



Role of theory of mind in emotional awareness and alexithymia: Implications for conceptualization and measurement [☆]

Richard D. Lane ^{a,*}, Chiu-Hsieh Hsu ^b, Dona E.C. Locke ^c, Cheryl Ritenbaugh ^d,
Cynthia M. Stonnington ^c

^a Departments of Psychiatry, Psychology and Neuroscience, University of Arizona, Tucson, AZ, United States

^b Division of Epidemiology and Biostatistics, University of Arizona Mel and Enid Zuckerman College of Public Health, Tucson, AZ, United States

^c Department of Psychiatry and Psychology, Mayo Clinic in Arizona, Scottsdale, AZ, United States

^d Department of Family and Community Medicine, University of Arizona, Tucson, AZ, United States

ARTICLE INFO

Article history:

Received 8 November 2014

Available online 9 March 2015

Keywords:

Theory of mind

Alexithymia

Affective agnosia

Emotional awareness

Somatic symptom disorders

ABSTRACT

The goal of this study was to determine whether alexithymia, which is characterized by difficulty in recognizing and describing emotions, is associated with impairments in the ability to mentally represent emotional states. We studied 89 outpatients including 29 conversion disorder patients, 30 functional somatic syndrome [e.g. fibromyalgia] patients and 30 medical controls.

Groups did not differ on affective or cognitive Theory of Mind (ToM) measures, the Levels of Emotional Awareness Scale (LEAS) or the Twenty-Item Toronto Alexithymia Scale (TAS-20) after adjusting for Positive and Negative Affect Scale (PANAS) variables. Across all patients, LEAS but not TAS-20 correlated positively with affective and cognitive ToM measures after adjusting for PANAS scores. Impairments in ToM functioning influence LEAS performance but not TAS-20 scores. These findings support the distinction between a milder “anomia” form of alexithymia associated with impaired emotion naming and a more severe “agnosia” form associated with impaired mental representation of emotion.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

Whether alexithymia is associated with “theory of mind” or mentalizing ability is becoming an increasingly important issue for research and clinical purposes. Alexithymia literally means “lacking words for emotion” and involves difficulty in identifying and describing one’s own emotional states. An important question, as yet unresolved, is whether the difficulty in putting emotions into words is observed because alexithymic individuals know what they feel but have difficulty describing it, or do they not know what they feel, and therefore have difficulty. The former is associated with intact mentalizing

Abbreviations: ASD, autism spectrum disorders; LEAS, Levels of Emotional Awareness Scale; MSS, Mental States Stories Test; MADRS, Montgomery Asperg Depression Rating Scale; PANAS, Positive Affect and Negative Affect Scale; SOM, Somatic Symptom Disorders; TAS-20, 20-item Toronto Alexithymia Scale; ToM, Theory of Mind; WTAR, Wechsler Test of Adult Reading.

[☆] Funding/support: Institute for Mental Health Research (Grant #2008-LR-804, Drs. Lane and Stonnington) and Mayo Clinic (08-001718, Dr. Stonnington).

* Corresponding author at: Department of Psychiatry, University of Arizona, 1501 N. Campbell Ave., Tucson, AZ 85724-5002, United States.

E-mail address: lane@email.arizona.edu (R.D. Lane).

<http://dx.doi.org/10.1016/j.concog.2015.02.004>

1053-8100/© 2015 Elsevier Inc. All rights reserved.

ability whereas the latter is not. Investigation into the role of mentalization in alexithymia may therefore shed light on how alexithymia is conceptualized, measured and potentially treated.

Uncertainty on this issue has important historical roots. The concept of alexithymia was put forward in 1972 by Sifneos and Nemiah (Nemiah, Freyberger, & Sifneos, 1976; Sifneos, 1972). They observed that patients with physical diseases thought to have an emotional or psychosomatic component such as essential hypertension or asthma had difficulty expressing their feelings. They noted in particular that this lack of expression was not due to psychological defenses that blocked conscious awareness of feeling states, because all clinical efforts to overcome defenses were unproductive. Rather, Sifneos and Nemiah concluded that these patients had a deficit in their ability to describe how they felt. In addition, they added that the patients in question not only did not express, but even “appeared not to have,” emotional experiences (Nemiah et al., 1976; Sifneos, 1972) – a conceptualization consistent with an impairment in knowing what they felt and therefore potentially involving impaired mental representation of emotional states.

Importantly, the concept of “theory of mind” was put forward six years later in 1978 by Premack and Woodruff (Premack & Woodruff, 1978), and thus the original conceptualizations of alexithymia could not have taken this newer concept into account. Theory of mind originally referred to the ability to know the thoughts, beliefs and intentions of others and is a mental function that is far more developed in people than in other species (Frith & Frith, 1999). As the concept of “theory of mind” evolved and its neural basis became better understood it came to be recognized that mentalization refers not just to understanding what others are thinking, but also involves knowing what others are feeling (Frith & Frith, 2006). In addition, the same or very closely related cognitive processes participate in knowing what the self is thinking and feeling (Lombardo & Baron-Cohen, 2011). Sorting out what self and others are thinking and feeling is the basis of Mentalization Based Therapy developed by Fonagy and colleagues (Allen & Fonagy, 2006). As such, the relationship between alexithymia and impaired mentalizing ability is potentially quite relevant to the question of how to treat it. This is an especially important question because alexithymia is notoriously difficult to treat (Ogrodniczuk, Piper, & Joyce, 2011).

Solid evidence that alexithymia may be associated with impairments in ToM comes from a study by Moriguchi et al. (2006). These investigators selected students who were classified as alexithymic on two different measures of alexithymia, the TAS-20 (Bagby, Parker, & Taylor, 1994a; Bagby, Taylor, & Parker, 1994b) and the Beth Israel Questionnaire (Sriram, Pratap, & Shanmugham, 1988). During performance of a mentalizing task the dorsomedial prefrontal cortex (a mentalizing area) (Amodio & Frith, 2006) was more activated in controls than alexithymic individuals, and this difference correlated positively with perspective taking. These results suggest that alexithymia is associated with deficits in mentalizing capacity. These findings were corroborated by Swart and colleagues (Swart, Kortekaas, & Aleman, 2009) who studied undergraduates and found that alexithymia trait as measured by the Bermond Vorst Alexithymia Questionnaire was associated with poorer performance on an emotional mentalization task.

A series of studies by Bird and colleagues, however, suggests that alexithymia as measured by the TAS-20 and ToM functions are independent concepts (Bernhardt et al., 2013; Bird & Cook, 2013; Bird et al., 2010; Cook, Brewer, Shah, & Bird, 2013). They find, for example, that individuals with autism spectrum disorders (ASD) score high on the TAS-20 and that TAS-20, not autism diagnosis, explains neuroimaging findings during an empathy task that involved sharing distress with another person in pain and a facial recognition task (Bird et al., 2010). Given that a deficit in mentalizing capacity is thought to be the core impairment in ASD (Frith, 2001), these results suggest that TAS-20 effectively captures the deficit in affective functioning that characterizes autism and that this impairment is distinctly dissociable from the ToM deficit in ASD.

Additional factors contribute to uncertainty about whether TAS-20 is capturing a deficit in affective ToM. The TAS-20 (Bagby et al., 1994a,b) is a self-report instrument that consistently correlates positively with self-reported negative affect. A study in psychiatric inpatients by Leising and colleagues (Leising, Grande, & Faber, 2009) showed that TAS-20 scores were correlated positively, not negatively, with the number of emotions expressed by patients in videotaped interviews. Similarly, a recent study by Marchesi and colleagues (Marchesi, Ossola, Tonna, & De Panfilis, 2014) indicated that TAS-20 score covaried with the severity of psychiatric symptoms and likely represents a state phenomenon involving negative affect. These observations suggest that the TAS-20 is a measure of distress, not an impairment in the ability to experience and express distress.

This issue takes on added clinical relevance when it is considered that somatic symptom and related disorders, which have been linked with alexithymia (De Gucht & Heiser, 2003), are associated with an impairment in the ability to create mental representations of emotional states. In two separate studies involving different populations and settings, we observed deficits in the ability to represent emotional states, or affective Theory of Mind (ToM), among patients with somatic symptom and conversion disorders (Stonnington, Locke, Hsu, Ritenbaugh, & Lane, 2013; Subic-Wrana, Beutel, Knebel, & Lane, 2010). The deficits in affective ToM were demonstrated using the Levels of Emotional Awareness Scale (LEAS) (Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990), a performance measure of the ability to put emotions into words, and Animations-L (Stonnington et al., 2013; Subic-Wrana et al., 2010), a performance measure of the ability to attribute emotional meaning to movements of animated geometric shapes.

The TAS-20 and LEAS tend to correlate at a low level (Lane et al., 1996; Subic-Wrana, Bruder, Thomas, Lane, & Köhle, 2005), and findings with the two scales tend to diverge when negative affect is introduced as a covariate. For example, Subic-Wrana and colleagues (Subic-Wrana et al., 2005) showed that somatoform disorders were associated with high TAS-20 and low LEAS scores, but when variance due to negative affect was removed the association between somatoform disorders and LEAS was maintained whereas the association with TAS-20 was no longer significant. Together these findings

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات