Neurophysiologic, phenomenological, cultural, social and spiritual correlates of empathy experiences: integral psychological and person centered perspectives

Steve Edwards[1], Duncan Cramer[2], Dimitri Kelaiditis[3], David Edwards[4], Nira Naidoo[5], Dale Davidson[6], Jabu Thwala[7], Buyi Mbele[8], Vusi Siyaya[9], Ashmin Singh[10], Pumelela Tshabalala[11], Sumeshni Govender[12] and Dumisani Nzima[13]

The main objective of this research was to explore neurophysiologic, phenomenological, cultural and social correlates of recipients' experiences of empathy within the context of Wilber's Integral approach and Person Centered theory and practice. Thirteen psychologists participated as co-researchers in a triangulated, within subjects' post-test experimental design in which empathy data were compared with data from control conditions of factual information processing and rest. A consistent pattern emerged from data gathered. Empathy experiences were associated with an unexpected, statistically significant increase in alpha activity, with some associated increasing trends in theta and beta activity. Expected findings were significant decreases in delta activity accompanied by decreasing trends in gamma wave activity, muscle tension, heart and respiration rate. Individual experiences generally reflected an affective, interpersonal, cultural, social and spiritual state of normal waking consciousness. Participant consensus was that the neurophysiologic and other correlates corresponded truthfully with typical empathic moments, insights and/or peak experiences, which are associated with effective therapeutic change in traditional and contemporary healing contexts.

Key words: Neurophysiologic, phenomenological, cultural, social, spiritual, correlates, empathy experiences, integral psychology, person centered psychotherapy

Introduction

From a holistic, integral perspective, beneficial psychotherapeutic change will inevitably imply more than any sum of, or interaction among, therapeutic variables (Edwards, 2010). Probabilistically such change will be related to individual, multifactor functions of many interacting personal, interpersonal, contextual and non-specified variables. Person-centered psychotherapeutic theory and empirical research have been directed towards individual and interacting variables related to the helper, helpee, relationship and wider context with special reference to such facilitating factors as empathy, congruence and respect. The least amount of attention has been given to the actual experience of the helpee, the most logically necessary variable in the mix (Cramer, 1990). Similarly, although there has been research into the neurophysiologic correlates of empathy as experienced by the empathiser (Ivey, Ivey & Zalaquett, 2010), to the best of our knowledge, no study has investigated such neurophysiologic correlates of empathy as apprehended or experienced by the empathised person(s), or recipients of such empathy. Such knowledge will be valuable in understanding, describing, explicating, explaining and/or predicting therapeutic change for all concerned psychological health care stakeholders, not least the relatively neglected helpee(s). Consequently the aim of the present investigation was to explore neurophysiologic and other related interpersonal, cultural, social and spiritual correlates of empathy experiences from an integral psychological, person centered perspective.

Although various forms of health promotion, subjective well-being and empathy have long been recognised by traditional healers (Edwards, 1985; Katz, 1982, Katz & Wexler, 1989; Ngubane, 1977), research by Rogers and others

1. Steve Edwards, PhD, DEd, is Emeritus Professor and Research Fellow in the Department of Psychology, University of Zululand, South Africa, *sdedwards@telkomsa.net*.
2. Duncan Cramer, PhD, is Professor of Psychological Health, University of Loughborough, United Kingdom
3. Dimitri Kelaiditis, MA (Clin Psych), is a former student at the University of Zululand, South Africa
4. David Edwards, D.Phil, is Research Fellow in the Department of Psychology, University of Zululand, South Africa
5. Nira Naidoo, MEd, (Ed.Psych) is a doctoral student in the Department of Psychology, University of Zululand, South Africa
6. Dale Davidson, MA (Clin Psych), is a doctoral student in the Department of Psychology, University of Zululand, South Africa
7. Jabu Thwala, PhD, is Associate Professor and Acting Head of the Department of Psychology, University of Zululand, South Africa
8. Buyi Mbele, D.Phil., is a Senior Lecturer in the Department of Psychology, University of Zululand, South Africa
9. Vusi Siyaya, MA (Clin Psych), is a Lecturer and doctoral student in the Department of Psychology, University of Zululand, South Africa
10. Ashmin Sing, MA, is a Lecturer in the Department of Psychology, University of Zululand, South Africa
11. Pumelela Tshabalala, PhD, is a Lecturer in the Department of Psychology, University of Zululand, South Africa
12. Sumeshni Govender, PhD, is a Senior Lecturer in the Department of Educational Psychology, University of Zululand, South Africa
13. Dumisani Nzima, PhD, is Associate Professor and Acting Head of the Department of Educational Psychology, University of Zululand, South Africa

such as Gendlin, Truax and Carkhuff was instrumental in the growth of modern scientific and professional psychotherapy through the development of scales that enabled the accurate measurement of such therapeutic variables (Carkhuff, 1969; Cramer, 2004, Cramer & Jowet, 2010; Clarke, 2004; Gendlin, 1962, 1996; Kirschenbaum, 2004; Rogers, 1957; 1980; Truax & Carkhuff, 1967). For example, the Carkhuff (1969) scales present five facilitative levels for such variables as empathy, respect, genuineness, self-disclosure, concreteness, confrontation, immediacy and helpee self-exploration. Facilitative characteristics range from level one, where helper expressions are typically unhelpful or destructive, through level three, which constitutes the minimum level of facilitative communication, to level five, where helper communications are very effective and creative. For example, in the case of empathic understanding, level five involves helper responses that add significantly to the feeling and meaning of helpee expressions, firstly so as to accurately communicate feelings below what the helpee is able to express and, secondly, to be fully with the helpee in the event of ongoing deep self-exploration. Such operational definitions and empirical precision enabled Carkhuff (1969) to provide convincing evidence that if helpers are functioning at a high level with regard to such important facilitative conditions, constructive changes will take place in helpees.

Over his extraordinarily productive life, Rogers explicated various definitions and perspectives on empathy. Earlier views were more concerned with offering rigorous operational definitions of a state like variable. Later views gave more emphasis to empathy as an experiential process of assisting helpee's to more accurately attune to and successively articulate what Gendlin (1962) had illuminated as the 'felt sense' and 'felt meaning' of those deep, visceral promptings in the ongoing flow of organismic consciousness. Comprehensive insight into such healing moments in turn facilitated the apprehension of deeper meanings of empathy as a core ingredient in the ongoing flow of the therapeutic micro-process. This enabled Rogers (1980) to conclude that an empathic climate enables openness to new facets of experience, which become part of a more accurately based self-concept and that such a climate may become a way of being (Rogers, 1980).

In addition to person centered theory, Wilber's integral psychological approach to consciousness was chosen as a convenient theoretical framework to inform the design, methodology and findings of the present investigation as it has the inbuilt facility and structure to include personal and transpersonal, subjective and objective, individual and collective perspectives on any empathy experience. In this approach AQAL, which is shorthand for all quadrants all levels, refers to a comprehensive system that integrates quadrants, levels, lines, states, types and realms of consciousness. The AQAL model postulates ongoing processes of evolution and involution, in an essentially spiritual universe or kosmos, fundamentally composed of holons, which are always both whole parts and part wholes, with interior and exterior, individual and collective perspectives that tetra-evolve in the form of four quadrants; intentional/phenomenological, behavioral, cultural and social; in concentric spheres of inter-being, transcending and including waves of consciousness, historically experienced as matter, body, mind, soul and spirit (Wilber, 1997, 1999, 2000, 2007). In the present study, the empathy experience is investigated from individual and collective, subjective and objective perspectives, with intersecting validity claims including representational truth (upper right quadrant), subjective truthfulness (upper left quadrant), inter-subjective cultural truths (lower left quadrant) and inter-objective, systemic functional fit (lower right quadrant).

The central quantitative research question related to whether there would be any significant statistical pattern in relation to empathy experiences and various neurophysiologic data as recorded during such experiences. In view of typical parasympathetic shift changes that occur during the psychotherapeutic micro-process (Corsini & Wedding, 1989; Ivey et al., 2010; Rogers, 1980), it was predicted that the empathic experience would be associated with general decreases in electroencephalographic activity, muscle tension, heart and respiration rates. Qualitative research questions were concerned with the related phenomenological, cultural, social and spiritual nature of such empathy experiences.

Method

Approach

The AQAL model provides a convenient and flexible triangulation framework for differentiating various research designs, methods and techniques (Reynolds, 2006; Wilber, 1997, 2000). As indicated above, the model distinguishes between individual phenomenological and behavioral quadrants, and collective cultural and social quadrants. In the present study design, subjective, objective, inter-subjective and inter-objective perspectives on empathy experiences represented these quadrants. Within this broader framework, a Person Centered investigation was conducted into the empathy experiences and neurophysiologic correlates of a convenience sample of psychologists. It was decided to limit the investigation to psychologists, as these persons had specific knowledge, training and/or teaching experiences in empathy and related qualitative and quantitative research methods, criteria and implications of this study. In addition, the sample was specifically chosen for their knowledge, experience, insight, commitment and willingness to explore, articulate, explicate, quantify and share their empathy experiences (Bryman & Cramer, 2008; Terblanche, Durheim & Painter, 2006).

Participants

The 13 psychologists in the present research had all completed at least master degrees in psychology and were in academic or professional practice. The home language of eight participants was English and five had isiZulu as their home language. Four were university professors. Eight held doctoral degrees. There were 5 women and 8 men. Ages ranged from 31 to 62 years, with a mean age of 43.69 years and standard deviation of 11.15 years. The range of empathic situations experienced had occurred from within the last month to twenty years previously, with a mean average of 87 months and standard deviation of 80 months. All empathy experiences were quantified at a score of 8 or more out of ten on a ten point scale where 1 was equivalent to minimal empathy and 10 equivalent to optimal empathy,

Design

A triangulated, within subjects' post-test design was used with two control conditions and one experimental condition. The control conditions consisted of a 5 minute rest period and a 5 minute factual information processing period during which participants were requested to process factual information as may typically occur in any interview. During the 10 minute experimental condition, participants were requested to explore empathy they had experienced in relation to particular empathisers and situations. Following an initial pilot study with one co-researcher, the following standardised instructions were put to all subsequent co-researchers:

a. Rest condition: Please rest for five minutes. You may keep your eyes open or closed, so long as you remain still and maintain a steady posture.

b. Factual condition: Please think of a factual situation, such as a standardised initial assessment, counseling or therapy interview, involving typical factual questions, for example, related to mental status, feelings, thoughts, experiences, behavior and relationships.

c. Please explore your most meaningful empathy experience. Feel free to explore any feeling, thought, person, relationship or context in relation to your past and/or present experience of empathy. Please try to experience or apprehend this moment, event or situation as immediately, directly, fully and deeply as possible.

After individual assessment, collective cultural and social perspectives were explored, where responses to the following cultural and social questions were respectively recorded. (a) What is our shared empathy experience? (b) What is the relationship between such experiences of empathy and other facilitative variables and therapeutic approaches? This information was recorded by the principal researcher and subsequently revised and edited by co-researchers until consensus was reached.

Procedure

All investigations took place in quiet and convenient conditions. In all cases, the rest period control condition, used to record baseline neurophysiologic data was followed by either the factual information control condition or the empathy experience experimental condition, which were presented in counterbalanced order. All participants provided brief subjective reports on their empathy experiences and quantified these on the above-mentioned scale from 1 to 10, before engaging in discussion on shared subjective and objective perspectives of their empathy experiences.

Apparatus

An Infiniti Thought Technology neurophysiologic feedback apparatus was used to monitor and simultaneously record basic electroencephalographic (EEG) data in relation to delta, theta, alpha, beta and gamma activity; as well as electromyography (EMG), for muscle tension/relaxation; levels of blood volume pulse (BVP) for changes in heart-rate; and respiratory activity for changes in breath pattern, respectively.

Ethical matters

All participants were thoroughly informed with regard to all aspects of the study. There was appropriate ethical clearance and informed consent.

Data analysis

Data analysis continued until consensus was reached by all co-researchers with regard to Wilber's (1997) four quadrant validity claims, which include correspondence, truthfulness, cultural validation and functional fit. Quantitative data were analysed with ANOVA for repeated measures (Bryman & Cramer, 2008). The limited amount of qualitative data lent itself readily to thematic content analysis (Terblanche *et al*., 2006).

Results

Subjective Qualitative Findings

Individual Profiles

Subject S1. For both conditions I thought about my wife's response to me when talking about my depression one evening about nine months ago. For a number of years I have had bouts of depression and anxiety, which lasted for about four months each time. I thought it was important that I tell my wife how I felt as she ~~may~~ have noticed I was behaving differently although generally I don't think she notices these kinds of changes. I couldn't remember any specific things she said to me but I tried to imagine the way she would generally behave. I did not feel confused about my feelings but thought it might be helpful to me to talk about how I felt. In general my wife behaves in a relaxed and sympathetic way and tends to give her opinion about what should be done. So there is no attempt to explore the way I am feeling which is not what I wanted anyway. In the empathy condition I tended to think of my wife listening to me while in the factual condition I tended to think about her talking to me and asking me questions.

Subject S2. I was able to experience deeper levels of empathy in relation to my wife and various friends and colleagues who I know at times have been with me or even beyond me in deeper experiential moments and levels of self - exploration. Although my focus was on the felt sense of empathy, various situations came to mind, with the most prominent ones related to the death of my parents, some fifteen years ago. Empathy was experienced in interpersonal, social and transpersonal forms as biased by an article I have written in this regard. The most powerful immediate experience was of God being with me. This I experience as a Presence greater than my ordinary self. I typically experience this in meditation and prayer and although this ~~may~~ indicate personal bias, which biofeedback data ~~may~~ reflect, this is my most essential and/or purest empathic experience. In the factual situation, I tried to ask myself typical sorts of mental status questions as one would do an initial interview with a client.

Subject S3. Basically a close friend of my mother provided the empathy experience. We had a discussion after my mother had passed away. Although I had chatted to other people about losing my mom, I felt she really understood what I was going through and more so than other people. It felt like unconditional love and complete understanding. Because it felt like real understanding on her part, it confirmed that what I was experiencing was true and acceptable. She confirmed my experience as real and connected the jumbled up thoughts into a coherent pattern. During the factual experience I was trying to work out the empathy experience in terms of date, place and what was said in the conversation. All this information was factually processed.

Subject S4. My empathy experience was in relation to an operation, which I underwent six years ago. I remember lying in the hospital and having my biological father holding my hand and God the Father watching over me. This deep empathy experience was that of love and how much parents watch over, support and care for their children and the pain which they go through when one of their children is unwell. This experience has left a lasting impression on my life and will always be embedded in my memory. For me it encompassed the highest level of empathy, which is truly experiencing what someone else is going through and being with them through the highs and the lows. It was a privilege and I wish everyone could experience this level of love and feel what it means to receive deep empathy. During the factual experience my thoughts were occupied by a typical clinical intake and mental status examination, which I undertake with clients during the initial assessment.

Subject S5. My experience of receiving empathy goes back two years. After being highjacked, one of the first people I contacted was my aunt. She listened and said: "You need my car more than me. I will bring it to you." This provided relief at that time. When I think about it now, it almost makes me tearful to know that somebody so fully understood my pressing needs and could put my needs before hers. Empathy is perhaps expressed culturally and socially differently from the way it is in a professional counselling context. For me the experience of receiving empathy from family and friends involved the act of sharing or doing. A colleague, who is a psychologist, came to my home after work on that Monday, addressed all my fears, calmed me and offered to take me around. There was relief as well as fear for her safety putting herself at risk every time she came to fetch me because I consider my home a high risk area. I continued working, but she would identify times at work when I would space out and bring me back in touch with feelings I was denying. Her empathic understanding made me feel supported and empowered to continue functioning at work. The empathy experience was not as relaxing as I expected, as in reliving it, I experience a bit of guilt at having deprived my aunt of her car. During the factual condition, I tried to recall all the names of the different offices that service education.

Subject S6: I was 18 in matric when I received a phone call and found out my girlfriend was pregnant. There was a feeling of horror and panic. I went to the home of a friend whom I had known since I was five or six and related what had happened. I was sitting on the floor. He hugged me. I felt physically and emotionally hugged with unconditional support. That whole process I have never forgotten. That was a very significant moment that bonded us. Even without that he would have still remained a friend. That was what I tried to re-experience during this experiment. I went on then to think of parental support – I stayed on that scenario of continued parental and friend support – just feeling the bond with family and friends if I needed support – a warm sense, not only tactile, but warm enclosed contained feeling where one is never alone essentially. During the factual condition, I sensed being hooked up to this machine, curious what it will mean, reflecting on life, mental status, carrying some stressors, but calm, relaxed and in a good place, going through these sort of feelings with awareness.

Subject S7: It was a very, focused, warm kind of feeling, in the family, environmental context of our backyard, where we dug soil. Friendly people came in to put up a retaining wall in a humbling experience, getting ideas and building a double, not single wall. It felt like the space as such already had warmth, provided warmth and these people came in with a wonderful humble spirit. It is almost complete. They are not rushing. We may finish Friday, Saturday, Sunday or Monday. Their commitment adds a sense of warmth, of giving, of appreciation for what they received for the wall, a sense of justice that they were satisfied. I imagined myself standing at the back door and felt a gift coming from heaven in a sense one cannot buy, a sense of warmth as if receiving from my parents – the husband and wife who are doing the work and the son of eighteen, so symbolic of one who wants to learn and contribute to seeing people being happy. They would work as a team, they loved what they were doing, put their hearts into it, the stable soil, the solid structure. Their approach was we can economise to what you have. What we have given to you we want to give to others, to advertise in every experience or trial sharing ideas in a very genuine spirit. I was actually receiving from them with all their support. In the factual situation, there was a scenario where I was presenting something using a laptop and checking to see if the audience was processing and understanding the information. I was looking at the audience all the time, so I would know which areas to emphasise and speaking more from experience. In the end I found the audience really focused and knew they understood.

Subject S8: In early 2009, I was staying alone and was so scared after a burglary. I phoned my friend and husband. My friend was at work and could not get home but reassured me. My husband just said "I am coming", came and was so supportive. By my voice, he had known I was scared, was comforting, stayed over and gave full support. During the factual information condition, I simple counted back from one hundred till zero. Then I thought about what we were discussing in class.

Subject S9: I believe in Jesus. My girlfriend became pregnant and I had a sense of guilt. I went to a pastor who gave understanding and guidance through the word of God. This gave me some relief and the guilt went down. He opened the scriptures, told me where to go from there and what I should do. Three pastors at different times showed empathy for me supported me and asked me how far I had gone with their recommendations. Friends supported me, told me I was now mature, should be getting married and that love was good. So I have started a process of paying *lobola* dowry and we are going forward. The child is now six months old and accepted. We are planning to marry next June. There is no pressure. We are moving at our own pace. During the factual information session, I imagined interviewing a client and went through a typical mental status situation.

Subject S10: About six years ago, I experienced a whole flood of emotions, like in a ball taken up in a tornado alley. Receiving empathy was like being brought gently back to the ground. It was calming to be contained, to have my outburst of emotion held, not to be judged as such. I was able to openly experience the emotions, without judgment or negativity towards what I was expressing. This is an emotional kind of account. The person who was empathetic was completely calm. The torrent of emotions came to a halt. I had a platform to express them and the intensity was reduced. During the factual situation, there was absolutely no emotion involved. I focused on my plans in terms of a list I needed to do, keeping aware of the time and the sequential order, basically trying to get as much information from the person as possible.

Subject S11: I felt very relaxed and a person listening to me who understood and accepted without judging, a person who understood where I came from, someone who listened with understanding, without judging, one who understands my problems. I was also just thinking of a situation where you have feedback from a patient. I was focused on this feeling and

again I was taken back to when we were doing our masters programme, the way you were motivating us in a situation where you are encouraged all the time by another person who knows and feels when you are anxious, who might say, "it's not the end of the world, try again," and I did and I made it, someone who encourages you when you are about to give up, a person who always trusts that you will definitely make it. During the factual condition, I was observing behaviour during an actual interview, describing a person who is happy, can make eye contact, asks questions, a relaxed person watching mood changes.

Subject S12: The most recent incident/situation where I experienced empathy was with another professional that I consulted so I spent time thinking about how that consultation session made me feel. The unconditional acceptance and non-judgmental attitude of my colleague was such a relief. It made me feel less guilt and more free than I have ever felt before. It was a very liberating feeling and also reassuring. It allowed me to move ahead with more confidence. I was initially second guessing the choices I was making, but after the consultation I knew what choice was right for me. I have never experienced empathy so completely. During the factual situation I did a bit of math and repeated first year psych questions.

Subject S13: During empathy, I became more relaxed and a bit sad, remembering almost all those hardships I have been through in the past: The loss of the brothers and sisters in the 1990's, my parents in the late 1990's, and mid 2000's and my wife and daughter in 2005. This has been a wonderful moment to come to terms with what happened, how I reacted to the situations, how people supported and sympathised with me throughout. I had to re-live all these experiences and sometimes shed tears internally. I felt connected with the diseased even though I could see them live. During the factual situation, I recalled where I was born, my number of siblings, years of schooling, education etc.

Collective Profile

After repeated reading and content analysis of the individual profiles, the following themes emerged. Participant numbers in which the themes appear are indicated in brackets.

The empathy experiences reported by the participants of the study depended largely on the meanings the participants attached to different events and or situations in their lives. Caring, interpersonal relationship situations (all 13) are re-experienced (all 13) in waking consciousness (all 13), involving feelings, thoughts (all 13), direction and meaning (all 13). Various situations are described involving family (1, 2, 3, 4, 5, 6, 7, 8, 9 and 13), crises (3, 4, 5, 6, 8, 9 and 13) and loss of loved one(s) (2, 3 and 13). Other experiences include spirituality (2, 4, 7, 9 and 13), understanding (3, 5, 7, 9, and 11), relaxation (1, 6, 11 and 13), acceptance (3, 9, 11 and 12), sympathy (5) and warmth (6, 7). The empathic experience occurs in various contexts: interpersonal only (S10, S11, S12), couple/marital (S1, S2, S8, S9), family (S2, S3, S4, S5, S6, S7, S8, S9 and S13), cultural (S7, S9), occupational (S5, S11, S12), professional, (S5, S11, S12), social (S2, S5, S6, S7, S9, 13) and spiritual (2, 4, 7, 9 and 13).

Objective quantitative findings

Table 1 Means and standard deviations for baseline, factual and empathy conditions (N=13)

Neurophysiology	Baseline	Factual	Empathy
BVP	71.62 (10.31)	71.45 (10.67)	70.89 (11.12)
EMG	3.38 (2.19)	3.11(1.93)	2.68 (1.41)
Respiration	15.54 (1.47)	16.10 (1.83)	14.29 (3.50)
Delta	14.20 (2.78)	13.80 (3.16)	11.31 (3.07)
Theta	10.59 (1.99)	10.72(2.35)	11.07 (3.73)
Alpha	8.32 (1.75)	8.79 (2.72)	11.16 (4.51)
Beta	6.88 (1.01)	7.05 (1.22)	7.10 (1.79)
Gamma	2.68 (.92)	2.60 (.49)	2.41 (.76)

ANOVA with repeated measures on the eight dependent variables indicated significant differences for delta, F (2, 24) = 4.40, $p < .024$, $^2 = .29$, and alpha, F (2, 24) = 5.38, $p < .012$, $^2 = .31$. Delta in the empathy condition (M = 11.31, SD = 3.07) was significantly lower than in both the rest (M = 14.20, SD = 2.78), t (12) = 2.51, $p < .027$, and the factual conditions (M = 13.81, SD = 3.16), t (12) = 3.12, $p < .009$. Alpha in the empathy condition (M = 11.16, SD = 4.51) was

significantly higher than in both the rest ($M = 8.32$, $SD = 1.74$), t (12) = 2.42, $p < .032$, and the factual conditions ($M = 8.79$, $SD = 2.72$), t (12) = 2.83, $p < .015$.

Inter-subjective qualitative findings

As psychologists, we shared our empathy experiences at various levels ranging from our immediate fresh, individual apprehensions of the phenomenon through familial, cultural experiences to academic supervision of student projects and theses. This included similar personal experiences, such as loss of loved ones, theoretical and conceptual understandings revealed through our personal research as well as the body of Person Centered literature appearing in scientific articles, books and conference proceedings. These experiences included emphases on interpersonal, empirical validation of person centered therapy as well as explication of social and transpersonal factors. We agreed that these experiences reflected both similar and different personal, spiritual, cultural, and geographical contexts in which we have lived our lives. Discussion among University of Zululand staff corroborated and consolidated many years of academic and professional research, teaching and general discussions on the context, theory and practice of empathy.

Inter-objective qualitative findings

Discussion revolved around empathy received as distinct from empathy transmitted as well as other core facilitative variables of congruence or genuineness and unconditional positive regard, and less researched variables such as immediacy and concreteness. Discussion also focused on hard empirical evidence for effectiveness of facilitative variables, the need for meta-analytic studies and statistical investigations such as multiple regression and factor analysis in order to explore the relative, weighted contribution of known person centered facilitative variables as well as many other non-specific variables, ranging from physical substances through to spiritual orientations.

Person centered therapy was regarded as a foundational counseling and therapeutic approach ideal for teaching of beginner counselors and therapists owing to its established, evidence based, empirical body of research and its clear operational definitions of various levels of therapeutic micro-skills, ranging from basic listening, reflection and clarification to more advanced techniques such as interpretation and confrontation. Participants found much value in Person centered therapy owing to its established philosophical underpinnings, with emphasis on fully functioning human beings, living responsible, meaningful, growth orientated and socially self-realised lives. The approach was viewed as universally applicable whatever the context; African, Asian, European, American or other.

It was also considered that Person Centered therapy was compatible with all other helping and healing approaches owing to its coherent underlying historical roots and geographical contexts, phenomenological philosophy, essentially human relationship orientation and continuing focus on the present reality revealed in the ongoing life process, moment to moment, here and now.

Discussion

Research decisions as to a saturation point in data collection need justification. Although sample size was relatively small, it was decided to write up this article owing to a consistent pattern that had emerged from all the data gathered; subjective, objective, individual and collective. This pattern involved unexpected statistically significant alpha increases with associated increasing trends in theta and beta activity; expected delta decreases with associated decreasing trends in gamma activity, muscle tension, heart and respiration rate; in a state of consciousness where deep feelings and thoughts provided meaningful direction in life; through individual and inter-subjective apprehension of a form of interpersonal care, which was consistent with inter-objective scientific literature on empathy and related psychotherapeutic variables, systems and findings. The pattern is explicated in greater detail as follows:

The statistically significant patterns of delta decrease and alpha increase in the empathy condition as compared to both baseline and factual conditions provided clear evidence for primarily waking state, cortical, neurological correlates for experienced empathy. When aligned with previous research evidence on the positive correlation between alpha and heightened parasympathetic nervous activity, stress reduction and creativity as originally pioneered by Joe Kamiya (Abarbanel, 1997; Doxey, 1974; Ivey et al. 2010), the corresponding physiological evidence of decreasing trends in pulse rate, muscle tension and respiration, point to experienced empathy as a state of consciousness that is neither too relaxed (theta) nor too alert (beta), but focused, affective and effective. Participant descriptions reflect those typical, empathic, therapeutic moments, insights and peak experiences, recognised by traditional healers as well as modern health care practitioners, who work from phenomenological, person centered and other psychotherapeutic orientations, as crucial precipitants in effecting healing changes (Corsini & Wedding, 1989; Ivey, Andrea, Ivey & Simek Morgan, 2002; Gumede, 1990; Katz, 1982; Ngubane, 1977; Wilber, 1977; 2000; 2007).

Other practical implications of an integral psychological, person centered approach to empathy are the correlated and cumulative effect of any change in pre-personal, personal and transpersonal variables involved in the mix. It can thus be

hypothesised that increases in alpha and to a lesser extent, theta and beta activity, will be associated with improved apprehension and reception of empathy, and corresponding individual, cultural, and social therapeutic insight and change, and vice versa. Similarly, decreases in delta and to a lesser extent, lower physiological arousal, should be associated with improved apprehension and reception of empathy, and corresponding individual, cultural and social therapeutic insight and change, and vice versa. Further research is needed to test these hypotheses and establish optimal parameters in these relationships. For example, it is possible that a more pronounced alpha- theta response, which is known to be associated with advanced meditation, may develop with longer exposure to empathic experience (Egner & Gruzelier, 2004). Further research with additional sophisticated equipment is also needed to investigate the role of such biochemical and neurophysiologic factors as neurotransmitters and mirror neurons in greater depth (Gutsell, 2009; Ivey et al. 2010; Lewis, 2010).

In Wilber's (1997, 2000, 2007) integral model such neurophysiologic correlates only exist in relation to individual phenomenology, collective culture, social system and its immanent and transcendent spiritual context. Intersecting validity claims ensure greater truth through third person, objective correspondence and functional fit (neurophysiologic correlates and individual empathy ratings in relation to person centered and other relationship orientated therapeutic approaches), second person, mutual understanding and cultural context (psychologists' agreement as to their empathy experiences) and manifest subjective truthfulness of individual descriptions. In addition to their unique phenomenology, the individual descriptions are particularly instructive in this regard. For example, experiences and cultural contexts of Subject 6 and Subject 9 in relation to unexpected pregnancy are both similar and different. Subject 7 describes warm, social empathy experiences elicited by a family who were working for him. Subject 5 and Subject 11 describe empathy received from other professionals in occupational contexts. Subjects 4 and Subject 3 describe immanent and transcendent spirituality experiences in relation to family situations.

The cultural, social and spiritual dimensions of the empathic experience of Subject 7 are particularly instructive. The repeated use of the term "warm" evoke empathic experiences, variously described as kinesthetic (Parviainen 2003; Stein, 1917) organismic (Rogers, 1980) and felt sense (Gendlin, 1996). Such an holistic organic-emotive-interpersonal-communal-spiritual nature of empathy has long been recognised by San healers who physically experience empathy in the form of a lower abdominal "gut feeling" called *gebesi,* which is critical to the experience of *!kia* (altered consciousness) as they unwind in the dance, open themselves (*hxabe*) and *twe* or pull the sickness out (Katz, 1982). This *gebesi* experience is similar to that described as *umbellini* by *Nguni* people and *kundalini* amongst certain yogic practitioners. San healers also describe an experience known as *kowhedili*, which refers to an aspect of *!kia* where there is much pain experienced as they expel sickness from themselves (Katz, 1982). Personal observations of such a dance attest to the dramatic intensity and lived healing experience so carefully researched and described by Katz and others (Katz, 1982; Katz & Wexler, 1989). These deep empathic, transpersonal connections are inextricably related to the drumming sound of energy (*num*) in a mutually facilitative pattern of healing, which thus becomes a shared ecological resource for all members of the group as sensed through nerves, guts, bones and ancestral, spiritual community.

The relationship of empathy experiences to health and in particular, subjective well-being is noteworthy. Terms such as calming, disarming, relaxation, confidence, assurance, warm, acceptance, liberating, understanding that participants used to describe their empathy experiences are all related to subjective well-being. Such findings provide some foundations for training to achieve appropriate subjective well-being through experience of empathy. The inter-subjective and inter-objective findings also corroborated many earlier University of Zululand empathy related studies (Edwards, 1985, 1986, 2002, 2010; Edwards, Makunga, Ngcobo & Dhlomo, 2004). Such research was essentially concerned with the African roots of contemporary humanity (Jobling, Hurles, & Tyler-Smith, 2004), and the inferential implication as to the ultimate African origin of all forms of healing and patterns of empathy. For example, the San describe themselves as "first people" and rock paintings provide evidence for healing dances since earliest times (Edwards, 2010). Countless generations of Southern African *Nguni* people have also recognised the holistic organic-emotive-interpersonal-communal-spiritual nature of empathy in the everyday practice of "*ubuntu."* Etymologically and broadly translatable in *isiZulu* as "humanity", *ubuntu* is the abstract form of the terms *umuntu* (a human being) and *abantu* (people), derived from the root *–ntu,* (Dent & Nyambezi, 1969). *Ubuntu* has very deep and rich connotations when for example expressed in the saying *umuntu umuntu ngabantu*, which literally means "a person is a person through others," "I only become an I through you", and "I am because we are". As implied by Subject 7 and Subject 9, the everyday practice of *ubuntu* constitutes the essence of deep empathic, inter-human, interpersonal, social and spiritual relationships. It promotes consensual cultural dialogue, illness prevention and healing and provides the essential context for indigenous diviners and faith healers, who often use a *vumisa* approach to interviewing, diagnosis and healing through communication with ancestral shades, while empathically honing in on problem areas as consensually validated through the degree of expressed agreement by afflicted and relatives (Edwards, 1986; Edwards *et al*. 2004; Gumede, 1990; Ngubane, 1977).

Subsequent history provides evidence that the term empathy was used in Europe as a translation of *einfuhlung,* a German term literally conveying the experience of "feeling into" a particular situation, phenomenon or life-world (Hackney, 1978). Edmund Husserl's (1900) phenomenological investigations revealed *einfuhlung* as a primary mode of awareness of the experience of other people and the concept became his chief philosophical tool for investigating the subjectivity of others as well as a foundation for his student Edith Stein's doctoral thesis. Carl Rogers (1964) was later to philosophically ground his pioneering empirical research in a North American version of this phenomenological tradition and validate empathy, and related variables, such as congruence and respect, as necessary and sufficient for effecting beneficial therapeutic change (Carkhuff, 1969; Clarke, 2004; Gendlin, 1962, 1996; Kirschenbaum, 2004; Rogers, 1957; 1980; Truax & Carkhuff, 1967). Such an approach underlies much modern professional psychological counseling practice as explicated by Subject 5 and Subject 11, whose experiences with other professionals provided unconditional acceptance, reassurance and sense of relief typically associated with alpha wave activity (Ivey et al. 2010).

Conclusion

The aim of this research was to explore neurophysiologic, phenomenological, cultural, social and spiritual correlates of empathy experiences using Wilber's Integral approach and Person Centered theory to inform the design, methodology and findings of the investigation. A consistent pattern emerged from data gathered. Empathy experiences were related to statistically significant increased alpha activity, with associated theta and beta trends and corresponding delta decreases with associated muscle tension, heart and respiration rate trends. Individual experiences corresponded with an affective, interpersonal, cultural, social and spiritual state of normal waking consciousness, which was inter-subjectively and inter-objectively validated as consistent with scientific literature on empathy and related psychotherapeutic variables, systems and findings in various historical and geographical contexts. It was agreed that findings reflected typical empathic, therapeutic moments, recognised by traditional healers as well as modern health care practitioners, who work from person centered and other psychotherapeutic orientations, as crucial precipitants in effecting healing changes.

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