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Author post-print (accepted) deposited by Coventry University's Repository

Original citation & hyperlink:

Hilton, C & Johnston, LH 2016, 'Has Motivational Interviewing fallen into its own Premature Focus Trap?' *International Journal for the Advancement of Counselling*, vol 38, no. 2, pp. 145-158

<https://dx.doi.org/10.1007/s10447-016-9262-y>

DOI 10.1007/s10447-016-9262-y

ISSN 0165-0653

ESSN 1573-3246

Publisher: Springer

The final publication is available at Springer via <http://dx.doi.org/10.1007/s10447-016-9262-y>

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Hilton, C. E., Lane, C. & Johnston, L. H. (2016). Accepted International Journal for the Advancement of Counselling (April 2016).

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Abstract

Since the initial conception of the behaviour change method Motivational Interviewing, there has been a shift evident in epistemological, methodological and practical applications from an inductive, process and practitioner-focussed approach to that which is more deductive, research-outcome, and confirmatory-focussed. This paper highlights the conceptual and practical problems of adopting this approach, including the consequences of assessing the *what* (deductive outcome-focussed) at the expense of the *how* (inductively process-focussed). We encourage a return to an inductive, practitioner and client-focussed MI approach and propose the use of Computer Assisted Qualitative Data Analysis Systems such as NVivo in research initiatives to support this aim.

Key Words: Motivational Interviewing; Qualitative methodologies; NVivo; Inductive Research.

Introduction

The current paper critically explores the historical approaches utilised to advance our understanding of the application and efficacy of the behaviour change counselling method Motivational Interviewing (MI; Miller & Rollnick, 2012). Specifically, the shift in epistemological, methodological and practical applications from the initial conception of MI - an inductive, process and practitioner-focussed approach - to that which is more deductive, research-outcome, and confirmatory-focussed is presented. We present the reasons as to why there may have been a shift in research that is predominantly concerned with demonstrating measureable outcomes (outcome-focussed) or that which aims to confirm what it is that is thought to already be known about the method (confirmatory-focussed). The conceptual and practice-based consequences of this shift are critiqued with a particular emphasis on the subsequent impact of exploring the *what* (deductive, outcome and predominantly confirmatory-focussed) at the expense of the *how* (inductively process-focussed).

In this respect we argue that MI may have fallen into its own *premature focus trap* and we present a number of challenges that arise both conceptually and practically as a consequence. These include difficulties with better understanding the micro qualities of just *how* and *why* MI may be effective and if this differs across contexts. For example, how might the application of MI differ when supporting the reduction or cessation of an ill-health behaviour, such as alcohol consumption or smoking, rather than encouraging a health promoting behaviour, such as physical activity or regular eating? A premature deductive outcome/confirmatory focus also has consequences for how the level of practitioner proficiency and the skill development of trainee practitioners is assessed (i.e., a lack of focus upon

interpersonal processes) – a common problem across therapeutic approaches (Roth & Fonagy, 2005). In the current paper, we present alternative approaches to help avoid this premature and arguably detrimental approach to attempting to understand the application of MI. Specifically, the role of constructionist approaches to help better understand the subtle complexities of MI-consistent conversations and therapeutic engagement, in addition to supporting skill acquisition and proficiency in the method, are addressed. Finally, the role of Computer Assisted Qualitative Data Analysis Systems (CAQDAS) such as QSR NVivo (www.qsrinternational.com) is discussed as a potential tool to support this process.

Motivational Interviewing (MI) is a complex counselling method that by its very nature can be difficult to define. The method identifies as a person/client-centred approach typically associated with the Rogerian understanding (See Rogers, 1980). However, MI is also typically associated with helping individuals resolve feelings of ambivalence about change behaviour (Miller & Rollnick, 2002). Most recently the method has been described in its simplest terms as “a collaborative conversation style for strengthening a person’s own motivation and commitment to change” (Miller & Rollnick, 2012, p. 12). The original conceptualisation of MI emerged from an inductive process of analysing clinical practice within the addictions field (see Miller 1983; Miller & Rollnick, 1991). Essentially, this inductive process involved groups of Norwegian Psychologists at the Hjeltestad Clinic near Bergen evoking (from Dr Miller) his implicit knowledge from his *procedural*, *reflective* and *declarative* knowledge systems within his therapeutic practice (see Bennett-Levy, 2006). In essence, this reflective process helped Dr Miller to explicitly articulate decision-making rules that he had developed without a level of prior conscious cognitive awareness within his procedural (if-then) knowledge system. The existing *Implicit*

Learning Theory literature suggests that when expertise is developed in this way (i.e., to become Declarative Knowing-that Knowledge) then skills-based expertise is less likely to break down under conditions of high cognitive demand (see Masters, 1992).

Since its early conception (Miller, 1983), MI has evolved as a behaviour change counselling method. What started as a method primarily developed to assist with reducing drug and alcohol behaviours (cf., Compton, Monahan, & Simmons-Cody, 1999; Mitcheson, Bhavsar, & McCambridge, 2009) has subsequently been used to promote healthy behaviours, such as increases in physical activity (cf., Gourlan, Sarrazin, & Troulloud, 2013), healthier eating (cf., Thorpe, 2003) and assisting with the management of chronic illness (cf., El-Mallakh, Chilebowy, Wall, Myers, & Cloud, 2012; Linden, Butterworth, & Prochaska, 2010), as well as reducing unhealthy choice behaviours such as smoking (cf., Bredie, Fouwels, Wollershelm, & Schippers 2011; Efrainsson, Fossum, Ehrenberg, Larsson, & Klang, 2012).

The rise in ill-health choice behaviours such as physical inactivity (DH, 2011) have led to an increase in investigations into approaches that are most likely to elicit sustained changes towards healthier behaviours. Evidence-based practice is considered central to healthcare and often drives the necessity to demonstrate desirable patient outcomes that are also economically viable and sustainable. It is reasonable to assume that in the quest for demonstrating efficacy within an outcome-focussed environment, MI may have fallen foul to favouring methods of research that attempt to demonstrate impact and outcomes at the detriment of more fully understanding the complexity of the interpersonal therapeutic processes involved. MI stipulates that focussing too early on the behaviour change outcome (e.g., weight loss) without first fully exploring the multitude of physiological, psycho-social and environmental factors that impact upon the change behaviour, runs the risk of

damaging the therapeutic alliance and inhibits the change process (Miller & Rollnick, 2002). An early focus on action and premature planning in this way is often termed the *premature focus trap* (Rollnick, Miller, & Butler, 2008). We consider that this has critical relevance not only for the applied practice of MI but for better understanding the micro detail and *intrinsic processes* involved in supporting individuals through changes in behaviour and in what way practitioners develop their skills. What follows is an exploration of the common approaches to knowledge acquisition (epistemology) and how these approaches translate into scientific enquiry (methodology), but with specific reference to the limitations of purely confirmatory and/or outcome-focussed approaches for the development and understanding of the MI method.

Premature Outcome Focus – Assessing Outcome without Process

During the initial development of MI, Miller's inductive process of externalising and explicitly outlining his heuristic (implicit) knowledge, developed from years of clinical practice, helped him to begin to articulate the original principles and strategies of *doing* MI (i.e., the *what, when, why, and how* of MI) within the addictions field (i.e., the *who and where*) (Miller, 1983). This approach is consistent with a constructionist epistemology whereby we would challenge the view that knowledge is based upon objective and unbiased observation (Burr, 2015). This approach is also consistent with an inductive and qualitative methodology that assumes that there is no single universal reality but that several realities may co-exist and that they are related to the context in which they occur (Braun & Clarke, 2013). However, since these initial conceptions of MI, a practitioner-led, constructionist, inductive and process-focussed approach to understanding the approach has been replaced with research that is distinctly deductive, confirmatory, and outcome-focussed (cf., Burke, Arkowitz, &

Menchola, 2003; Foxcroft, Coombes, Wood, Allen, & Santimano, 2014; Lindson-Hawley, & Thompson, 2015; Rubak, Sandbaek, Lauritzen, & Christensen, 2015). Whilst it is accepted that there is value in establishing the outcome efficacy of MI, a recent systematic review of the approach in regard to smoking cessation (Rubak et al. 2015) highlights the problematic nature of a quantitative only approach to understanding MI. Specifically, the authors concluded that variations in study quality, treatment fidelity and between-study heterogeneity meant that the results of the studies examined should be interpreted with caution.

This epistemological and methodological paradigm is not exclusive to MI research. Such positioning is also reflective of the growing trend in the use of behaviour change taxonomies within health interventions, whereby practitioners are advised of a desirable checklist of skills that are likely to elicit behaviour change (cf., Abraham & Michie, 2008; Michie, Ashford, Sniehotta, Dombrowski, Bishop, & French, 2011) rather than a focus on the *process* and *how-to* of the complex skill that is supportive of change-behaviour. The limitations of this approach for psychological enquiry have been consistently highlighted within the literature in the Clinical Psychology (practice-based) domain, where the need for a formulation-based (case conceptualisation) approach has been called for in helping to understand the predisposing, precipitation, perpetuation, and protective factors associated with a client's presenting problems and treatment plans (see Kuyken, Padesky, & Dudley, 2009).

Similarly, within the research methods literature, Baker (1992) asserted that a positivistic approach to research replaces human participants with mere variables and that "as psychology evolved in the 20th century, its practitioners manifested an almost neurotic need to be seen as scientific" (Baker, 1992, p. 13). Psychology has often been

deemed as a discipline that should seek to identify that which is objective, consistent and measurable – a ‘universal psychological reality’ (Braun & Clarke, 2013). Coupled with the growing demand for health care practice to be evidence-based, it is not difficult to understand how MI has fallen into the same reductionist trap in this respect. However, there are clear implications for this, more especially because there is a cyclical relationship between research, policy and practice. If the research utilised to inform policy formulation and subsequent behaviour change practice is limited and/or ill-fitted, it follows that these limitations will filter into clinical practice. This is somewhat ironic given the origins of the conceptualisation of MI. As mentioned previously, this is magnified when we consider that since the initial conception of MI, the continued utilisation of an inductive and process-related research framework from the perspective of the client and practitioner to help further develop the method have been distinctly lacking.

Historically there has been a lack of credibility of qualitative *process* research and consequently a lack of funding. It is important to recognise that efficacy or explanatory trials determine whether an intervention produces the expected result, whilst effectiveness or pragmatic trials measure the degree of beneficial effect under ‘real world’ clinical settings (Gartlehner, Hansen, Nissman, Lohr, & Carey, 2006). The randomized controlled trial (RCT) approach to research is often favoured as the *gold standard* for assessing the efficacy of health-related interventions, and it is likely that this has also contributed to the lack of funding for process research across a range of therapeutic approaches (see Roth & Fonagy, 2005). However, it has consistently been recognized that the RCT approach is ill-fitted to psychological research (Cartwright, 2010; Marshall & Marshall, 2007; Simon, 2001), predominantly because an RCT cannot capture the organic and complex processes involved in the study of

human behaviour. The challenges of the approach in demonstrating meaningful outcomes within physical activity behaviour change contexts, for example, has also been highlighted (Gidlow, Johnston, Crone, & James, 2008). Arguably this is particularly pronounced in studying an interpersonal dynamic between two or more individuals, as is the case within psychological therapies.

The quality of the therapeutic relationship between client and practitioner, often termed the therapeutic alliance, has been consistently recognised as critical to predicting successful therapeutic outcomes (cf., Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000; Norcross, 2005). Process-related considerations, such as the importance of acknowledging the role of practitioner interpersonal style to the behaviour change process, is increasingly recognised and communicated within the scientific literature (cf., Hagger & Hardcastle, 2014; Moyers, 2014). However, this vital contribution to the change process has arguably been overlooked within recent behaviour change guidance in the UK (NICE, 2014). This is particularly concerning given that such guidance is often used to shape service delivery and impacts heavily upon research funding. Within MI, the collaborative and empathic style of a typical MI consistent conversation (often termed as *spirit*) is central to supporting people through change. A conversation lacking in *spirit* is not MI - regardless of the techniques employed during a consultation intended to be MI-consistent (Miller & Rollnick, 2002). Furthermore, MI has been consistently described as a *style* of therapy rather than a set of particular techniques (cf., Rollnick & Miller, 1995). Practitioner interpersonal skills, such as cooperation, disclosure and expression of affect, have been found to enhance client engagement within MI consultations (Moyers, Miller, & Hendrickson, 2005; Moyers, 2014). Consequently, whilst it is acknowledged that such an alliance, and what Rogers (1980) would term as ‘a way of being’, is challenging to

measure, it is difficult to comprehend how and why research intended to better understand the behaviour change process continues to ignore these factors.

Increasingly, researchers are recognising that little is known about the processes of change in MI (Apodaca & Longabaugh, 2009), and calls for more process-related work from the perspective of both the client and the practitioner have been made (Jones et al. 2015). Moreover, understanding what MI *is* and *how* to implement MI skilfully are two fundamentally different things. The limitations of approaching counselling skill acquisition and development from a purely knowledge-based (or cognitive) perspective have been highlighted previously by Bennett-Levy (2006), who articulated the importance of the development and refinement of skills through experience, feedback and reflective practice. To suggest that behaviour change counselling skills can be refined through a cognitive level of knowledge and conceptual learning alone is akin to proposing that a skilled athlete can perform at a consistent level simply by following a list of key tasks, without the necessity for coaching, mentoring, training, practice experience and reflection. In similar terms, the preparation of a meal would be somewhat limited if the chef were only to know what ingredients were required without any iterative experience of preparing the particular meal previously. The importance of the role of iterative reflection for therapeutic skill development more generally, and also during (in action) and following supervision (on action), is something that has been consistently highlighted as being integral to the skill enhancement process (cf., Bennett-Levy, 2003, 2003a; Johnston & Milne 2012; Kolb, 1984; Schon, 1986; Vygotsky, 1978).

The Research Evidence-Base for the Conceptual Development of MI: Confirming the unconfirmed

In more recent publications (e.g., Miller & Rollnick, 2012) and in recent presentations by Miller and Rollnick regarding developments of the method of MI at the Motivational Interviewing Network of Trainers (MINT) conferences (2012; 2013; 2015); we noted that there seems to be a lack of clear empirical evidence to support the rationale for the recently introduced (Miller & Rollnick, 2012) ‘Four Process Model’ specifically. We also observed that there is lack of clarity regarding the rationale and evidence-base for removing the notion of psychological resistance from MI practice. In addition, we consider that some of the methodological limitations of the research underpinning MI conceptual developments, in particular *change talk*, may have been overlooked, and the inherent affiliated considerations of the diverse nature of language use have been ignored.

With respect to *change talk*, practitioners are advised to skilfully elicit, listen for and respond to the client’s verbal expression of their *desires*, *abilities*, *reasons* and *need* to change, alongside considerations of *commitment* level, how ready or prepared an individual is to engage in change (*activation*) and whether an individual is ‘*taking-steps*’ towards change, for which the acronym DARN-CAT is often used (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003)). Additionally, we are advised that *sustain talk* comprises the kind of language a person may use to justify maintaining their current ill-health behaviour and that such language also falls into the categories of DARN. However, in this case, the language used would be that which reflects the *desires*, *abilities*, *reasons* and *need* to sustain the behaviour (Miller & Rolnick, 2012). A further recent development in the method is the notion of *discord*, which reflects a breakdown in the therapeutic alliance. Examples of *discord* include the client using defending language, or expressing anger towards the practitioner (Miller & Rolnick, 2012). Whilst the notions of *sustain talk* and *discord* make intuitive sense, there

appears to be a lack of empirical evidence to support the rationale for the addition of these terms both conceptually and practically into our understanding of the MI method. Additionally, to date, the methodological approach employed to explore and better understand *change talk* is ill-fitted to this aim.

One particular study seems to have been particularly influential upon how processes within MI are conceptualised and measured. Paul Amrhein and colleagues explored the relationship between client talk within a single MI session and the proportion of days abstinent from substance use in 84 participants (Amrhein et al., 2003). They used a qualitative coding frame to identify client *change talk* within the categories of *desire*, *ability*, *reason*, *need*, *readiness* and *commitment* in relation to changing or not changing current substance use. These were numerically rated on a scale from -5 (extremely committed to no change) to +5 (extremely committed to change). Each MI session was divided into tenths (deciles) for analysis, to examine changes in the strength of change talk as the session progressed. Participants were grouped according to their average proportion of days abstinent through a 3 to 12 month follow-up period (into ‘maintainers’, ‘changers’, ‘strugglers’ and ‘discrepants’). ‘Maintainers’ and ‘changers’ demonstrated a significantly higher strength of verbal commitment to change, in comparison to ‘strugglers’ and ‘discrepants’. Proportion of days abstinent at follow-up was predicted by the strength of client commitment language scores at the 7th and 10th deciles of their MI session, and commitment language was predicted by client expression of desire, ability, reasons and need for change.

There are a number of problems regarding the quality of the Amrhein et al. (2003) study, which draw into question some of the conclusions being made from the findings. First, an assumption is made that the constructs of *change talk* and *sustain*

talk are functioning in the way they are thought to function within MI (i.e., that it is indicative of a cognitive or affective process in relation to change). In contrast to the inductive approach taken by Miller during his time in Norway, a deductive approach has been applied to the qualitative coding frame used in this study, in so far as specific kinds of talk, based upon hypothesis-driven questions, were focussed upon during these interactions, to the exclusion of wider processes. This is contrary to alternative approaches to linguistic analysis, such as discourse analysis. These kinds of approaches seek to establish *how* and *why* language is being used in particular ways, which discursive resources are drawn on by the speakers, and the kinds of social effects that arise from using language in this way (cf., Potter 2002; Potter and Wetherall, 1987, 2012). Indeed, one study using a discursive psychological framework found instances where what is understood within the MI field to be *change talk* served a range of functions (Lane, 2012). This included: to propose action, to enhance the feasibility of the client's proposed action, to persuade, to challenge the therapist's position, and to resist the positions in relation to changing drinking opened up for the client by the therapist. These findings suggest the possibility that the way language use within MI is currently being categorised may not be fully or accurately capturing important aspects of interactive processes.

Second, the design of the Amrhein et al. (2003) study raises questions with regard to the generalizability of their findings, given that they were generated from just 84 participants in a given social and cultural setting. Further, the data were subjected to secondary analysis and not purposively gathered in order to investigate the research questions being asked. The groups for comparison were compiled based on their final drinking outcomes, which clearly violates the assumption of random allocation made by statistical tests. Although no demographic differences were

observed between these groups, this greatly increases the potential for regression to the mean effects, Type 1 error and other confounding factors that have not been controlled for to influence the results reported by this study.

Despite these weaknesses, it seems that the findings were accepted uncritically by several research teams. Two skill assessment measures (MITI, Moyers et al. 2014; MISC, Miller et al. 2008) that are the most widely used within MI research adopted the *change* and *sustain talk* categories identified in the Amrhein et al. (2003) study and began linking them to outcomes. In a review of other studies of language use within MI, which adopted the categories from the Amrhein et al. (2003) study as variables of analysis in relation to outcomes, Lane (2012) highlighted that each study included in the review reported different outcomes with regards to the sub-categories of *change talk* seemed to be most important in relation to client change. Yet, many of the studies reviewed, some of which lend support to the Amrhein et al. (2003) findings, were also of poor methodological quality. Several studies looked at linguistic data from one session of a multiple MI session intervention (Engle, Macgowan, Wagner, & Amrhein, 2010; Perry & Butterworth, 2011; Walker, Stephens, Rowland, & Roffman, 2011; Moyers, Martin, Christopher, Houck, Tonigan, & Amrhein, 2007), most relied upon self-reported client outcomes (Baer, Beadnell, Garrett, Hartzler, Wells, & Peterson, 2008; Walker et al., 2011; Daepfen, Bertholet, Gmel, & Gaume, 2007; Gaume, Gmel & Daepfen, 2008; Gaume, Gmel, Faouzi & Daepfen, 2008; Gaume, Gmel, Faouzi & Daepfen, 2009; Moyers, Martin, Houck, Christopher, & Tonigan, 2009; Strang & McCambridge, 2004), and most excluded participants lost to follow-up from the analyses (Baer et al., 2008; Hodgins, Ching & McEwen, 2009; Bertholet, Faouzi, Gmel, Gaume & Daepfen, 2010; Walker et al., 2011; Perry & Butterworth, 2011; Moyers et al., 2007; Engle et al., 2010; Daepfen et

al., 2007; Gaume, Gmel & Daeppen, 2008; Gaume, Gmel, Faouzi & Daeppen, 2008; Gaume, Gmel, Faouzi & Daeppen, 2009). Many also relied upon the secondary analysis of data, rather than studies designed to test specific hypotheses about language categories (Baer et al., 2008; Bertholet et al., 2010; Catley, Harris, Mayo, Hall, Okuyemi, Boardman, T., et al., 2006, Daeppen et al., 2007; Engle et al., 2010; Feldstein-Ewing, Filbey, Sabbineni, Chandler & Hutchison, 2011; Gaume, Gmel & Daeppen, 2008; Gaume, Gmel, Faouzi & Daeppen, 2008; Gaume, Gmel, Faouzi & Daeppen, 2009; Hodgins et al., 2009; Magill, Apodaca, Barnett, & Monti, 2010; Moyers, Martin, Manuel, Stacey, Hendrickson, & Miller, 2005; Moyers & Martin, 2006; Moyers et al., 2007; Moyers et al., 2009; Perry & Butterworth, 2011; Strang and McCambridge, 2004; Vader, Walters, Houck, & Field et al., 2010; Walker et al., 2011).

Consistently through this body of literature, there is a focus on the ‘what’ rather than the ‘how’ of language use in MI. The function of utterances is assumed from their grammatical structure and form, and quantified by coding instruments. Arguably, this reflects a *premature focus* within the evidence-base as it currently stands. Rather than making detailed independent observations of language in MI and then generating theories based on those observations, research appears to be focused on confirming hypothesised linguistic mechanisms and MI constructs. The function of an utterance can differ from its grammatical structure, yet this assumption has still been made. Indeed, the inconsistent findings regarding which language variables seem to link with particular outcomes suggests that existing coding measures may themselves require further development. There has been limited exploration of paralinguistic variables such as intonation, stresses and pauses, which are likely to be inherently important in relation to the practice of MI (Carr, 2013).

The conclusions that can be drawn about the relationship between language use in MI and outcomes are, therefore, incredibly limited. Yet they appear to be being accepted uncritically as confirmation that this is *how* MI works. There is relatively little exploration of other potential mechanisms that may be important through inductive enquiry of clinical encounters across a range of contexts and cultures. Arguably, we have moved away from inductive studies of clinical practice prematurely. By assimilating 'data' from academic studies rather than clinical practice, we have lost the focus on *processes* in MI and almost exclusively focussed on key procedural tasks (i.e., if-then rule-based algorithms) and this runs the risk of turning MI into a manualised approach akin to *Therapy by Numbers*.

Motivational Interviewing Skill Measurement

Arguably, the research-informed practice reciprocal trap described earlier, has led to an over-reliance upon reductionist tools such as the MITI (Moyers et al., 2010, 2014) to support MI practitioner skill development and training. This is particularly poignant given that in an earlier version of the tool (version 3.3.1), the authors themselves advised that the measure was not designed for such purpose (Moyers, Manuel, Miller, & Ernst, 2010). Indeed, they previously suggested that the Motivational Interviewing Skills Code (MISC) (Miller, Moyers, Ernst, & Amrhein, 2008) may be better suited to this aim - “the MISC is typically more useful in conducting detailed process research investigating the critical elements and causal mechanisms within motivational interviewing. It cannot be replaced by the MITI for these purposes” (Moyers et al. 2010, p. 2). The most recent (version 4.0) of the MITI suggests that the tool is suitable for assessing treatment integrity in clinical trials, a method of providing feedback on skill assessment in non-clinical settings and contributing to selection criteria for

training and hiring. Whilst the MISC utilises Likert-type rating scales and, therefore, may also be subject to the same reductionist challenges as any other scale (i.e., reducing our understanding of attitudes and beliefs to a data set of numbers), it is generally unknown why the MISC is not more fully utilised within skill assessment and feedback in training. One may speculate that this is due to time and cost implications.

There is interest in establishing what the ‘core ingredients’ of MI are that make the method a successful approach in supporting behaviour change, and this has been recently demonstrated in the literature (e.g., Dobber et al. 2014). However, Dobber and colleagues adopted a psychometric approach in attempting to understand this vital aspect of MI and based their findings upon a review of existing MI scales. It is, therefore, subject to the same reductionist limitations as described earlier. Arguably, if we are to avoid the inherent reductionist data challenges generated from the use of scale data to assess MI skill acquisition or the key ingredients that contribute to supporting the behaviour change process, a qualitative inductive approach would be more suitable. It is not uncommon for a qualitative approach to be employed in instances where a deeper and broader understanding of phenomenon are required, although thus far MI research and training practice has been slow to acknowledge this. It appears that in attempting to demonstrate outcome efficacy, MI has overlooked the potential value of an inductive approach to support explorations of critically important process-related factors that are much more reflective of Miller’s early work and are an approach to encouraging long-term behaviour change that has been encouraged recently (cf., Hilton, Trigg & Minitti, 2015). Consequently, what follows is an exploration of how rigorous qualitative approaches to research may

support endeavours to better understand the 'how to' of MI and the assessment of practitioner skills.

Shifting Focus to Avoid the Premature Focus Trap

Counselling skills are fundamentally linked to the use and exchange of language and non-verbal cues (NVCs) (Hall, 2005). Therefore, it seems fitting that any assessment of the processes of engagement, focus, evocation, and planning between client and therapist reflect the consideration of: *what* was said, *when*, *how*, *where*, *why* and by *whom* alongside the NVCs used to support the exchanges. Qualitative approaches to research predominantly utilise language, images and sounds as data (Braun & Clarke, 2013). Silverman (2000) has reported that the elements of what is often referred to as a qualitative research paradigm include: a) the analysis of data that are not reducible to numbers, b) data collection that more closely resembles real-world applications rather than that which is artificially controlled for as is the case with experimental designs, c) a focus on meanings rather than outcome measures, d) recognition and acceptance of the subjective role of the researcher within the research process (which will be addressed again later) and, critically, e) qualitative approaches often use inductive theory-generating research, which is much more akin to the early conceptions of MI. Such approaches have the capacity to assess the use of NVCs during interpersonal and therapeutic exchanges and are, therefore, particularly well suited to better understanding the inductive, organic process-related aspects of MI.

Qualitative data are often generated via the means of interview, group interview (focus group), observation, field notes, surveys (Braun & Clarke, 2013) or more naturally occurring data such as the use of media publications. More recently, the expansion in technology has created opportunities for the use of Internet and

social media sources for the purposes of research (e.g., Hilton). Approaches to data analysis are equally as diverse, although common across all approaches is the requirement for the researcher(s) to develop intimacy with the data, recognise the role of their own attitudes, beliefs, experiences and values within the research process, uphold a commitment to the transparency and accuracy of data interpretations and engage in what is often an iterative analytical process such that the participants/data source are represented with depth/breadth and genuineness of interpretation rather than the generalisability of findings (see Barbour, 2001; Bringer, Johnston, & Brackenridge, 2004; Hutchison, Johnston & Breckon, 2010; Koch, 2006; Krefting, 1991).

Core approaches to study design and data analysis comprise Thematic Analysis (Guest, MacQueen & Namey, 2012), Grounded Theory (Glaser & Strauss, 2009), Discourse Analysis (Gee, 2014), Interpretive Phenomenological Analysis (IPA) (Smith, Flowers, & Larkin, 2009), and data are interpreted with (deductive) or without (inductive) the use of theoretical underpinnings. In each case it is typical that primary data are coded and commonalities are grouped together in themes and subordinate themes (e.g., Bazeley, 2013). The resultant themes reflect common patterns in the language or data medium (e.g., images/ NVCs) that are considered a transparent and in-depth representation of meanings contained within the data. As mentioned previously, central to this representation is the acknowledgement of the impact of the subjective interpretation of the data by the researcher(s) and, contrary to quantitative approaches, this inevitability is embraced through the process of critical reflexivity (see Etherington, 2004; Finlay & Gough, 2003).

Qualitative approaches are well suited to MI-related research because they have the capacity to address the complexities of human interaction in a manner that

quantitative approaches to research cannot. For example, Discourse Analysis specifically focuses on critically exploring how people use language to construct meaning (reference?) and yet it has not been utilised in advancing our understanding of the complex processes involved in MI-related therapeutic engagement and in better understanding *change talk*. There are examples of qualitative approaches to MI-related research within the literature, although they tend to focus more on reporting patient (e.g., Brobeck, Odencrants, Bergh, & Hildingh, 2014) or practitioners' experiences (e.g., Wiley, Irwin, & Morrow, 2012) of a MI consultation rather than a critical exploration of the method itself. A recent study has utilised a process-focussed Grounded Theory approach to understanding clients' perspectives of a MI consultation (Jones, Latchford & Tober, 2015). However, if we consider that a MI-consistent consult is often described as a collaborative *dancing partnership* between the client and practitioner (Rosengren & Wagner, 2001), research that reflects this underpinning philosophy of MI with the depth and breadth of understanding that is required has yet to be conducted. Therefore, we have an emerging body of evidence that reflects the respective experiences of *either* the client *or* the practitioner, but very little about the collaborative partnership itself.

Historically, qualitative data handling and analysis was undertaken without the use of computer software and very little was written about what qualitative researchers actually did with their data (see Johnston, 2006, for a critical review of the impact of software on method). Over the last twenty-five years there has been a steady introduction of software designed to support the process (e.g., ATLAS.ti, MAXQDA, NUD*IST, and NVivo - see Silver & Lewins, 2014, for a review of software). Computer software programmes were designed to help researchers consolidate large volumes of data and support the analytical process with various data

coding functions. Most recently, NVivo (v.11) has the capacity to integrate different data sources and mediums, such as text, images audio-visual material and Internet data, and the analysis capabilities provide researchers with a breadth of interpretative opportunities. Such opportunities reduce the risk of an over-reliance on a written transcript, which is problematic because so much of the linguistic subtleties are lost in translation. Qualitative researchers have consistently reported the use of NVivo as a useful method of supporting the data handling and interpretation process (cf., Bazeley & Jackson, 2014; Bringer et al. 2004, 2006; Hutchison, et al., 2010; Siccama & Penna, 2008) and we consider that the capabilities of NVivo are particularly well suited to facilitating the advancement of our understanding of MI and in supporting practitioners to develop proficiency in the method.

For example, NVivo is capable of being used to code MI consultations in such a way that it is possible to identify *what* was said, *when*, *how*, by *whom*, and in what context (*where*). A wide range of search operators can be employed within NVivo to ask questions of the data. This facilitates the use of sequencing questions to systematically explore the interpersonal dynamic between client and therapist, as well as between trainee and supervisor. Data from multiple sources and mediums (e.g., text, video, audio, datasets) can be searched, linked, and modelled in a whole range of ways that are impossible to do by hand or via manualised coding frameworks. A key advantage of using tools such as NVivo for the aforementioned purposes is that any analysis can incorporate the assessment of the role of NVCs within the therapeutic exchange as well as the verbal content. Video data can also be linked directly to the practitioner and clients' thoughts behind every aspect of the interaction; thus allowing the researcher to code both the observable (video) and non-observable 'thinking aloud' behind this - e.g., thoughts behind the interaction which may be generated via

methods such as verbal protocol analysis (Bainbridge & Sanderson, 2005). Similarly, these analytical functions may be utilised for the purposes of practitioner skill assessment and development and, therefore, capture these important processes in a manner that is not limited by psychometric considerations and reductionist tools.

Adopting an inductive process approach to research presents an exciting and valuable opportunity for MI. We encourage future research to avoid the premature quantification and outcome-focussed trap that is currently being perpetuated within the ‘academic’ behaviour change literature more generally (e.g. the development of taxonomies etc.; Abraham & Michie, 2008; Michie et al., 2011). Instead we encourage practitioners and researchers to work collaboratively to adopt a holistic practice-theory-practice approach to better understand the complex and intrinsic process factors that comprise the method. We consider that qualitative approaches have the capacity to address and explore the therapeutic relationship, assess how and why a consultation develops, and provide a clearer understanding of concepts such as *discord* (therapeutic ruptures), *sustain* and *change talk*. We believe that this would facilitate the critical role of reflection *in* and *on* action (Bennett-Levy, 2006; Johnston & Milne, 2012) and iterative levels of interpretation into the research process.

This approach is consistent with the early conception of MI and, therefore, offers the potential to contribute to inductive, clinician-informed process-related work that ceased prematurely in favour of quantitative outcome focussed research. We also consider that Computer Assisted Data Analysis Systems (CAQDAS) such as NVivo can contribute to these aims and offer a tool that can support practitioners and researchers to generate deeper, more meaningful insights into the inductive process-related aspects of an MI consistent conversation. Additionally, NVivo is capable of assessing skill acquisition in a more holistic manner that reflects the complexity of

human therapeutic engagement, the processes of behaviour change and can advance our knowledge regarding how practitioners develop proficiency in the method.

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