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Article:

The impact of therapists' responses to resistance to change: a sequential analysis of therapist-client interactions in motivational interviewing.

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Abstract

Aims The study aims to examine how therapists trained in motivational interviewing respond to resistance and whether this has an impact on subsequent client speech.

Methods Fifty recorded Motivational Enhancement Therapy sessions were examined using a sequential behavioural coding method for speech. Client counter-change talk formed the baseline for coding and categorising subsequent therapist speech and the following client speech. Transitional analysis identified the probable occurrence of specific therapist and client utterances at each stage.

Results Following client expressed resistance or counter-change talk, motivational interviewing consistent therapist utterances were most commonly observed. A moderate to strong predictive relationship was found between MI-consistent therapist speech and subsequent client change talk. A moderate predictive relationship was found between therapist MI-consistent behaviours and client ambivalence. A moderate to strong predictive relationship was found between MI-inconsistent therapist speech and subsequent client counter-change talk and a weak negative predictive relationship was found between MI-inconsistent therapist speech and client expressed ambivalence.

Conclusions In the face of initial expressed resistance to change, MI-consistent therapist speech appears to increase subsequent client utterances regarding intentions to change drinking behaviour.

Short summary Recordings of alcohol treatment were examined for the identification of resistance to change, therapist responses and the nature of subsequent client utterances. Following client counter-change talk, motivational interviewing consistent therapist utterances were most commonly observed. MI-consistent therapist speech appears to increase subsequent client utterances regarding intentions to change drinking behaviour.

Introduction

Ambivalence about drinking and expressed reluctance to make changes are relatively well understood (Orford 2001) but remain central challenges in the treatment of problem drinking. Motivational Interviewing (MI) (Miller 1983) was developed as an alternative to the traditional confrontational style of addiction counselling; it was designed to manage resistance, address the challenge of resolving ambivalence and enable readiness to change. Miller hypothesised that the way the therapist spoke to the client could determine the degree of expressed resistance, or reluctance to change. Therapist speech consistent with an MI approach includes reflections of change talk and statements that emphasise the client's autonomy and control, whereas MI-inconsistent speech is defined as reflections of counter-change talk or confrontation of such utterances. Research into the effectiveness of MI demonstrates improved drinking outcomes compared to a confrontational approach (Miller et al. 1993) and equivalence when tested against other protocol-based treatments (Project MATCH Research Group 1998; UKATT 2005).

Process research examining the impact of different therapist utterances has shown that those defined as MI-consistent can elicit client speech containing expressions of desire, ability, need and reasons to change (change talk) (Glynn & Moyers, 2010; Moyers et al., 2007). Change talk increases the likelihood that the client then expresses determination to change (commitment talk) (Magill et al., 2010). This in turn increases the likelihood of actual behaviour change, such as reduced drinking or drug use (Amrhein et al., 2003; Gaume et al., 2013; Daeppen, Bertholet & Gaume, 2010; Gaume et al., 2010; Moyers et al., 2009). Gaume et al (2008) showed that higher levels of MI inconsistent speech, were less likely to be followed by CT and more likely to elicit client speech not linked to the alcohol topic. Brown et al. (2018) found the specific therapist MI consistent skills of open questions and complex reflections to be significantly and positively associated with client change talk, and complex reflections to be predictive of strong client commitment talk in successful alcohol treatment sessions.

Clients who express a high degree of counter-change talk are less likely to change their drinking behaviour following therapy (Amrhein et al 2003; Baer et al. 2008; Gaume et al. 2010; Gaume et al. 2013; Bertholet et al. 2010.) The MI approach suggests that if client counter-change talk is followed by MI-consistent therapist speech then the client is more likely to respond with change-talk, ambivalence, or neutral client speech. Barnett et al.

(2014) found that when therapists reframed the client's counter-change talk (CCT) into a positive reflection, there was a small but significantly positive effect on client language. Research focusing on how a therapist behaves in the presence of counter-change talk is rare but pertinent, since managing resistance is a central feature of the MI approach. The current study aims to explore therapist responses to client CCT, and to examine their impact on subsequent client utterances.

Material and Methods

Design

This is a secondary analysis of data from the multi-centre UK Alcohol Treatment Trial (UKATT; UKATT Research Team, 2001; UKATT Research Team., 2005a). The trial compared Motivational Enhancement Therapy (MET; an adaptation of MI) with Social Behaviour and Network Therapy for problem drinking. This pragmatic trial offered therapy to clients who met criteria for National Health Service intervention for their alcohol problems. Participant demographics are reported in UKATT (2005a). Participating therapists were screened for MI skills before training in MET and competence was assessed through ongoing supervision and monitoring of recordings (see UKATT, 2005b).

All sampling and analysis procedures received National Research Ethics (REC reference: 14/WM/0075) and LYPFT (Leeds and York Partnership Foundation Trust) NHS R&D approval (reference: 2014/478/L).

Procedure

Recordings were selected using a combination of random and purposeful sampling. 50 recordings were considered a sufficient and feasible sample size. These were selected by randomly screening from the MET arm, then excluding recordings where the sample already included 2 sessions from an individual client; which had poor sound quality; or where there were no examples of CCT. These criteria led to the exclusion of 40 recordings (from a total of 90 that were screened), mostly due to poor sound. The sample consisted of three-part conversational chains beginning with CCT (see Figure 1) involving a total of 28 MET therapists and 44 clients. The recordings were sampled from all 3 MET sessions (18 from session 1, 19 from session 2, 13 from session 3.) Baseline counter-change talk was identified as speech which indicates the client's present state of mind about not changing (i.e. the client's reluctance to change or their desire to maintain the status quo in relation to a specific target behaviour, in this case drinking).

FIGURE 1 ABOUT HERE

The dataset included 1570 speech categories representing 785 transitions (i.e. therapist – client utterance pairings). The coding of utterances was guided by the MI-SCOPE (Sequential Code for Observing Process Exchanges) manual (Martin et al., 2005) and from a detailed protocol designed for the study (Drage, 2015). Each audible utterance had one of 41 possible codes applied to it (see Supplementary Table S1). Multiple utterances were aggregated into one of seven categories. Therapist categories were reduced to three in order to assign them to an MI consistent (MICO), MI inconsistent (MIIN) or "other" category (TOther), which included speech not related to alcohol or alcohol related behaviour.

MI-Scope does not usually include a category for ambivalence and this has sometimes been resolved by measuring the strength of change talk (Amrhein et al., 2003; Gaume et al., 2016; Brown et al., 2018). The creation of an ambivalence category in the current study was in response to observation of the prevalence of utterances which contained both CT and CCT. The four client categories used in analyses were: change talk (CT), counter-change talk (CCT), ambivalence (AMBIV) and Client-Other (CLOther).

Reliability

Reliability of coding was assessed twice. An assessment of the reliability of identification of CCT was performed, with a MI-expert rating 3 recordings to identify CCT. In total, 137 examples of CCT were found in these tapes, and any initial disagreement over categorisation was resolved with reference to the MISCOPE and the supplementary coding protocol (S1) specific to this study.

The reliability of coding of the subsequent utterances was tested by examining agreement between the lead researcher and an independent, experienced MI researcher in 5/50 recordings (10%): Cohen's kappa indicated strong agreement for therapist speech (k=.67, p<0.001 and client speech (k=.70, p<0.001). Overall, agreement did not fall below 71% for therapist utterances and was not lower than 73% for the client utterances, indicating acceptable agreement (Landis & Koch, 1977; Krippendorf, 1980).

Analyses

The client and therapist speech categories were analysed by GSEQ 5.1 (Generalised Sequential Analysis; Querier, Bakeman & Quera, 2011). The analysis first calculated relative frequencies of client and therapist speech categories.

In investigating the transitions it was predicted that: a) Following initial CCT, when the therapist responds with MICO, the subsequent client response is more likely than chance to be CT; b) Following initial CCT, when the therapist responds with MIIN, the subsequent client response is more likely than chance to be CCT.

Analysis included both conditional probability (CP) (the probability of an event *b* occurring after a given event *a*) and odds ratios (OR) (the odds of an event *b* occurring after event *a* divided by the odds in the absence of *a*). Conditional probabilities are therefore influenced by how often the speech category occurs, whereas odds ratios allow an understanding of the likelihood of a speech act following the therapist's intervention that accounts for the total number of those utterances.

Results

Relative frequencies of speech categories

Following CCT, MI-consistent (MICO) was the most common therapist speech category, (relative frequency (rf) = 0.64). MIIN utterances were less common (rf=0.26) and Therapist other (TOther) the least common (rf = 0.10). The most common client speech category following therapist speech was CCT (rf=0.36) then AMBIV (rf = 0.28) followed by CLOther (rf=0.24). Change-talk (CT) was the least common (rf=0.12).

Transitional Probability analysis

The probability analysis revealed that the strongest predictive relationship overall was between therapist MICO and client CT behaviour (Table 1). CT was over 3 times more likely than by chance to follow therapist MICO behaviour (OR (95% CI) =3.7 (2.05, 6.63), CP= 0.16, p<0.001). Client ambivalence (AMBIV) was twice as likely than by chance to follow MICO (OR (95% CI) =2.04 (1.46, 2.96), CP=0.32, p<0.001). CCT was 53% less likely to follow MICO (OR (95% CI) =0.47 (0.35, 0.63), CP= 0.3, p<0.001), and so is the least likely transition following MICO.

The most likely client speech to follow therapist MIIN behaviour was further CCT (OR= 2.64 (1.90, 3.67), CP= 0.54, p<0.001). AMBIV was 48% less likely than by chance to follow MIIN (OR= 0.52 (0.35, 0.77), CP= 0.19, p< 0.001) and CT was 65% less likely than by chance to follow MIIN (OR=0.35 (0.18, 0.67), CP= 0.06, p<0.001)

When the therapist used neutral speech (TOther), the client was twice as likely to follow with further neutral speech (CLOther; OR=2.73 (1.74, 4.46), CP= 0.4, p<0.001). CT was 75% less likely than by chance to follow TOther behaviours (OR=0.25 (0.08, 0.80), CP= 0.4, p=0.01).

TABLE 1 ABOUT HERE

Discussion

In this study the most common therapist response to client resistance was motivational interviewing consistent. Therapist practice made a difference in the following ways: where MI consistent behaviour was adopted in response to client counter-change talk, it was three times more likely than chance to be followed by change talk, and two times more likely than chance to be followed by ambivalence – deemed to be progress in comparison with counter-change talk. These findings are particular significant given the relative infrequency of change talk and ambivalence in the sample of utterances.

Where therapists responded to CCT with MIIN, the client was more likely to respond with further CCT and less likely to respond with CT or Ambivalence. Where the therapist responded to CCT with unrelated content (TOther), the client was more likely to respond with neutral or unrelated content. These findings suggest emphasis in training and practice should be on the importance of staying focussed on the topic of change in the addictive behaviour in a way that is consistent with the practice of motivational interviewing.

Some limitations of the current study should be noted. The sample of 50 recordings was analysed by a single researcher. An increased sample size would enable Multilevel Modelling (Snijders, 2011), an analysis procedure that could have accounted for variance in CCT frequency across clients, therapist competence, session number and site. Furthermore, this approach would have controlled for the autocorrelation of the sequential data, which is a potential weakness with the current analysis. Despite the limited sample size, the findings were strong and consistent with the hypotheses. Sequential analysis is able to reveal

potential relationships between speech events, and the focus on and examination of counter-change talk, which is a central challenge in the treatment of addictive behaviour, is a strength.   The extraction of counter-change talk as the starting point of the investigation necessarily precludes understanding the therapist and client factors that might have invoked the CCT and their impact on subsequent chains of dialogue. Further investigation of these factors may have important implications for training therapists and could be the subject of another investigation.

Given the centrality of ambivalence in the MI literature, it is perhaps surprising that ambivalence has not been coded before now. In this study it was found to be a useful way of capturing the prevalence of combined expressions of change talk and counter-change talk. The creation of the category of ambivalence allowed us to capture an important (though not essential) stepping-stone to change. It is proposed that aggregating speech codes into categories enabled the analysis of behaviour patterns reflecting overall therapist-client interaction in a way that advances existing process research.

Conclusion

Feelings of conflict or ambivalence and the expression of reluctance to change are a core challenge in the treatment of addictive behaviours. This study focussed on how therapists responded to resistance, and how they might change the tone and direction of a session. The findings add to the existing literature on MI therapists' ability to adhere to motivational interviewing protocol in the face of client reluctance to change, and highlight the potential for these therapist behaviours to move clients towards change.

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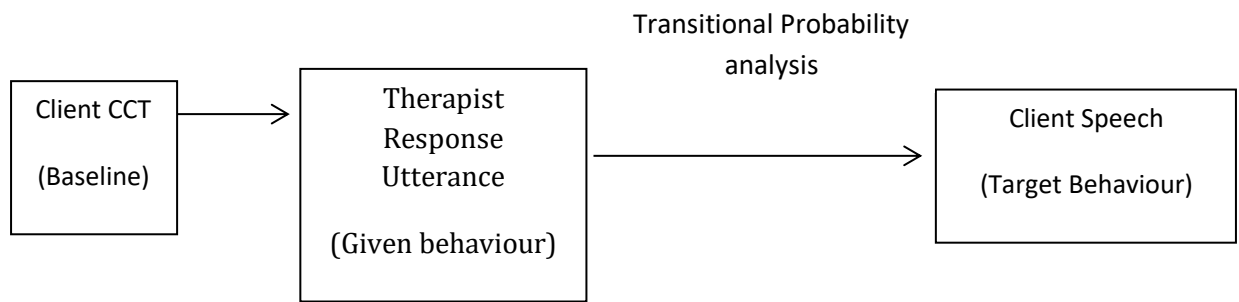
Figure 1. The utterance chain

Table 1. Transitional probabilities between therapist and client speech categories

Given	Target	Joint Frequency	Expected Frequency	Conditional Probability	Odds Ratio	95 % Confidence Interval		p Value
						Upper	Lower	
CCT-MICO	CCT	151	182.89	0.30	0.47	0.35	0.63	<0.001
CCT-MICO	AMBIV	163	138.77	0.32	2.04	1.46	2.96	<0.001
CCT-MICO	CLOther	107	119.58	0.21	0.69	0.49	0.96	0.03
CCT-MICO	CT	81	60.75	0.16	3.70	2.05	6.63	<0.001
CCT-MIIN	CCT	107	72.50	0.54	2.64	1.90	3.67	<0.001
CCT-MIIN	AMBIV	37	55.01	0.19	0.52	0.35	0.77	<0.001
CCT-MIIN	CLOther	44	47.41	0.22	0.88	0.60	1.29	0.51
CCT-MIIN	CT	11	24.08	0.06	0.35	0.18	0.67	<0.001
CCT-TOther	CCT	28	30.6	0.33	0.86	0.54	1.41	0.53
CCT-TOther	AMBIV	17	23.22	0.20	0.64	0.34	1.06	0.11
CCT-TOther	CLOther	36	20.01	0.43	2.73	1.74	4.46	<0.001
CCT-TOther	CT	3	10.17	0.04	0.25	0.08	0.80	0.01