Explicit and Implicit Evaluation of Pain Experienced by Ingroup and Outgroup Members: the Case of the Jewish-Arab Conflict

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Abstract

Despite the automaticity of empathy for pain of others, recent research highlights the important role of top-down components and of social categorization factors in determining peoples' empathy to pain. An important question, largely ignored in previous research, concerns empathy to ingroup and outgroup members' pain in the contexts of ongoing intergroup conflict. In the present study we examined how implicit and explicit ethnic social categorization of others affects empathy in the context of the Israeli-Palestinian conflict. To meet this aim, we assessed perceived pain when Jewish and Arab participants viewed a series of visual stimuli, depicting painful and non-painful familiar situations. The stimuli were associated with explicitly or subliminally implicitly primed typical names depicting ingroup, neutral outgroup, and adversary outgroup members. Results demonstrate that when the targets' categories are primed *implicitly*, Jews and Palestinian-Arabs showed no ingroup or ougroup bias. In contrast, pain ratings in the explicit priming provide support for the ingroup empathy hypothesis, positing that empathy to pain is higher for ingroup, than for outgroup members.

Keywords: Empathy, pain, intergroup conflict, ingroup bias, outgroup discrimination, social categorization, social identity

Introduction

Humans possess a remarkable, largely automatic, capacity to share the affective experiences of others. We yawn when we see someone yawn; we wince when an individual's hand slammed in a car door; we suffer when our loved ones are in pain. Empathy refers to our ability to share and understand emotional states of others (Eisenberg & Eggum, 2009). Evolutionary, developmental, social, and neuroscience perspectives underline the importance for survival of investing positively in relationships, and in understanding our own, as well as others' emotions, desires, and intentions (Batson, 2009; Decety and Jackson, 2004;). Various definitions of empathy have been proposed, but two primary components are consistent across numerous conceptualizations: (1) an emotional response to another person, which entails

sharing that person's emotional state, and (2) a cognitive capacity to take the perspective of the other person, while keeping self and other differentiated (e.g., Batson, 1991; Decety and Jackson, 2004; Hodges and Wegner, 1997; Shamay-Tsoory, 2009). Therefore, Empathy is thought to be both an inductive, affective and cognitively evaluative process (Hoffman, 2007), affording the individual vicarious experiences of other's feeling-states that informs and augments subsequent responses.

The underlying possible mechanism of empathy to others' pain may be evolutionarily adaptive on several levels. On one level, it may aid in the immediate perception and avoidance of a threat to oneself, a crucial avoidance response to survive (Yamada & Decety, 2009). On another level, empathic concern may also serve a pro-social function, by facilitating cooperation between family members who share a similar genetic makeup or between members of a mutually beneficial social group (de Waal, 2008).

Although empathy is not unique to humans (e.g., Ben-Ami Bartal, Decety & Mason, 2011; Langford et al., 2010), with the development of humans' higher cognitive abilities, emotional contagion has evolved into more complex forms of empathy, specifically into ones which require self-other decoding and cognitive flexibility (de Waal, 2007; Decety, 2011). Thus, we may distinguish between two distinct components associated with an empathetic experience: an unconscious, implicit component and a conscious explicit one. While the first is a bottom-up, automatic and affective component, the second is a top-down component which involves complex cognitive constructs like attitudes, beliefs, stereotypes, etc.

It has been suggested that these social and cognitive factors modulate the automatic response in ways which influence a person's perception and reaction to how another person feels and is affected by a given situation, and how he or she would feel and would be affected had he or she been in the place of the other person (Batson, Early, & Salvarani, 1997). It was also proposed that the modulating role of the cognitive component is influenced by the empathizer sense of self-other overlap, which determines the extent to which the representation of the other comes to resemble his or her self-representation (Decety, Echols, & Corell, 2009). An increased self-other overlap occurs when participants can imagine themselves in the other's place, or when they imagine what it is like to be that other (Davis et al., 1996 ;Lamm, Meltzoff, & Decety, 2009).

An important empathetic response, which constitutes the focus of the present study, concerns people's empathy to others' pain. Despite the automaticity of empathy for pain, recent research highlights the important role of top-down components and of contextual factors in determining the peoples' empathy to pain. Empirical research has demonstrated that the empathic response

to pain is either strengthened or weakened when contextual variables are manipulated (Hans et. al, 2009). Such variables include intent of the perpetrator to harm the other (Akitsuki & Decety, 2009), perceived fairness of the target (Singer et al., 2006), whether a person's appraisal of the target's pain is cognitive or sensory (Lamm, Nusbaum, Meltzoff, & Decety, 2007), racial group membership (Gu et al., 2010), and whether the individual in pain belongs to a stigmatized group (Decety, Echols, & Corell, 2009; Tarrant, Dazeley, & Cottom, 2008). It was also shown that adding diverse social dimensions to an empathy-inducing context produces an empathic response, accompanied by activation of brain regions associated with cognitive control (Lamm, Meltzoff, & Decety, 2009),

An important upper-level module affecting empathy is social categorization. According to Social Identity Theory (Tajfel, 1982; Tajfel & Turner, 1986) and the Self Categorization Hypothesis (Turner, 1985, 1987), categorization transforms social perception. Rather than seeing people as idiosyncratic and unique individuals, they are viewed as category representatives (Weelan, 2005). Categorizing oneself as belonging to a certain group entails modulation of personal norms, attitudes, and feelings in relation to what is accepted or normative in the ingroup. Detrimental consequences to categorization occurs when outgroup members are viewed through the lens of negative stereotyping and prejudice (Billing & Tajfel, 1971). On a behavioural level categorizing others as ingroup and outgroup members often produces ingroup favouritism and outgroup derogation (Billing & Tajfel, 1971; Brewer, 1999; Gaertner, & Dovidio, 2000; Hewstone, Rubin, & Willis, 2002).

Social categorization also affects people's emotional responses (Smith, 1993). For example, Gordijn, Wigboldus, and Yzerbyt (2001) found that anger was less likely to be experienced in response to harmful intergroup behavior when victims of that behavior were categorized as outgroup members, compared to when they were categorized as ingroup members. Brown et al. (2006) found that the reaction of African American and European American participants to pleasure and displeasure arousing pictures were significantly stronger when the protagonist was from the same race as the participants (an ingroup member) than when the protagonist was from another race (an outgroup members). Similarly, Serino et al. (2009) found that participants who were exposed to barely noticeable tactile stimulation on their faces, detected the stimulation more easily when they watched target faces belonging to members of their own ethnic or political group, than when they watched target faces of a different ethnicity or political affiliation. Another convincing evidence for the importance of social categorization on empathy to pain is the finding that empathy to painful stimulations was higher to in-group than to outgroup racial-faces (Xu, Zuo, Wang, & Han, 2009).

An important question hardly addressed in previous research, concerns empathy for ingroup and outgroup members' pain in the contexts of ongoing intergroup conflict. It is still unclear whether diminished empathy toward outgroup members is mainly the result of decreased activation of lower-level implicit, automatic processing components, or from greater subsequent inhibition by higher-level, explicit cognitive components. We also do not know to what extent the bias detected in empathy for pain is the result of ingroup favouritism vs. outgroups derogation. Another interesting, yet unexplored, question pertains to the possibility that in the context of ongoing intergroup conflicts, people might not only feel heightened empathy to the pain experienced by ingroup members, as opposed to possible decrease in empathy to pain experienced by outgroup members, but they may also experience fear and intimidation by the latter's pain. In such case, empathy toward an adversary group member might be substantially diminished, and even replaced by aversive feelings such as fear, causing avoidance and more animosity. These issues constitute the main objectives of the present study. In particular, focusing on the protracted Israeli-Palestinian intergroup relations, we investigated the empathetic responses towards the pain experienced by ingroup and outgroup members under conditions of an intractable intergroup conflict.

To address the aforementioned questions, we conducted an experiment designed to test the specific mechanisms underlying empathy for pain for ingroup and outgroup members in the context of the Israeli-Palestinian protracted conflict. Specifically, we compared Jews and Palestinian-Arabs evaluation of pain experienced by ingroup and outgroup members under conditions of low (implicit) and high (explicit) priming of group membership. We hypothesized that under the explicit priming condition, Jewish and Palestinian-Arab participants will exhibit more empathy towards ingroup than outgroup members. In contrast, we hypothesized that when the ingroup/outgroup social categorization of the target is elicited subliminally (thus restricting the activation of the top down cognitive system), both Jewish and Palestinian-Arab participants will exhibit similar levels of empathy to pain towards ingroup and outgroup targets. On the other hand, when elicitation of the social categorization is performed explicitly, both Jewish and Palestinian participants will be affected by social categorization biases, stereotypical evaluations and other higher-order cognitive processes, causing them to suppress their empathy to an outgroup, increase their empathy to an ingroup member, or both.

Method

***Participants*:** 80 Jewish (40 males, 40 females) and 80 Palestinian-Arabs (40 males, 40 females) students, all Israeli citizens, participated in the experiment. They were recruited from

the University of Haifa community through advertisements. Forty participants (20 Jews and 20 Palestinian-Arabs) completed a pain evaluation task in which the names of targets experiencing pain (Jews and Palestinian-Arabs) were displayed explicitly. The rest of participants completed an identical task in which the targets' names were displayed subliminally. Written informed consents were obtained. Participants were paid 30 NIS (about $8) each for their participation.

Pain evaluation task: The pain evaluation task utilized in the experiment was the task designed by Jackson, Meltzoff, & Decety (2005), which consists of a series of digital color photographs showing right hands and right feet in painful and non-painful situations. All situations depict familiar events that can happen in everyday life. Various types of pain (mechanical, thermal, and pressure) are represented. For each painful situation, there is a corresponding neutral picture, which involved the same setting without any painful component. A selected series of 40 stimuli were presented randomly, following a 750ms presentation of different common names of either Jews, Palestinian-Arabs or Europeans (see Figure 1). The adapted version of the task was controlled via the software package E-prime 2.1 and involved stimuli which included (1) right hands in painful situations, (2) right hands in neutral situations, (3) right feet in painful situations, (4) right feet in neutral situations. Participants were asked to rate the degree of pain felt by the target using a visual analogue scale (VAS) using the computer mouse (0 - no pain, 10 - most painful).

Procedure: The experiment was conducted in the Social Psychology Laboratory at the University of Haifa, and approved by the local Ethics Committee. Participants were randomly assigned to either condition (explicit or implicit) and were invited individually, one at a time, and given written instructions detailing their respective experimental task.

Explicit Priming Condition: In the explicit condition task participants were first presented for 750 ms with different common names of Jews, Arabs or Europeans. Following each name, they were presented with a picture showing either a painful or a non-painful situation (see Figure 1). After each presentation of a name and subsequent picture, participants were requested to rate the intensity of the pain experienced by the target presented in the stimuli. They were instructed to report their ratings as quickly as possible on the VAS. The experiment consisted of 40 trials in total (20 painful and 20 non painful stimuli). In all sessions, the same name was always tagged with the same picture and the combinations of names and pain or no-pain stimuli were randomized between subjects. The task began with 3 practice trials, followed by the test blocks.

Implicit Priming Condition: This condition was similar to the explicit condition, except that the names tagged to the targets in the pictures were presented subliminally. The refreshing rate of the screen was set at 120 Hz. in order to ensure that the primed words were not recognizable (unconscious), prime duration was set to 25 ms. (3 frames). The presence of the prime was not mentioned to the participants. To insure that participants were not aware of the prime stimuli, we used a debriefing procedure in which participants were interviewed about the procedures used in the study.

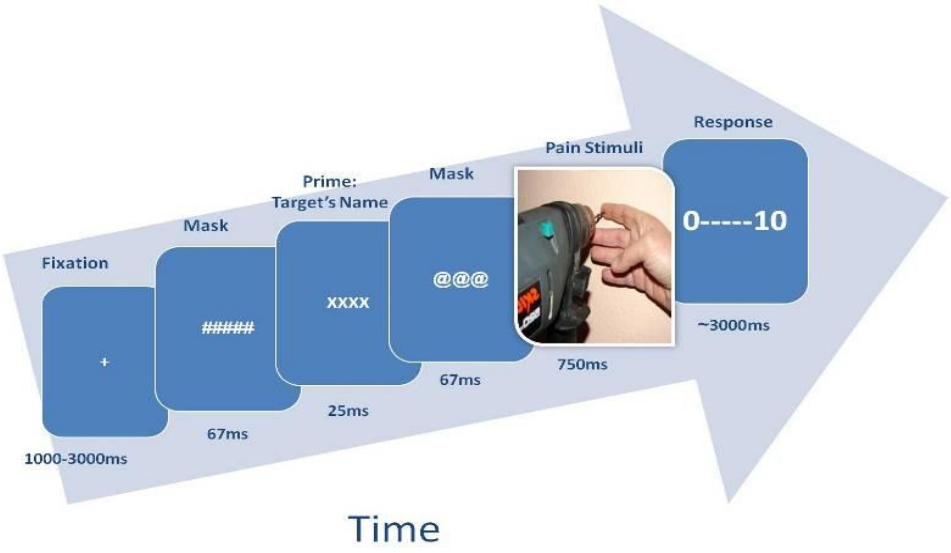

Figure 1. Experimental design: sequence of events in the implicit priming condition: 1. A fixation point, 2. forward mask, 3. subliminally primed target name (restricted to 25ms), 4. backward mask, 5. pain stimuli, 6. empathic response (scale 0-10). In the explicit condition, the target prime was visible and therefore did not require masking. The events for this condition were: 1. a fixation point, 2. explicitly primed target name (750ms), 3. pain stimuli, 4. subjective pain ratings.

Selection of targets' names: The selection of the targets' names was based on a preliminary study in which 120 students from the University of Haifa (60 Palestinian-Arabs and 60 Jews), all Israeli citizens, were asked to report what they believe are the five most common names of Palestinian-Arabs, Jews and Europeans. From a total list of 96 names 5 names with the highest frequency rates were selected for each group. The selected Jewish names were Moshe, Avi, Yits'hak, Yesrael, and Shimon, the Arab names were Ahmad, Mohamed, Abed, Saleem and Ali and the European (neutral outgroup) names were Chris, John, Mark, Martin and Paul.

Results

To control for baseline differences in pain ratings, an overall pain score was calculated for each participant based on the difference between the pain and the no pain (baseline) ratings. We conducted a multivariate analysis of variance (MANOVA) with repeated measures on the difference between the pain and the no pain ratings, with participant ethnicity (Jewish, Palestinian-Arab) and pain priming (implicit, explicit) as between-subjects factors and the target's category (ingroup, adversary outgroup, European neutral outgroup) as a within-subjects factor. This analysis revealed significant main effects for target's category [$F(2, 298)=7.682$, $p<0.001$], for the interaction between participant ethnicity and pain priming [$F(2, 298)=16.857$, $p<0.0001$], for the interaction between target category and pain priming [$F(2, 298)=4.960$, $p<0.008$] and for the three way interaction between participant ethnicity, pain priming and by target category [$F(2, 298)=11.501$, $p<0.0001$].

To further explore the source of the three-way interaction, separate two-way multivariate, repeated measures, analyses were conducted on the explicit and implicit ratings. These analyses revealed a significant interaction between participant ethnicity and target category under the explicit condition [$F(2,158)=34.123$, $p<0.001$], but not under the implicit condition [$F(2,140)=0.274$, NS]. Follow-up tests of within subject contrasts revealed that in the explicit priming condition both Jewish and Palestinian-Arabs rate the pain of ingroup targets significantly higher that the pain of adversary outgroup targets [$F(1, 40)=68.528$, $p<0.0001$ and $F(1, 39)=11.517$, $p<0.002$, for Jewish and Palestinian-Arabs, respectively]. Similarly, participants rated the pain ingroup targets higher than the pain of neutral outgroup targets [$F(1, 40)=45.027$, $p<0.0001$ and $F(1, 39)=24.145$, $p<0.0001$, for Jewish and Palestinian-Arabs, respectively]. Moreover, independent t-tests in the explicit condition revealed that Jews rated the pain of Jews (their ingroup) significantly higher as compared to Palestinian-Arabs [$t(79) = 8.22$, $p<0.001$], whereas Palestinian-Arabs did not rate the pain of Arabs (their ingroup) as significantly higher than Jews [$t(79)=-0.657$, NS], suggesting that the ingroup bias detected for Jews was higher than the ingroup bias detected for Arabs. The mean differences in pain ratings under implicit and explicit priming as a function of target group and participant ethnicity are depicted in Figure 2.

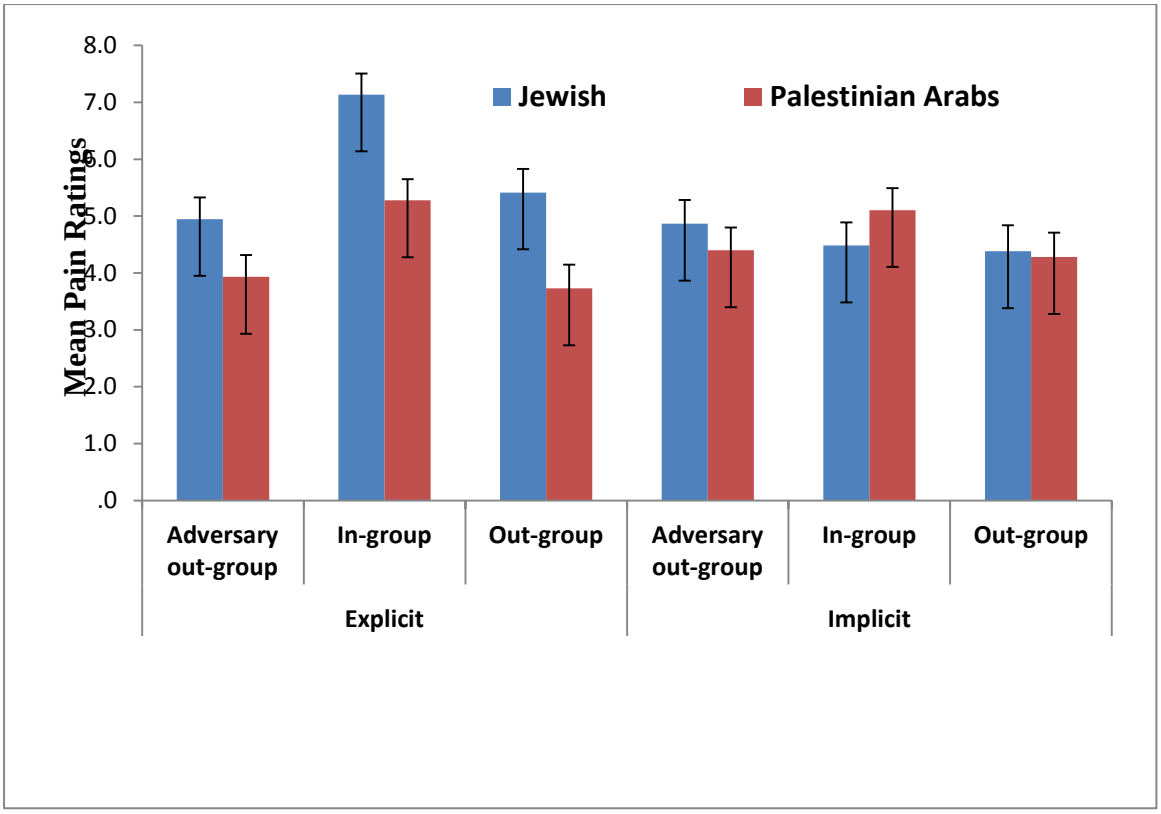

Figure 2. Mean pain ratings under implicit and explicit priming as a function of target group and participant ethnicity.

Finally, although we had no *a priori* hypotheses regarding potential gender differences, our analysis revealed a significant main effect for gender [$F_{(1,145)} = 4.49$, $P = 0.036$]. On the other hand, no interactions of gender with any of the tested factors were detected. The mean pain rating of females (M = 6.81, SD = 1.85) was higher than the mean pain rating of males (M=6.33, SD=1.88). This result is consistent with previous reports indicating that the value placed on emotional expression is influenced by gender differences (Matsumoto, 1993; Tsai et al., 2002).

Discussion

In line with recent evidence supporting the ingroup empathy bias (Forgiarini et alk., 2011; Whitmarsh et al., 2011; Cheon et al., 2011) the results from this study demonstrate that individuals rate the pain of ingroup members higher as compared to neutral and adversary outgroup members. Interestingly, our findings reveal that when the targets' categories are primed *implicitly*, Jews and Palestinian-Arabs showed no significant ingroup or ougroup bias. For us this finding is of particular significance, since it seems to suggest that at the

unconscious, automatic, level, the evaluation of others' pain by both Jews and Palestinian-Arabs, who belong to two adversary groups with an on-going violent conflict, is not affected by the victim's group affiliation. If reproduced in future research on other social (ethnic and other) groups in conflict, such a finding could lend support to the view that the evolutionary developed, unconscious component of empathetic responses to the pain is entirely interpersonal, in the sense that it is determined only by the fact that the victim of pain is human, and not by the victim's social category. It may be speculated that evolution have favored such response, as being adaptive for human survival, particularly in early periods of history, when small scale societies were comprised of few families who lived in relative seclusion from other groups. Moreover, the fact that the modulation produced by the explicit priming of social categories was relatively small (see figure 2) suggests that peace and reconciliation initiatives between Jews and Palestinians might benefit from emphasizing shared humanistic values in concert with educational and other interventions aimed at reducing xenophobia, negative attitudes and stereotyping of the adversary group members.

Interestingly, for the Palestinian-Arabs no significant difference was detected between their pain ratings in the implicit and the explicit priming conditions. In contrast, Jewish participants gave higher pain ratings under explicit priming, particularly to ingroup others. With regard to the Palestinian-Arabs, we attribute this result to their minority status, which renders them more dependent on the majority's actions and more sensitive to cues regarding majority members and the majority-minority conflict.

Consistent with previous studies on the effects of social categorization on discrimination (Tajfel et **a**l., 1971; Mummendey, 1995; Gaertner & Insko, 2000), stereotyping (Taylor,1981; Zarate & Smith, 1990) and emotional responses (Brewer, 1999; Smith, 1993; Gordijn et al., 2001), our findings indicate that providing explicit queues for ethnic categories, produced higher evaluation of ingroup members' pain (in-group favouring bias) and did not produce lower evaluation of outgroup members' pain (out-group derogation). The finding showing that under explicit priming, Jewish participant demonstrated a strong ingroup-bias that Palestinian-Arab participants may be attributed to higher levels of insecurity and Xenophobia among Jews that among Palestinian-Arabs.

Based on our findings an interactive model of two components involved in empathy to pain may be suggested. According to our theoretical framework these components are: 1) a low level shared pain component automatically activated when presented with 'self' or 'other' pain, 2) a higher level system responsible for social categorization and social identity processing. As described in the model, the empathic response integrates both bottom-up and

top-down processing. While the low level, bottom-up system, is automatically activated when presented with self or other's pain, the high-level, top-down is a complex system comprised of the cognitive processes responsible for 'self-other' decoding, social categorization and social identity processing. It is suggested that the low level, the high level act together to produce the empathic response. We show here that when elicitation of the social categorization is performed explicitly, the higher level, top-down cognitive system is activated, both Jewish and Arab participants inhibit their empathic response to an outgroup, but not to an ingroup member. On the other hand, the lack of difference between ingoup and outgroups ratings of pain suggests that indeed the lower level system operates in an automatic mode.

The fact that the detected intergroup bias for both groups is foremost the product of preferential evaluation of the pain of ingroup members, rather than of devaluation of the pain of outgroup members, is of particular significance, particularly when one considers the high intensity of the ongoing conflict between the two investigated groups. In Brewer's terms, it appears that even in the context of the protracted and violent Israeli-Palestinian conflict, the modulation created by category membership is predominantly the product of "ingroup love" rather than an "outgroup hate" (Brewer, 1999) . Notwithstanding, we think that further testing of this finding on laboratory constructed conflicting groups and on real adversary social groups in other areas of the world, is needed to further validate the proposition that stigmatizing a social group as "the enemy" does not have a significant effect on the evaluation of pain suffered by its members.

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