceptualization, measurement, and treatment. Behavior Therapy, 31, 529-545.

Elliott, A. J., & Fuqua, R. W. (2001). Treatment of trichotillomania: A review. In D. Woods & R. Miltenberger (Eds.). Tic Disorders, Trichotillomania, and Other Repetitive Behavior Disorders: Behavioral Approaches to Assessment and Treatment. Boston: Kluwar Academic Publishers.

Elliott, S. N. (1986). Children's ratings of the acceptability of classroom interventions for misbehavior: Findings and methodological considerations. Journal of School Psychology, 24, 23-35.

Elliott, S. N., Witt, J. C., Galvin, G. A., & Moe, G. L. (1986). Children's involvement in intervention selection: Acceptability of interventions for misbehaving peers. Professional Psychology: Research and Practice, 17, 235-241.

Fabbri, R., & Dy, A. J. (1974). Hypnotic treatment of trichotillomania: Two cases. International Journal of Clinical and Experimental Hypnosis, 22, 210-215.

Fairbanks, L. D., & Stinnett, T. A. (1997). Effects of professional group membership, intervention type, and diagnostic label on treatment acceptability. Psychology in the Schools, 34, 329-335.

Foxx, R. M., McHenry, W. C., & Bremer, B. A. (1996). The effects of a video vignette on increasing treatment acceptability Behavioural Interventions, 11, 131-140.

Friman, P. C. (1992). Further comments on trichotillomania. American Journal of Psychiatry, 149, 284.

Friman, P. C., Finney, J. W., & Christophersen, E. R. (1984). Behavioral treatment of trichotillomania: An evaluative review. Behavior Therapy, 15, 249-265.

Friman, P. C., & O'Connor, W. A. (1984). The integration of hypnotic and habit reversal techniques in the treatment of trichotillomania. the Behavior Therapist, 7, 166-167,

Friman, P. C., Rostain, A., Parrish, J. M., & Carey, W. B. (1990). Hair pulling [Letter to the editor]. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 489.

Fuqua, R. W., & Schwade, J. (1986). Social validation of applied behavioral research: A selective review and critique. In A. Poling, & R. Fuqua (Eds.). Research Methods in Applied Behavior Analysis. New York: Plenum Press.

Galski, T. (1981). Hair pulling (trichotillomania). Psychoanalytic Review, 70, 331-346.

Graber, J., & Arndt, W. B. (1993). Trichotillomania. Comprehensive Psychiatry, 34, 340-346.

Hall, J. R., & McGill, J. C. (1986). Hypnobehavioral treatment of self-destructive behavior: Trichotillomania and bulimia in the same patient. American Journal of Clinical Hypnosis, 29, 39-46.

Hall, L. H., & Robertson, M. H. (1998). Undergraduate ratings of the acceptability of single and combined treatments for depression: A comparative analysis. Professional Psychology: Research and Practice, 29, 269-272.

Hallopeau, M. (1889). Alopecie par grattage (trichomanie of trichotillomanie). Annales de Dermatologie et de Vernereal, 10, 440-441.

Hansen, D. J., Tishelman, A. C., Hawkins, R. P., & Doepke, K. J. (1990). Habits with potential as disorders. Behavior Modification, 14, 66-80.

Heffer, R. W., & Kelley, M. L. (1987). Mothers' acceptance of behavioral interventions for children: The influence of parent race and income. Behavior Therapy, 2, 153-163.

Himle, J. A., Bordnick, P. S., & Thyer, B. A. (1995). A comparison of trichotillomania and obsessive-compulsive disorder. Journal of Psychopathology and Behavioral Assessment, 17, 251-260.

Hunsley, J. (1993). Treatment acceptability of symptom prescription techniques. Journal of Counseling Psychology, 40, 139, 143.

Kazdin, A. E. (1977). Assessing the clinical or applied importance of behavior change through social validation. Behavior Modification, 1, 427-452.

Kazdin, A. E. (1980). Acceptability of alternative treatments for deviant child behavior. Journal of Applied Behavior Analysis, 13, 259-273.

Kazdin, A. E. (1981). Acceptability of child treatment techniques: The influence of treatment efficacy and adverse side effects. Behavior Therapy, 12, 493-506.

Kelley, M. L., Heffer, R. W., Gresham, F. M., & Elliott, S. N. (1989). Development of a modified Treatment Evaluation Inventory. Journal of Psychopathology and Behavioral Assessment, 11, 235-247.

Keuthen, N. J., Aronowitz, B., Badenoch, J., & Wilhelm, S. (1999). Behavioral treatment for trichotillomania. In. D. J. Stein, G. A. Christenson, & E. Hollander (Eds.). Trichotillomania. Washington, DC: American Psychiatric Press.

King, R. A., Scahill, L., Vitulano, L. A., Schwab-Stone, M., Tercyak, K. P., & Riddle, M. A. (1995). Childhood trichotillomania: Clinical phenomology, comorbidity, and family genetics. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 1451-1459.

Lindeman, D. P., Miltenberger, R. G., & Lennox, D. B. (1992). Acceptability of behavioral interventions: Perceptions of superintendents of public residential facilities. Behavioral Residential Treatment, 7, 35-44.

Long, E. S., Miltenberger, R. G., & Rapp, J. T. (1999). Simplified habit reversal plus adjunct contingencies in the treatment of thumb sucking and hair pulling in a young child. Child and Family Behavior Therapy, 21, 45-58.

Lundervold, D. A., & Young, L. G. (1992). Treatment acceptability ratings for sexual offenders: Effect of diagnosis and offense. Research in Developmental Disabilities, 13, 229-237.

Mansueto, C. (1991). Trichotillomania in focus. OCD Newsletter, 5, 10-11.

Mansueto, C. S., Golomb, R. G., Thomas, A. M., & Stemberger, R. M. T. (1999). A comprehensive model for behavioral treatment of trichotillomania. Cognitive and Behavioral Practice, 6, 23-43.

McLean, P. D., & Hakstian, A. R. (1979). Clinical depression: Comparative efficacy of outpatient treatments. Journal of Consulting and Clinical Psychology, 47, 818-836.

Miltenberger, R. G. (1990). Assessment of treatment acceptability: A review of the literature. Topics in Early Childhood Special Education, 10, 24-38.

Miltenberger, R. G. (2001). Habit reversal treatment manual for trichotillomania. In D. Woods & R. Miltenberger (Eds.). Tic Disorders, Trichotillomania, and Other Repetitive Behavior Disorders: Behavioral Approaches to Analysis and Treatment. Boston: Kluwer Academic Publishers.

Miltenberger, R. G., Fuqua, R. W., & Woods, D. W. (1998). Applying behavior analysis to clinical problems: Review and analysis of habit reversal. Journal of Applied Behavior Analysis, 31, 447-469.

Miltenberger, R., Parrish, J., Rickert, V., & Kohr, M. (1989). Assessing treatment acceptability with consumers of outpatient child behavior management services. Child and Family Behavior Therapy, 11, 35-44.

Mittle, V. F., & Robin, A. (1987). Acceptability of alternative interventions for parent-adolescent conflict. Behavioral Assessment, 9, 417-428.

Mouton, S. G., & Stanley, M. A. (1996). Habit reversal training for trichotillomania: A group approach. Cognitive and Behavioral Practice, 3, 159-182.

Ninan, P. T., Rothbaum, B. O., Martsteller, F. A., Knight, B. T., & Eccard, M. B. (2000). A placebo-controlled trial of cognitive-behavioral therapy and clomipramine in trichotillomania. Journal of Clinical Psychiatry, 61, 47-50.

Norton, G. R., Austen, S., Allen, G. E., & Hilton, J. (1983). Acceptability of time out from reinforcement for disruptive child behavior: A further analysis. Child and Family Behavior Therapy, 5, 31-41.

O'Sullivan, R. L., Christenson, G. A., & Stein, D. J. (1999). In D. J. Stein, G. A. Christenson, E. Hollander (Eds.). Trichotillomania. Washington, DC: American Psychiatric Press.

Padula, M. A., Conoley, C. W., & Garbin, C. P. (1998). The dimensions underlying loneliness counseling interventions: A multidimensional scaling solution. Journal of Counseling and Development, 76, 442-451.

Parloff, M. B. (1983). Who will be satisfied by "consumer satisfaction" evidence. Behavior Therapy, 14, 242-246.

Phares, V., Ehrbar, L. A., & Lum, J. J. (1996). Parental perceptions of the development and treatment of children's and adolescents' emotional/behavioral problems. Child and Family Behavior Therapy, 18, 19-36.

Power, T. J., Hess, L. E., & Bennett, D. S. (1995). The acceptability of interventions for attention-deficit hyperactivity disorder among elementary and middle school teachers. Developmental and Behavioral Pediatrics, 16, 238-243.

Rapp, J. T., Miltenberger, R. G., Galensky, T. L., Ellingson, S. A., Stricker, J., Garlinghouse, M., & Long, E. S. (2000). Treatment of hair pulling and hair manipulation maintained by digital-tactile stimulation. Behavior Therapy, 31, 381-393.

Rapp, J. S., Miltenberger, R. G., Long, E. S., Elliott, A. J., & Lumley, V. A. (1998). Simplified habit reversal treatment for chronic hair-pulling in three pre adolescents: A clinical replication with direct observation. Journal of Applied Behavior Analysis, 31, 299-302.

Reimers, T. M., & Wacker, D. (1988). Parents' ratings of the acceptability of behavioral treatment recommendations made in an outpatient clinic: A further analysis. Child and Family Behavior Therapy, 5, 31-41.

Reimers, T. M., Wacker, D. P., Cooper, L. J., & DeRaad, A. O. (1992). Clinical evaluation of the variables associated with treatment acceptability and their relation to compliance. Behavioural Disorders, 18, 67-76.

Ristvedt, S. L., & Christenson, G. A. (1996). The use of pharmacologic pain sensitization in the treatment of repetitive hair-pulling. Behavior Research and Therapy, 34, 647-648.

Robiner, W. N., Edwards, P. E., & Christenson, G. A. (1999). Hypnosis in the treatment of trichotillomania. In D. J. Stein, G. A. Christenson, & E. Hollander (Eds). Trichotillomania. Washington, DC: American Psychiatric Press.

Robleck, T. L., Detweiler, M. F., Fearing, T., & Albano, A. M. (1999). Cognitive behavioral treatment of trichotillomania in youth: What went right and what went wrong? Cognitive and Behavior Practice, 6, 154-161.

Rodolfa, E. R. (1986). The use of hypnosis in the multimodal treatment of trichotillomania: A case report. Psychotherapy in Private Practice, 4, 51-58.

Rothbaum, B. O., & Ninan, P. T. (1999). Manual for the cognitive-behavioral treatment of trichotillomania. In D. J. Stein, G. A. Christenson, & E. Hollander (Eds.). Trichotillomania. Washington, DC: American Psychiatric Press.

Schlosser, S., Black, D. W., Blum, N., & Goldstein, R. B. (1994). The demography, phenomology, and family history of 22 persons with compulsive hair pulling. Annals of Clinical Psychiatry, 6, 147-152.

Sinnott, J. D., Burgio, L. D., Lakein, D., Pappas, K., DeLeonardo, L., Spencer, F. M. (1998). Acceptability ratings of psychotherapeutic treatments for elderly individuals. The Journal of Applied Gerontology, 17, 172-185.

Spirrison, C. L., & Mauney, L. T. (1994). Acceptability bias: The effects of treatment acceptability on visual analysis of graphed data. Journal of Psychopathology and Behavioral Assessment, 16, 85-94.

Spirrison, C. L., & Noland, K. (1991). The original vs an abbreviated version of the treatment evaluation inventory: Systematic measurement error. Psychological Reports, 69, 763-766.

Spirrison, C. L., Noland, K. A., & Savoie, L. B. (1992). Factor structure of the treatment evaluation inventory: Implications for measurement of treatment acceptability. Journal of Psychopathology and Behavioral Assessment, 14, 65-79.

Spreat, S., Lipinski, D., Dickerson, R., Nass, R., & Dorsey, M. (1989). The acceptability of electric shock programs. Behavior Modification, 13, 245-256.

Spreat, S., & Walsh, D. E. (1994). Impact of treatment efficacy and professional affiliation on ratings of treatment acceptability. Mental Retardation, 32, 227-233.

Stanley, M. A. (1999). Broadening the approach to treatment of trichotillomania in youth. Cognitive and Behavioral Practice, 6, 161-163.

Stein, D. J., & Christenson, G. A. (1999). Introduction: Why trichotillomania. In D. J. Stein, G. A. Christenson, & E. Hollander (Eds.). Trichotillomania.. Washington, DC: American Psychiatric Press.

Sturmey, P. (1992). Treatment acceptability for anorexia nervosa: Effects of treatment type, problem severity and treatment outcome. Behavioural Psychotherapy, 20, 91-93.

Swedo, S. E. (1993). Trichotillomania. Psychiatric Annals, 23, 402-407.

Swedo, S. E., Lenane, M. C., & Leonard, H. L. (1993). Long-term treatment of trichotillomania (hair pulling). New England Journal of Medicine, 329, 141-142.

Swedo, S. E., & Leonard, H. L. (1992). Trichotillomania: An obsessive compulsive spectrum disorder? Obsessional Disorders, 15, 777-790.

Swedo, S. E., Leonard, H. L., Rapoport, J. L., Lenane, M. C., Goldberger, B. A., & Cheslow, B. A. (1989). A double-blind comparison of clomipramine and desipramine in the treatment of trichotillomania (hair pulling). New England Journal of Medicine, 321, 497-501.

Tarnowski, K. J., Gavaghan, M. P., & Wisniewski, J. J. (1989a). Acceptability of interventions for pediatric pain management. Journal of Pediatric Psychology, 14, 463-472.

Tarnowski, K. J., Kelly, P. A., & Mendlowitz, D. R. (1987). Acceptability of behavioral pediatric interventions. Journal of Consulting and Clinical Psychology, 55, 435-436.

Tarnnowski, K. J., Rasnake, L. K., Mulick, J. A., & Kelly, P. A. (1989b). Acceptability of behavioral interventions for self-injurious behavior. American Journal on Mental Retardation, 93, 575-580.

Tarnowski, K. J., Rosen, L. A., McGrath, M. L., & Drabman, R. S. (1987). A modified habit reversal procedure in a recalcitrant case of trichotillomania. Journal of Behavior Therapy and Experimental Psychiatry, 18, 157-163.

Tarnowski, K. J., & Simonian, S. J. (1992). Assessing treatment acceptance: The abbreviated acceptability rating profile. Journal of Behavior Therapy and Experimental Psychiatry, 23, 101-106.

Tarnowski, K. J., Simonian, S. J., Bekeny, P. & Park, A. (1992). Acceptability of interventions for childhood depression. Behavior Modification, 16, 103-117.

Tracy, J. J. (1977). Impact of intake procedures upon client attrition in a community mental health center. Journal of Consulting and Clinical Psychology, 45, 192-195.

Vitulano, L. A., King, R. A., Scahill, L., & Cohen, D. J. (1992). Behavioral treatment of children and adolescents with trichotillomania. Journal of the American Academy of Child and Adolescent Psychiatry, 31, 139-146.

Von Brock, M. B., & Elliott, S. N. (1987). The influence of treatment effectiveness information on the acceptability of classroom interventions. Journal of School Psychology, 25, 131-144.

Wilson, G. L., & Wilson, L. J. (1991). Treatment acceptability of alternative sex therapies: A comparative analysis. Journal of Sex and Marital Therapy, 17, 35-44.

Witt, J. C., & Elliott, S. N. (1985). Acceptability of classroom intervention strategies. In T. R. Kratochwill (Ed.). Advances in School Psychology (Vol. 4, pp. 251-288). Hillsdale, NJ: Lawrence Erlbaum Associates.

Witt, J. C., & Martens, B. K. (1983). Assessing the acceptability of behavioral interventions used in classrooms. Psychology in the Schools, 20, 510-517.

Witt, J. C., Martens, B. K., & Elliott, S. N. (1984). Factors affecting teachers' judgments of the acceptability of behavioral interventions: Time involvement, behavior problem severity, and type of intervention. Behavior Therapy, 15, 204-209.

Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is findings its heart. Journal of Applied Behavior Analysis, 11, 203-214.

Woods, D. W., & Miltenberger, R. G. (1995). Habit reversal: A review of application and variation. Journal of Behavior Therapy and Experimental Psychiatry, 26, 123-131.

Woods, D. W., & Miltenberger, R. G. (1996). A review of habit reversal with childhood habit disorders. Education and Treatment of Children, 19, 197-214.