

## Analysis

# Cultural research deconstructs the psychosocial construct 'expressed emotion'

Alison M. Heru

## Summary

Expressed emotion (EE) is a highly researched psychosocial construct. Cultural research challenges the assumption that high family criticism is a universal determinant of poor outcome, especially for chronic illness. The concept of warmth, an original component of EE, was dropped owing to the complexity of its measurement. Warmth has now been resurrected as an important predictor of good patient outcome. Cultural scrutiny and appropriate adaptation of any psychosocial construct is

necessary before its acceptance into the medical lexicon of healthcare.

## Keywords

Psychosocial interventions; qualitative research; rating scales; transcultural psychiatry; statistical methodology.

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Many psychosocial constructs have been developed and applied in psychiatry and other medical disciplines without regard to sociocultural norms. In this article I describe the origin of the concept of expressed emotion (EE), the six decades of subsequent EE research and its uncritical acceptance into the lexicon of medicine. I will argue that cultural research does not support the concept of EE as it is currently interpreted and applied in many sociocultural contexts.

First, it is important to clarify how culture affects the expression of emotions. Research has begun to establish that there are universal features of emotional expression and there is considerable cultural variability in emotional expression. Cordaro and colleagues<sup>1</sup> examined the expression of 22 emotions in five cultures, and found clear between-culture patterns to the expression of emotion that accounted for about 50% of the expressive behaviour of any individual expressing any emotion, and that cultural dialects accounted for 25% of the expression. The understanding of the concept of EE must take these findings into account.

## Deconstruction of the psychosocial concept of expressed emotion

In 1966, expressed emotion (EE) was conceived as a measure of the family emotional climate, the premise being that the expression of emotion in families had an impact on the member with psychiatric illness, namely schizophrenia. The Social Psychiatry Unit of the UK Medical Research Council created six family measures with construct validity: warmth, number of positive comments, severity of criticism, number of critical remarks, dissatisfaction and hostility.<sup>2</sup> The final measure consisted of critical comments, hostility and emotional overinvolvement (EOI). These terms were considered normative at the time, but they may now sound culturally deaf and outdated. A more culturally appropriate and normative concept/language would be family emotional expressiveness/climate or family cohesion. In this article, I will continue to use the original term EOI in describing research findings that used the Camberwell Family Interview and the EOI concept.

The measurement of warmth was dropped because of its complex relationship with the other variables; however, the original researchers made several comments about warmth noted later in this article. A second study<sup>3</sup> clarified that high EE was present when there was 'hostility' and seven or more critical comments. Using these parameters, patients with schizophrenia in high-EE families had a relapse rate of 58%, compared with 16% for those in low-EE families. The key relative's initial EE score was considered

the best single predictor of relapse 9 months post-discharge. EE was the first psychosocial construct that assessed the family emotional climate using a semi-structured clinical interview, the Camberwell Family Interview, rather than a checklist of behaviours.<sup>4</sup>

The next step was to assess EE outside of south-east England. In 1984, Los Angeles ( $n = 69$ ) was chosen as the next site, but the samples were required to be similar; male patients with schizophrenia, age 17–50 and 'Caucasian in ethnic origin'. Similar results were found: 53% of family members scored high on critical comments, which was associated with higher patient relapse.<sup>5</sup>

Looking further afield, a sample of patients and their families extracted from the World Health Organization's Determinants of Outcome of Severe Mental Disorder study found that patients in Nigeria, India and Columbia had a more favourable course than patients living in Czechoslovakia, Denmark, Taiwan, the UK, the USA and the USSR, with researchers speculating that this was due to 'differences in intensity of family bonds, and the type of family structure'.<sup>6</sup> Further studies in Australia, Denmark, Poland, India, Egypt, Israel, China, Japan and Iran also found substantial EE variation on patient outcome.<sup>7</sup>

In 1998, American researchers Butzlaff & Hooley<sup>8</sup> summarised their findings on EE in a meta-analysis of 27 studies. They confirmed that EE was a valid predictor of relapse for people with schizophrenia, and called for an end to research designed to replicate the EE-relapse association. In 2017, these findings were reconfirmed, using the same samples plus two more samples<sup>9</sup> and employing *p*-curve analysis ([www.p-curve.com/app3](http://www.p-curve.com/app3)). Despite their call for an end to EE-relapse research, Butzlaff & Hooley found that the mean effect sizes ( $P = 0.004$ ) across locations were significant when the studies were grouped into geographical areas: UK, Northern Europe, Southern Europe, Eastern Europe, North America, Australia and Asia. They recommended further examination of geographical location and the magnitude of the EE-relapse link. The early EE researchers summed it up best: 'the nature of EE is clearly grounded in cultural conventions; it is culture specific [...] but not ethnocentric or culture bound'.<sup>10</sup> Bhugra & McKenzie<sup>11</sup> opined that EE must be seen in cultural context and embedded in the normative data of the population before being considered in the pathogenesis of relapse.

## What does EE actually measure?

As originally conceived, EE measures family emotional climate, an undefined interaction between family members. As mentioned

above, the original measurement of EE is composed of three elements: critical comments, hostility and emotional overinvolvement (EOI). There is not a clear understanding of what is actually being measured; and initial investigators looked unsuccessfully for patient or relative traits. An initial hypothesis was that patients with more symptoms would evoke more family distress, but this was not found to be the case.<sup>12,13</sup> No consistent relative variables were correlated with high EE, although these relatives were found to be more conventional, less satisfied with themselves, less flexible, less tolerant, lower in empathy,<sup>14</sup> more conscientious,<sup>15</sup> more burdened, more distressed and caring for a longer period of time.<sup>16</sup> Low-EE relatives were more fatalistic and less active in managing problems, whereas high-EE relatives were noted to be more active, more critical, disagreed with patients more and showed lower levels of accepting behaviour.<sup>17</sup> However, family beliefs about illness do show that high-EE relatives believed that patients could and ought to exert more control over their symptoms.<sup>17</sup> This finding led to the development of interventions based on family psychoeducation (FPE) that focus on illness education, resulting in reduced relapse rates.<sup>18</sup> However, when FPE is applied across cultures, there is no single 'universal' successful FPE intervention, and McFarlane notes that the American version of FPE may mesh better with certain cultures than with other cultures.<sup>18</sup> The differences in efficacy may lie in the quality of cultural adaptations, specific aspects of the studies' design or cultural context.

### Measuring EE in different cultural settings

As our understanding of the importance of sociocultural factors has grown, the importance of understanding the 'what and how' of measuring the family emotional climate in different cultures has also grown. The use of instruments and concepts in different sociocultural settings needs to be subjected to the following inquiry: (a) are we measuring the right concepts for the specific sociocultural context? (b) Once we decide on the correct concept, are we using the correct construct? If these are both correct, (c) do the instruments need cultural adaptation? (d) If we want to adapt instruments, what steps can we take to ensure fidelity to the original concept? (e) If we have an intervention based on the construct, is the intervention relevant for that cultural context? Specifically assessing EE, additional questions arise because EE is a complex concept with several internal components. Also, the measurement of EE using the Camberwell Family Instrument takes 2 h and the validity of shorter EE tools will require examination.

### Is the reduction of EE culturally relevant?

Although it is often unfair to draw generalisations across cultures because this does not take into account within-group variation, some studies do suggest norms in specific cultural/ethnic settings. In African American families with a person with schizophrenia, high EE/high criticalness is associated with better patient outcomes.<sup>19</sup> On qualitative analysis, patients perceived high-EE family comments as 'direct and expressive', supportive and an expression of concern, whereas low-EE family comments were perceived as passive and uncertain. So, interventions to reduce EE will not be helpful for patients in African American families.

In Mexican American families with a person with schizophrenia, high EE/high EOI is associated with relapse, even when sampling (total  $n = 224$ ) differed across time (1980 and 2000), recruitment sites (in-patient versus out-patient), years of illness, illness course and different interviewers/coders.<sup>20</sup> In one sample, a subset of 'Anglo-Americans' ( $n = 54$ ) had the same EE scores as

Mexican Americans, but the EE score had different internal components: Anglo-Americans had 72% criticism/hostility and 8% EOI, whereas Mexican Americans who had 44% criticism/hostility and 40% EOI. An intervention focused on reducing criticalness will, at best, be irrelevant for families that have high EOI.

Interventions for Mexican Americans should therefore focus on reducing EOI. Kopelowitz and colleagues<sup>21</sup> successfully adapted an FPE intervention for Mexican American families. Before the intervention, a systematic assessment of each family enabled the clinical researchers to capture the cultural elements considered important for the adaptation. As a result, family members ( $n = 174$ ) were successfully taught how to support medication adherence. Warmth and moderate EOI emerged as good prognostic factors.

### Warmth

Warmth was an original component in the EE construct but was dropped because of its 'complex relationships with the other components, which largely explained its relationship to relapse' according to Leff & Vaughn<sup>2</sup> (p. 23), who added that 'if relatives showed considerable warmth in the absence of criticism and over-involvement, the patient tended to remain well' (p. 83). The original observers of the importance of family emotional climate also predicted that if critical comments and EOI were controlled, then warmth would predict a better outcome.<sup>3</sup> After 40 years, the importance of this research is now re-emerging.

In the Camberwell Family Interview, warmth was conceptualised as 'the expression of positive feeling', such as 'the tone of voice including a display of enthusiasm, positive changes in manner and tone *v.* flatness, or the presence of coldness', spontaneous expressions of warmth, expressions of sympathy, concern and empathy, especially when the relative is describing symptoms, and display of interest in the person and enthusiasm for their achievement. Evaluators were directed to pay attention to expressions of warmth about the patient, and warmth was measured on a 6-point scale (0, no warmth; 5, high warmth).

When family warmth is high, several international studies show that individuals with psychosis have a better outcome.<sup>20,21</sup> In Mexican American families, the best predictors of good patient outcome were high warmth and moderate EOI.<sup>20</sup> In families from Barcelona ( $n = 21$  dyads), high warmth as measured by the Camberwell Family Interview was correlated with fewer patient symptoms.<sup>22</sup> In Puerto Rican children, high parental warmth was found to be protective against psychiatric disorders.<sup>23</sup> In this study measurement of warmth included assessment of feelings of closeness, trust and anger towards the child. However, despite the increasing use of warmth as a predictor, the measurement of warmth still does not incorporate cultural/ethnic variation in the display of affection<sup>24</sup> or the cultural variation in the expression of warmth.<sup>25</sup>

### Cultural adaptation of interventions

Different methods have been proposed for cultural adaptation of interventions. Resnicow and colleagues<sup>26</sup> consider cultural adaptations as occurring across two dimensions: surface and deep. Surface adaptation of an intervention increases the receptivity and outward appeal of the intervention by alterations to language, visual representations, case scenarios, refinements of intervention materials and cultural sensitivity in recruitment and data collection, and clinical researchers often include treatment staff from the target group. This is fairly easy to do, and if done well does not affect the core of the intervention. On the other hand, deep structural

adaptations revise core treatment components to align with the culture, social experiences and values of the group. Deep adaptations are more likely to threaten the fidelity of the intervention.

Wang-Schweig and colleagues<sup>27</sup> suggest four steps for clinicians to ensure that an intervention is relevant and maintains fidelity. Step one examines the original theory underlying the intervention to determine whether the constructs are relevant to the population and align with the programme's core components. Step two uses a macro-level theory to identify and select key constructs most likely to be culturally dependent. Step three reviews the literature to determine whether there are cultural factors that might influence these constructs. Step four incorporates these culturally based constructs with the core constructs. This methodology assumes that there is culturally relevant literature available.

The FPE interventions of Kopelowitz and colleagues<sup>21</sup> for Mexican American families used Wang-Schweig et al's methodology by examining the underlying theory and selecting key constructs (moderate EOI and warmth) for implementation. Step three was met by their systematic assessment of each family to capture the cultural elements for the adaptation. Step four was met when the cultural elements were incorporated into the intervention.

### Application of the concept of EE: recent examples

The extent of the current application of the concept of EE is illustrated in the following examples.

The use of the concept of EE is widespread in the medical and psychiatric literature, especially in the care of patients with chronic illness.<sup>28</sup> A southern California sample ( $n = 106$ ) of individuals living with diabetes who had partners with high EE had poorer diabetes management.<sup>29</sup> However, in the analysis, warmth ( $P < 0.05$ ), EOI ( $P < 0.05$ ) and criticism ( $P < 0.05$ ) were combined to create the factor of EE. EOI was later dropped because of a 'quadratic relationship with outcome variables as well as significant multivariate outlier problems'. The ethnicity of the sample was approximately 50% White, 25% Hispanic, 13% African American and 8% Asian. There was no discussion of how ethnicity might be affecting the results.


In another example, neuroimagers stated that 'high EE' evoked activations in brain regions associated with aversive social information processing (amygdala, temporal pole, inferior frontal gyrus, anterior cingulate cortex and medial prefrontal cortex) and with right or bilateral language prosody areas.<sup>30</sup> The authors concluded that they had 'confirmed the hypothesis for a distinct neural basis for high EE and that the pattern of activations offer a feasible biomarker approach for identifying neural substrates that mediate the influence of high EE on relapse'. The study was small (11 participants) and the conclusion seemed overreaching. However, the implication is that the high EE/criticalness paradigm is universally accepted.

### Conclusions

Family emotional climate is a high-level construct that is generally accepted as an important psychosocial variable in the presentation of illness and in assessing patient outcomes. The general belief is that high EE is 'caused' by criticalness and is a negative attribute in families. However, the studies presented here show that the deconstruction of EE in different cultures results in varied EE findings. The analysis of the internal components of the family emotional climate (critical comments, hostility and EOI) shows significant variation by sociocultural setting. If the concept and

construct do not hold true, then the relevance and the interventions are likely to be false. The premise that high EE means high criticalness and is related to poor outcome is likely false, so interventions based on this premise may fail if applied universally. EE should be deconstructed and each component applied appropriately in each sociocultural context.

Cultural research of EE has been significant in resurrecting family warmth as a predictor of good patient outcome. Focusing on enhancing positive feelings develops an expectation that families can adapt and that, as practitioners, we can enhance the resilience of families and patients managing chronic illness.<sup>31</sup> Warmth has now become a common measure of family emotional climate and much welcomed as we try to move the discipline of psychiatry away from its strong focus in psychopathology towards a focus on resilience. However, the concept of 'warmth' must also be subjected to cultural analysis.

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### Declaration of interest

None.

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## Reflection

### Light at the end of the tunnel: a front-line clinician's personal narrative on COVID-19 and mental illness

Venkat Ramesh 

I have suffered from generalised anxiety disorder with depression ('anxious depression') and obsessive–compulsive traits, first diagnosed at age 18 in my first medical school year. I have been on four courses of selective serotonin reuptake inhibitor antidepressants, sometimes along with clonazepam and buspirone: sertraline in 2006, fluvoxamine in 2009, escitalopram in 2012–2013 and 2017–2018. I have been off psychiatric medication since March 2018.

I am a physician and an adult infectious diseases specialist by training – a training completed in April 2020, just as the COVID-19 pandemic began to hit.

For people like me with anxiety issues, COVID-19 has made an already challenging condition worse. The hardest part of working in the front line, treating patients with COVID-19, was the constant daily angst and dread of being infected with a disease with an unpredictable clinical course and no definite cure.

I survived 2020 without being infected. In late January 2021, three days before my scheduled vaccination, I tested positive for SARS-CoV-2.

The initial symptoms were mild but distressing, with low-grade fever, malaise and a throbbing headache. The most unpleasant were palpitations and what I can now recognise as 'brain fog', being unable to focus or concentrate. Unfortunately, all this triggered a massive anxiety episode. I had trouble sleeping because of tachycardia and palpitations. Worrisome, intrusive thoughts filled my mind: What if I die? What if I require admission into the intensive therapy unit (ITU)? Having treated hundreds of patients, I had envisioned for myself five worsening clinical states: the need for admission into the hospital, need for supplemental oxygen, admission to the ITU, invasive mechanical ventilation and death. I kept pacing around in anxious tension, and a relapse seemed imminent.

However, then I realised I was only repeating the same old cycle. I decided then that, come what may, I would not let fear dominate me. I had academic assignments to complete and would focus on them. If my mind wandered and my heart pounded, and I felt anxious, so be it. I reread portions of Paul David's books *At Last A Life* and *At Last A Life and Beyond*, two books that have helped me immensely. I have also found valuable insights in the book *You Are Not Your Brain*, by Drs Jeffrey M. Schwartz and Rebecca Gladding. I had previously found success with mindfulness and acceptance, and cognitive–behavioural therapy, and I knew this episode was no exception.

I gradually improved, made a complete and uneventful recovery, and took the first dose of the vaccine two weeks later.

The COVID-19 pandemic is an opportunity to bring into the limelight the importance of mental health and well-being. We need to be strong advocates for breaking barriers and increasing access to mental health resources.

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