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The influence of affective behavior on impression formation in interactions between black cancer patients and their oncologists

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ABSTRACT

Objective: Black patients and their physicians tend to form relatively negative impressions of each other, and these may contribute to racial disparities in health outcomes. The current research tested the hypothesis that the interaction between positive and negative affective behavior predicts the most positive impressions in clinic visits between Black patients and their oncologists.

Method: Naïve coders rated patients' and oncologists' positive and negative affective behavior in thin slices from 74 video recorded clinic visits. We examined whether (a) physician positive affect, negative affect, or their interaction predicted patients' perceptions of patient-centeredness, trustworthiness, and confidence in recommended treatments and (b) patient positive affect, negative affect, or their interaction predicted physicians' perceptions of patient cognitive ability, likelihood of treatment adherence, and likelihood of treatment tolerance. We also tested whether affective behavior mediated relationships between race-related attitudes and post-visit impressions or influenced post-visit impressions independently of attitudes.

Results: When oncologists displayed relatively high levels of both positive and negative affect, patients were more confident in recommended treatments but did not rate physicians higher in patient centeredness or trustworthiness. When patients expressed relatively high levels of positive and negative affect, oncologists perceived patients to be higher in cognitive ability and more likely to adhere to treatment recommendations, but no more likely to tolerate treatments. Affective behavior influenced impressions independently of race-related attitudes.

Conclusions: Positive and negative affective behaviors jointly contribute to impression formation in clinic visits between Black patients and oncologists, and may have implications for patient treatment and outcomes in this underserved patient population.

1. Introduction

Affective behavior—verbal and nonverbal displays of emotion, mood, and other feeling states—is a significant factor guiding impression formation. In the context of medical care, the impressions that physicians and patients form of each other have important implications for patients' health outcomes (van Ryn et al., 2006; Penner et al., 2014,2016b; Street et al., 2009). The influence of these impressions may be especially important in interactions between Black patients and their physicians because we know that Black patients typically interact with non-black physicians (Hamel et al., 2015) and that they tend to view each other less positively than they do Black physicians or White patients, respectively (Shen et al., 2017; Street et al., 2007; van Ryn and Burke, 2000). Identifying factors that contribute to more positive impression formation in this context is of significant practical importance as we work towards reducing racial health disparities. The current research contributes to a growing literature on the role of communication in the quality of Black patients' oncology clinic visits, specifically during discussions of cancer treatment options, by examining how affective behaviors conveyed by Black patients and their oncologists during clinic visits influence the impressions they form of each other.

1.1. Affective communication and medical interactions

Verbal and nonverbal communication during clinic visits provides patients and physicians with information that can influence impressions and health outcomes (Levine and Ambady, 2013; Gordon et al., 2006).

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Affective behavior, specifically, may have important implications for impression formation in Black patients' clinic visits (Penner et al., 2013; Levine and Ambady, 2013). In non-medical settings, affective behavior has been shown to signal information about others' current emotional states, interpersonal intentions, and personalities (Knutson, 1996; Van Kleef, 2010); it facilitates effective communication, helping people to navigate complex social situations (Boiger and Mesquita, 2012). For example, expressing sadness or anxiety can evoke sympathy and support; smiling may elicit positive feelings like calmness or hope (Fischer and Manstead, 2008).

The expression of positive affect is associated with a host of positive inferences, including honesty, pleasantness, and sincerity (for a review, see Hess et al., 2002). Past research demonstrates that people prefer smiling physicians to inexpressive ones (Lill and Wilkinson, 2005), and that physician expression of positive affect is associated with patients' perceptions of patient-centeredness (Henry et al., 2017). Physicians perceive patients expressing positive affect to be better communicators, more satisfied with care, and more likely to adhere (Street et al., 2007). More research is needed, however, to better understand whether the expression of negative affect in medical settings is beneficial. Negative emotions are, in general, viewed as socially undesirable (Bastian et al., 2012; Koopmann-Holm and Tsai, 2014), so the expression of negative affect may lead to negative impressions. In one study, physicians' use of words conveying negative affect was associated with being less liked by patients (Falkenstein et al., 2016). In another, patients receiving results from a worried physician felt more anxious and recalled less information than those receiving results from a nonworried physician (Shapiro et al., 1992). On the other hand, negative affect is a typical response to a cancer diagnosis, and people perceive others more positively when they conform to emotion norms and expectations (Blumenthal, 2005; Perry-Parrish and Zeman, 2011). Street et al. (2015) found physician expression of negative affect was associated with increased adherence, suggesting negative affective behavior may be useful in this context.

The effect of negative affective behavior on post-visit outcomes may depend, in part, on whether positive affect is also displayed. Positive and negative affect often co-occur within interactions, and they can have different implications when expressed together than either does when expressed alone (Hershfield et al., 2013; Miyamoto et al., 2010). For example, increased negative affect in married couples' conflict discussions was not associated with divorce years later, but the *combination* of increased negative affect *and* decreased positive affect did predict later divorce (Carrere and Gottman, 1999). However, the existing literature does not clearly indicate how positive and negative affect interact to drive the impressions patients and physicians form of each other. Prior work examining overall expressivity—that is, the extent to which any affect is expressed—in patient-physician interactions suggests that expressing affect in general can be beneficial (Ambady et al., 2002; Griffith et al., 2003). Yet, by combining positive and negative affect into a single construct, this work cannot distinguish whether benefits are driven by high levels of positive affect, negative affect, or a combination of the two. Other work has examined the independent effects of positive and negative affect (Hall et al., 1981; Roter et al., 1987). Hall et al. (1981) found that patients in routine medical visits were more satisfied with their appointments when naïve coders rated the physicians' speech as containing more positive emotion, but also when they rated the physicians' vocal tone as conveying more negative emotion. Roter et al., (2006) speculated that it is the combination of positive and negative affect that is perceived positively in medical settings—perhaps by conveying sincerity, seriousness, and competence. However, an explicit test of this assumption requires examining both the independent *and* interactive effects of positive and negative affective behavior. It is also worth noting that few studies cited here were conducted using samples of primarily Black patients in a real-world medical setting (e.g., Hall et al., 1981). Furthermore, most of this work has examined the effects of physicians' emotional behavior on patients' impressions, with comparatively little focus on how patients' affective behavior influences physicians' impressions. The current work provides an important test of the generalizability of results obtained using standardized or primarily White patient populations, and extends existing work to include physicians' impressions of patients.

1.2. Affective communication and race-related attitudes

Patients and physicians enter clinic visits already holding attitudes and beliefs that can impact their impressions and decisions. For example, Black patients' mistrust of the healthcare system is related to confidence in treatment recommendations (Penner et al., 2017), engagement in genetic counseling (Sheppard et al., 2013), and quality of life (Kinlock et al., 2017). Physicians' biases and stereotypes can guide their impressions and treatment recommendations (Penner et al., 2014; van Ryn et al., 2006). Research in non-clinical settings suggests race-related attitudes and beliefs, such as bias, can manifest in affective behavior (Richeson and Shelton, 2005), suggesting affective behavior may be a mechanism through which race-related attitudes influence post-visit impressions. Yet, other work suggests affective behavior may provide individualizing information that contributes to post-visit impressions independently of preexisting attitudes (Kunda and Thagard, 1996; Senft et al., 2016). Existing literature has not examined relationships between race-related attitudes and affective behavior in clinical settings.

1.3. Current research

In the current study, we build upon existing research by examining how positive affect, negative affect, and the interaction between these influence both patients' and physicians' perceptions of one another and the treatment under discussion. Past research demonstrates the expression of positive affect is associated with perceptions of likability, trustworthiness, and intelligence. Therefore, we hypothesized that when physicians expressed high levels of positive affect, patients would perceive them more positively; and when patients expressed higher levels of positive affect, physicians would perceive them more positively. Second, we expected the expression of negative affect would lead to more positive perceptions, but only when expressed along with positive affect. In other words, we expected the co-occurrence of positive and negative affect to elicit more positive impressions and expectations among oncologists and patients. Specifically, our first hypothesis was that higher levels of oncologist positive affect would yield more positive patient perceptions of (1) oncologist patient-centeredness, (2) trust in the oncologist, and (3) confidence in recommended treatments; and oncologist perceptions of (1) patient cognitive ability (2) likelihood of treatment adherence, and (3) likelihood of treatment tolerance. Our second hypothesis was that positive and negative affect would interact to influence patient and oncologist impressions, such that higher levels of negative affect would positively influence each of these impressions, but only when it was accompanied by high levels of positive affect.

As noted earlier, we know that patients' and oncologists' preexisting race-related attitudes and beliefs influence the outcomes of these interactions, yet we know relatively little about the processes whereby this occurs. We considered two possibilities: affective behavior may mediate relationships between race-related attitudes and post-visit perceptions, or it may provide individualizing information that contributes to post-visit impressions independently of preexisting attitudes.

2. Method

2.1. Participants and setting

Data were from a larger parent study testing the effects of a communication intervention in the outpatient clinics of two urban cancer hospitals in Detroit, Michigan (Eggly et al., 2017). Institutional Review Boards at Wayne State University and participating hospitals approved