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ORIGINAL ARTICLE

The impact of thinking about supportive relationships on interpersonal defensiveness. Does it matter who thinks, about whom, and in what way?

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BACKGROUND

The aim of this study was to test the effects of thinking about supportive relationships on interpersonal defensiveness among participants with different levels of attachment security. The effects were examined depending on closeness with a visualized person and an ecosystem or egosystem perspective of thinking about him/her.

PARTICIPANTS AND PROCEDURE

After taking the bogus emotional intelligence test and completing the attachment questionnaire, the participants (N = 124) visualized an acquaintance or a close person, adopting the ecosystem or the egosystem perspective on thinking about him/her. Subsequently the participants received unfavorable feedback on their bogus test results and completed measures of defensiveness in an anticipated conversation with the researcher.

RESULTS

The high-securely attached individuals reported less comfort in an anticipated conversation with the researcher after close well-wishing person visualization than after well-wishing acquaintance visualization. The low-securely attached participants showed greater emotional openness to the researcher after ecosystem thinking about any wellwishing person than after egosystem thinking.

CONCLUSIONS

The key results suggest that some aspects of interpersonal defensiveness among insecurely attached people can be reduced by a shift from an ego- to an ecosystem perspective of thinking about their relationships. In the next research step, it seems especially important to explore whether therapeutic work focusing on ecosystem orientation can overcome the attachment problems in relationships.

KEY WORDS

attachment; defensiveness; close relationships; egosystem and ecosystem perspectives

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BACKGROUND

The results of numerous experimental studies in which a temporary sense of security was stimulated by means of the subliminal or supraliminal exposition of words, images or visualizations activating mental representations of supportive people (called security priming) suggest a beneficial influence of this procedure on many areas of human life.

IMPLICIT VS. EXPLICIT THINKING ABOUT SUPPORTIVE RELATIONSHIPS

Implicit (subliminal) or explicit (supraliminal) thinking about supportive relationships can be useful for intrapersonal and interpersonal functioning, e.g., for a positive mood, compassion, altruistic help, tolerance towards out-group members (Mikulincer & Shaver, 2001; Mikulincer, Shaver, Gillath, & Nitzberg, 2005), willingness to learn about and explore one's personal weaknesses (Kumashiro & Sedikides, 2005), increasing self-worth (Arndt, Schimel, Greenberg, & Pyszczynski, 2002; Schimel, Arndt, Pyszczynski, & Greenberg, 2001) or positive interpersonal expectations (Carnelley & Rowe, 2007; Pierce & Lydon, 1998). What is more, subliminally security priming seemed to reduce symptoms of mild PTSD (Mikulincer, Shaver, & Horesh, 2006) as well as distortions in body image in women with eating disorders (Admoni, 2006). The desired effects of security priming continued in the participants from several seconds to several weeks, depending on the frequency of repetition and the type of priming. The promising results of the experiments prompted the researchers to conclude that the repetitive priming of attachment security in the laboratory can "roughly" reflect the process of how repeated interactions with attachment figures affect the formation of attachment in real conditions. Security priming could therefore be used in further research deepening the understanding of the process of creating secure attachments, but also in clinical practice as a complement to the therapy for people with insecure attachments (see e.g. Carnelley & Rowe, 2007; Gillath, Selcuk, & Shaver, 2008). However, the application of the implicit and explicit kinds of this procedure in psychotherapy settings creates some difficulties.

The main problem with using the implicit security enhancing procedures (e.g., names, words or pictures related to a supportive secure person) in a psychotherapeutic context can be of technical nature. Effective subliminal priming requires taking control of many factors, e.g., adjusting the exposure time of subliminal stimuli to an individual subject, preparing adequate techniques for masking these stimuli to hide the true purpose of priming (see Mayer & Merckelbach, 1999 for a review). Fulfilling these conditions is difficult even in laboratory settings (Baldwin, 2007). On the other hand, Mayer and Merckelbach (1999) argue that the effects of subliminal stimulation are too subtle to use as therapeutic interventions into clinical problems, which are usually linked to strong emotions and radical behaviors.

The basic problem with explicit thinking about supportive relationships relates to poor or undesirable effects on people with an insecure attachment style and other attachment-related or psychological difficulties. For example, the general beneficial effects of recalling a close accepting person on a positive mood (Mallinckrodt, 2007) and on creative problem solving (Mikulincer, Shaver, & Rom, 2011) decreased in the case of participants with a relatively high anxious attachment. Similarly, in Mikulincer, Shaver, Bar-On, and Ein-Dor's (2010) study, after conscious thinking about the beginnings of their romantic relationships, the participants with an anxious attachment style showed an ambivalent and avoidant tendency towards closeness. In both studies, people with an avoidant style displayed neither favorable nor adverse effects of explicit security priming. In another study close relationship visualization influenced depressed and non-depressed women differently. The former experienced a decreasing, the latter an increasing stress level (Cyranowski, Hofkens, Swartz, & Gianaros, 2011).

EXPLICIT THINKING ABOUT SUPPORTIVE RELATIONSHIPS AND ATTACHMENT INSECURITY

A convincing explanation for the negative effects of explicit thinking about supportive relationships among anxiously attached individuals is offered by Mikulincer et al. (2011). They suggest that anxious individuals are initially likely to think about situations in which their close ones provide them with their support; afterwards, however, they move to associated thoughts of insufficient support or to questioning the motives behind it. In consequence, some negative images and feelings emerge, undermining the expected effects of close relationship visualization. Lack of significant effects of supportive relationship visualization in avoidantly attached people was not directly commented on in the literature. Probably it is related to the specific nature of the functioning of avoidant people, whose close relationships are marked by "contact trauma" (e.g. Mikulincer, Shaver, & Pereg, 2003). Establishing close relationships, but also recalling them in memories, can evoke in those people reactions of avoiding closeness and make it difficult for them to seek real or symbolic, imagined support.

The adverse or insignificant effects of explicit security priming for people with bad memories of close relationships make researchers more likely to use subliminal exposure in experiments. It is brief enough (less than 500 ms) to "prevent" a chain of bad associations connected with closeness or defensive reactions against experiencing it. Unfortunately, it is also less well adapted to real-life conditions than the supraliminal one and more difficult to use therapeutically outside the laboratory.

The undesirable effects of thinking about a supportive person among insecurely attached people can depend on the emotional closeness of visualized relationships. The closer they are, the deeper are the feelings of emotional pain (or defensive reactions against it) that can be induced if some problematic memories are recalled. To circumvent this kind of negative effect, Gilbert and Procter (2006) suggested to their patients that they should not visualize human-like supportive images but those supportive images which would just be a personal creation, unnecessarily associated with the idea of man. The patients could generate e.g. their own images of "a safe place", a tree, a sea or an animal, attributing human qualities like acceptance or wisdom to them. In this way a sense of emotional security could be induced while omitting some potentially negative feelings. It is likely that insecurely attached people can achieve similar results by thinking about supportive but nonclose relationships, e.g. recalling some disinterested help received from a well-wishing official.

Another possible way of bypassing the negative spillover effects of thinking about supportive relationships can be to adopt a specific motivational perspective. Crocker, Olivier, and Nuer (2009) distinguished two motivational perspectives on thinking about relationships: egosystem and ecosystem. The former is based on a competitive or zero-sum view (one person's gain means another's loss) of relationships and refers to adopting self-image goals. The latter is based on perceiving relationships as cooperative or nonzero-sum (one person's gain is another's gain) and having compassionate goals, i.e. being constructive and supportive to others.

Crocker and her colleagues (Crocker & Canevello, 2008; Canevello & Crocker, 2010; Crocker, Canevello, Breines, & Flynn, 2010), in a series of daily and weekly report studies of individuals and roommate dyads, found that having self-image goals led to decreased regard for their roommates, less supportive relationships, less responsiveness to their needs on the part of their roommates, and increased levels of depression and anxiety. On the other hand, the participants with compassionate goals received greater regard from their roommates, more responsiveness to their needs, revealed more supportive relationships, and low levels of depression and anxiety. Crocker (2011) interprets these results as the paradoxical effects of ego and ecosystem goals - when people focus on satisfying their own desires, they may create what they do not want, whereas if they take others' well-being into account, they may experience what they want for themselves.

As Baldwin, Keelan, Fehr, Enns, and Koh-Rang-Rangarajoo (1996) indicated, people with an insecure attachment style as adults have a diverse network of supportive relationships and memories related to them, some of which, however, are of a "secure" character. Access to memories supporting a relationship, accompanied by a greater sense of security, may depend on the type of a motivational perspective adopted during visualization. Thinking about supportive relationships in an egosystem perspective may bring back memories of being examined by others and probably experiencing themselves as being "at their mercy" (see Crocker, 2011). Evoking this kind of memories, especially among insecurely attached people, can trigger a sense of helplessness and other negative feelings, making interpersonal contacts even more difficult (see Crocker, 2008). On the other hand, ecosystem thinking about a supportive person may bring back memories in which individuals perceive themselves as agents who are able to receive desirable goods by initiating a positive exchange of them. In this way the participants may experience themselves as being "at the source" of desirable goods (see Crocker, 2011). Even for insecurely attached people this sort of experience can probably increase the sense of hope (see Cheavens, Feldman, Woodward, & Snyder, 2006) or other positive feelings promoting interpersonal contacts (see Crocker, 2008).

Kuncewicz, Niiya, and Crocker (2015) proved that ego- and ecosystem motivations are equivalent constructs in the U.S., Japan, and Poland and have similar implications for several aspects of relationships and growth regardless of cultural context. The pancultural nature of both constructs supports the legitimacy of including them in research conducted also in our country.

STUDY CONCEPTION

The previous considerations provided some arguments for the positive emotional and interpersonal effects of explicit thinking about supportive relationships in the case of securely attached people and potentially negative or insignificant effects for insecurely attached ones. We also indicated potential ways of bypassing the undesirable effects by controlling closeness and a motivational perspective of visualized relationships. So far, no research has been conducted that would allow one to better understand, and subsequently find a way of bypassing undesirable reactions of explicit security enhancing procedures. Therefore, an experiment was designed to examine the effects of closeness and a motivational perspective on interpersonal defensiveness.

In clinical terms, defensiveness typically refers to cognitive processes protecting an individual from excessive anxiety and other negative emotions, loss

of self-esteem or loss of self-integration (see Cramer, 2000 for a review). Next, in the relationship context, the concept of defensiveness is usually understood as protecting the self (through fight-or-flight responses) against rejection by significant others and social groups (Downey, Mougios, Ayduk, London, & Shoda, 2004; see Murray, Holmes, & Collins, 2006). We presumed that interpersonal defensiveness is one of the key features inhibiting optimal emotional disclosure and consequently the development of satisfying close relationships (see Kahn, Hucke, Bradley, Glinski, & Malak, 2012). Exploring some effective ways of overcoming interpersonal defensiveness seems important particularly for insecurely attached people who manifest defense reactions in their relationships. For example, avoidant individuals often protect their independence and keep an emotional distance in relationships while anxious ones focus on controlling and clinging to them for fear of being rejected (Mikulincer et al., 2003).

Our study focused strictly on the participants' defensiveness towards the researcher after receiving negative (bogus), self-threatening feedback from him/her on the results obtained in the emotional intelligence test (see the experimental procedure by Kumashiro & Sedikides, 2005). We assumed that defensiveness towards the researcher after receiving self-threatening feedback may be manifested by: the participants` unwillingness to receive more information from him/ her about these unfavorable results, anticipated discomfort in a conversation with him/her about these results, and unwillingness to tell the researcher more about their emotions during this conversation.

To examine the impact of the closeness of visualized relationships on interpersonal defensiveness, we instructed the participants beforehand to think about the closest well-wishing person or a non-close well-wishing acquaintance. To control ego- and ecosystem reactions within supportive person visualization, we directed the participants' attention to different kinds of memories, related to these visualized people. The individuals focused on their self, examining themselves to decide if they deserved to receive something good from a well-wishing person (the egosystem perspective adoption), or focused on their needs and on their own initiative to start a positive exchange of something good with them (the ecosystem perspective adoption). In order to test the significance of closeness level and a kind of perspective on thinking about supportive relationships for insecurely attached participants, measurement of attachment security was also conducted.

Taking into account the general stress-buffering effects of close supportive person visualization (e.g., Cyranowski et al., 2011; Kumashiro & Sedikides, 2005) we assumed that after the visualization of a wellwishing close person the participants would manifest less defensiveness towards the researcher than after well-wishing acquaintance visualization (H1). Assuming that ego-systemic thinking about a supportive relationship focuses primarily on the aspect of assessment and rivalry, while eco-systemic thinking tends to concentrate on the cooperative exchange of goods (see Crocker & Canevello, 2008; Crocker, 2011), we expected that the adoption of an ecosystem perspective in thinking about a well-wishing person would cause weaker defensiveness towards the researcher than adoption of the egosystem perspective (H2).

Insecurely attached individuals hold more problematic memories of supportive relationships, marked by greater distrust towards their relatives and friends than securely attached ones (e.g., Fitzpatrick & Lafontaine, 2017). Evoking such memories sometimes causes distrust and, as a result, strengthens a defensive attitude towards an anticipated conversation with the researcher. Thus, we presumed that in the case of insecurely attached individuals, thinking about a close well-wishing person would cause more defensiveness towards the researcher than thinking about a well-wishing acquaintance (H3). Memories concerning supportive relationship, held by people with an insecure attachment pattern, are often accompanied by thoughts about support insecurity (e.g., whether it is at all possible, whether I deserve it, etc.) and a sense of helplessness (see Mikulincer et al., 2003). The ego-system way of thinking about supportive relationships, which focuses on the assessment and dependence on another person's support, can strengthen such a sense of helplessness, but also an attempt to protect oneself from it. In turn, adopting the ecosystem perspective increases the likelihood of evoking memories in which the protagonist - perhaps under favorable circumstances - initiated an effective exchange of support with another person, and thus gained a sense of certainty and security (see Crocker, 2008, 2011). Therefore, we think that even in the case of insecurely attached participants, ecosystem thinking about a well-wishing person would produce relatively less defensiveness to the researcher than thinking about him/her in an egosystem way (H4).

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

A hundred and twenty-four (92 females and 32 males) full-time and part-time psychology students of the SWPS University of Social Sciences and Humanities (USWPS) participated in the study in exchange for coffee and cake vouchers. Ethical approval for the study was obtained from the Ethics Board of the USWPS. The students were invited to take part in a study into "relationship and emotions" through advertisements put on the campus and on the Internet. The age ranged from 19 to 43 (M = 24.60, SD = 5.50).

PROCEDURE AND MEASURES

The study was carried out individually or in small groups of 2-4 people in one of the rooms of the USWPS Experimental Research Laboratory. The cover story was that they would engage in two independent tasks. One would consist in filling in a few questionnaires, including the emotional intelligence test EQ-R(PL), which had been tentatively adapted to Polish cultural differences. The other was presented as the "visualization-reflective task". To minimize the impact of the researcher's personality on the course of the test, all necessary instructions had been printed and included in the test sets. During the study, the researcher was available in the adjacent room. His/her role was to collect and hand out successive test tasks.

Questionnaire task. The first questionnaire to be completed was the bogus EQ-R(PL) test. It contained 30 statements relating to various aspects of emotional and relational experience (e.g., "When I experience positive emotions, I know how to make them last") and a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). After doing the bogus test the participants were asked to show the results to the researcher (to have them calculated quickly during the next stages of the research) and – after finishing the whole study – to answer a few questions regarding their perception of the emotional intelligence test.

Subsequently, the participants completed *the Demographic Survey* and *the Relationship Questionnaire*. The latter (Bartholomew & Horowitz, 1991; Polish translation: Kuncewicz, 2012), which had been prepared using the back-translation procedure, consisted of four short paragraphs describing different prototypical attachment patterns (secure, fearful, preoccupied, dismissing) that applied to close peer relationships. The participants were asked to rate the degree to which each prototype is true for them on a 7-point scale (1 - not at all like me, 4 - somewhat like me, 7 - very much like me). Then the participants began the second announced task.

Visualization-reflective task. Within this task the participants were randomly and evenly allocated to four experimental conditions.

In the *close person/ecosystem perspective condition*, the participants first performed the visualization task. They thought about their closest well-wishing person (excluding parents and children so as to control clear asymmetry of supporting or being supported within relationships), with whom they kept in close touch regularly. They also wrote down the person's initials, the relationship type (partner, friend, etc.), and spent 2-3 minutes imagining that person sitting next to them, especially thinking (not writing) about his/her typical clothes, facial expressions and voice. In the next "reflective" part, everyone was asked to recall a situation when they had done something (e.g., a friendly gesture, a warm smile, kindness, help, support, nice words) that positively influenced that person, who in response had done something that influenced them. Next, they were asked to answer three questions ("What did you do for him/her...? How did he/she react...? In what way did his/her reaction influence you...?").

The participants in *the close person/egosystem perspective condition* also thought of the closest wellwishing person for 2-3 minutes in the same manner as previously. The reflective part, however, started with a different instruction. Everyone was asked to think about their chosen person and – even without having any knowledge of the person's actual opinions – reflect on his/her possible perception and evaluation of them. They were also instructed to answer some questions ("What does he/she think about your helpfulness...? What does he/she think about your re-sponsibility...?").

In the *acquaintance/ecosystem perspective condition* the participants performed their visualization task in the same manner as before but they had to think of a familiar well-wishing person with whom they were in regular touch but did not share any close relationship. Subsequently, they completed the reflective task described above of recalling the exchange of something positive with the visualized person.

The participants assigned to the *acquaintance/ego-system perspective condition* in their "visualization" part also had to think about a familiar well-wishing person but next they completed the previously described reflective task of recalling what the visualized person thought about them.

Afterwards, to make a check on the above manipulation procedure, the participants rated: how much they felt 18 feelings (love, joyful, giving, empathy, connectedness, sympathy, gratitude, pride, contentment, clarity, vulnerability, criticism, humiliation, selfishness, fear, sadness, confusion, anger) on a scale from 1 – not at all to 5 – extremely (the feelings scale taken from Crocker, Niiya, & Mischkowski's studies, 2008; Polish translation: Kuncewicz, 2012); how well they managed to visualize a well-wishing person (1 – I have great difficulty with it; 7 – I still have vivid memories of that person); how important that well-wishing person was in their life (1 – not important, 7 – very important); finally, to what extent performing this reflective task was pleasant (1 – very unpleasant, 7 – very pleasant) for them. We assumed that the closeness manipulation of the visualized person would work well if the participants reported greater importance of imagining a well-wishing close person and deeper feelings (e.g. love) rather than a well-wishing acquaintance. In turn, the effectiveness of the perspective manipulation would be confirmed if the participants in the ecosystem conditions found the ecosystem way of thinking more enjoyable but also indicated more other-directed (e.g. empathy) and less self-directed feelings (e.g. selfishness) than in an egosystem.

Adverse feedback and measurement of defensiveness. Each person received some unfavorable bogus feedback on their results in the EQ-R(PL). They learnt in particular that their emotional intelligence level was slightly below average (from 32nd to 37th percentile), and that the profile graph showed a high diversity of their partial results. Subsequently, they were invited to discuss the EQ-R(PL) with the researcher and to find out more detailed information about their emotional intelligence. Before the announced conversation, the participants were asked to answer some so-called preliminary questions. In fact, the first question, "Are you surprised by your emotional intelligence test results?" (response scale: 1 - definitely not, 7 - definitely yes), was asked in order to indirectly check the level of threat for their self, which they (psychology students) experienced after receiving some unfavorable bogus feedback on issues professionally important to them.

The three follow-up questions were designed to measure different manifestations of defensiveness in an anticipated conversation with the researcher: "Are you interested in getting more detailed information about your emotional intelligence? Will you feel comfortable to discuss your results with the researcher? Would you provide more information about your emotions to the researcher?" (response scale: 1 – *definitely not*, 7 – *definitely yes*).

Finally, the participants were informed about the true purpose of the experiment. They took part in a procedure designed to alleviate possible discomfort after the test, involving a brief description of the most pleasant event that occurred in the last month. They were also given thanks and the promised vouchers.

RESULTS

MANIPULATION CHECKS

The participants successfully visualized a well-wishing person in each of the four experimental groups (ratings $6.25 \le M \le 6.73$ on a scale from 1 to 7). To check the effectiveness of visualized closeness and perspective manipulations, *t*-tests were conducted. As expected, the importance of a visualized person differed between the close person and acquaintance conditions: *t*(122) = 16.98, *p* < .001, *d* = 3.06. The participants reported much greater importance of a visualized well-wishing close person (M = 6.60) than a visualized well-wishing acquaintance (M = 3.85). Minor differences between the close and acquaintance conditions were also found in the evaluation of love experience [t(122) = 2.52, p = .013, d = 0.45],clarity [t(122) = 1.91, p = .056, d = 0.35] and anger [t(122) = 1.90, p = .060, d = 0.35]. Following the visualization of a well-wishing close person, the participants reported - in line with the assumptions -

slightly stronger love (M = 3.66) and, additionally, more clarity (M = 3.82) and anger (M = 1.31) than in well-wishing acquaintance visualization (M = 3.10, 3.50, 1.11 respectively). Next, the effect of the prospect of deriving pleasure from thinking about a wellwishing person was relatively weak but significant: t(122) = 2.44, p = .016, d = 1.16. The participants, as expected, reported greater pleasure in thinking about a well-wishing person in an ecosystem (M = 5.29) than in an egosystem perspective (M = 4.71). The type of an adopted perspective also influenced the assessment of experiencing: love [t(122) = -1.86, p = .065,d = 0.34], empathy [t(122) = -1.77, p = .079, d = 0.32], selfishness [t(122) = -2.59, p = .011, d = 0.47], joyfulness [t(122) = -2.52, p = .013, d = 0.44] and contentedness [t(122) = -2.49, p = .014, d = 0.44]. After thinking about a well-wishing person in an ecosystem perspective, the participants reported - as assumed – slightly stronger love (M = 3.59) and empathy (M = 3.78), weaker selfishness (M = 2.77), and stronger joyfulness (M = 3.87) and contentedness (M = 4.06) than in an egosystem perspective (M = 3.17, 3.46, 3.33, 3.48, 3.61 respectively). The levels of unpleasant surprise which the participants experienced at the emotional intelligence test results were also checked. For the further analysis we used only the data obtained from the participants (72.1% of all) who revealed at least an average level of surprise; i.e. those who reached the midpoint $(M \ge 4)$ on the seven-point responses scale.

THE IMPACT OF A WELL-WISHING PERSON AND ADOPTED PERSPECTIVE TYPES ON DEFENSIVENESS

The two-way MANOVA, examining the effects of a well-wishing person and perspective types on manifestations of defensiveness towards the researcher (unwillingness to learn more about unfavorable results, anticipated discomfort in a conversation, unwillingness to tell more about emotions), did not yield any significant (p > .05) main or interaction effects. However, two-way ANOVAs, conducted separately for each manifestation of defensiveness, revealed two main effects: an effect of a well-wishing person on anticipated comfort during a conversation with the researcher about the test results [F(1, 84) = 5.21, $p = .025, \eta^2 = .06$] and a perspective type effect on willingness to tell the researcher more about emotions [F(1, 84) = 6.27, p = .014, $\eta^2 = .07$]. No other ANOVA effects were significant.

Thus, the participants anticipated less comfort (or greater discomfort) in their conversation with the researcher after visualizing a close well-wishing person (M = 4.20) than after well-wishing acquaintance visualization (M = 5.00). Hypothesis 1, according to which thinking about a well-wishing close person

would cause less defensiveness than thinking about a well-wishing acquaintance, was not supported. What is more, thinking about a close well-wishing person, compared to thinking about a well-wishing acquaintance, increased one of the three defensiveness manifestations.

Next, in accordance with hypothesis 2, the participants reported greater willingness to tell the researcher about their emotions after ecosystem thinking about a well-wishing person (M = 5.80) than after thinking about him/her in an egosystem way (M = 5.13). This means that ecosystem perspective adoption, compared to egosystem ones, lowered only one manifestation of defensiveness instead of the expected three.

SEPARATING THE PARTICIPANTS IN RELATION TO THEIR ATTACHMENT SECURITY LEVELS

Separating individuals with different levels of insecure attachment was performed using the non-hierarchical k-means cluster analysis. In order to obtain relatively large groups of participants, the most parsimonious two-cluster solution was used.

The results of the k-means cluster analysis according to the participants' scores in each of four attachment patterns showed significant (p < .001) differences between the two clusters. In one cluster, compared to the other, the center values representing all the insecure attachment patterns (fearful, dismissing and preoccupied) were higher, whereas the center





Figure 1. Mean values representing anticipated comfort in a conversation with the researcher about the test results depending on thinking about a close well-wishing person and a well-wishing acquaintance for high- and low-securely attached participants. Standard errors are represented by the error bars attached to each column.

value for the secure pattern was lower. This means that the participants who belonged to the first cluster (n = 71) manifested higher levels of general secure attachment than the participants assigned to the other (n = 53). The fearful pattern contributed definitely the most [F(1, 122) = 245.22] to this two-cluster solution, while the dismissing, preoccupied and secure patterns contributed the least [F(1, 122) = 38.89, 14.64, 63.94 respectively].

THE IMPACT OF A WELL-WISHING PERSON TYPE AND ATTACHMENT SECURITY ON DEFENSIVENESS

The two-way MANOVA was conducted to examine the effects of well-wishing person visualization and attachment security on three facets of defensiveness (unwillingness to learn more about unfavorable results, anticipated discomfort in a conversation, and unwillingness to say more about emotions). Only the interaction effect was significant [$\lambda = .90$, F(3, 82) = 3.07, p < .05]. However, two-way ANO-VAs, conducted separately for each manifestation of defensiveness, revealed one significant main effect of attachment security on willingness to learn more about unfavorable test results [F(1, 84) = 6.07, p = .016, $\eta^2 = .07$] and one interaction effect between a wellwishing person and attachment security on anticipated comfort in a conversation with the researcher about the test results [$F(1, 84) = 8.33, p < .01, \eta^2 = .09$].

The former effect, not concerning the hypotheses, showed that the high-securely attached participants – regardless of any manipulation – were more willing to learn about unfavorable test results (M = 6.21) than the low-insecurely attached ones (M = 5.59). The last interactional effect is displayed in Figure 1.

Tests for simple effects revealed a significant (p < .001) difference in the group of the high-securely attached participants. They reported less anticipated comfort in a conversation with the researcher after close well-wishing person visualization (M = 3.92)than after visualizing a well-wishing acquaintance (M = 5.39). On the other hand, in the group of lowsecurely attached participants there were no differences (p > .05) between close well-wishing person and well-wishing acquaintance conditions for any defensiveness manifestation. Thus, the prediction, according to which thinking about a close well-wishing person, compared to thinking about a well-wishing acquaintance, would trigger more defensiveness in low-secure individuals, was not supported. It is also noteworthy that there was a significant difference (p < .001) between the high- and low-securely attached participants. The former showed a greater anticipated comfort in a conversation with the researcher about the test results (M = 5.39) than the latter (M = 3.91).

THE IMPACT OF AN ADOPTED PERSPECTIVE TYPE AND ATTACHMENT SECURITY ON DEFENSIVENESS

The two-way MANOVA, examining the perspective and attachment security effects on three facets of defensiveness (unwillingness to learn more about unfavorable results, anticipated discomfort in a conversation, unwillingness to tell more about emotions) did not yield any significant (p > .05) main or interaction effects. Two-way ANOVAs, performed separately for each facet of defensiveness, revealed a significant main effect of attachment security on willingness to learn more about unfavorable test results [F(1, 84) = 6.13, p = .015, $\eta^2 = .07$] and a perspective type on willingness to tell the researcher more about their emotions [F(1, 84) = 7.00, p < .01, $\eta^2 = .08$].

The former effect, not concerning the hypotheses, showed again that high-securely attached participants – irrespective of any manipulation – were more willing to learn about unfavorable test results (M = 6.20) than low-insecurely attached ones (M = 5.60). The last main effect reflected the same relationship as presented in Figure 2. The participants – regardless of their attachment security – reported greater willingness to tell the researcher about their emotions after ecosystem thinking about a wellwishing person (M = 5.79) than after thinking about him/her in an egosystem way (M = 5.01). However, as shown in Figure 2, this relationship was slightly more visible for low-securely attached individuals.

The participants with a low level of attachment security reported greater (p < .05) willingness to tell the researcher about their emotions after ecosystem thinking about a well-wishing person (M = 5.71) than after thinking about him/her in an egosystem way (M = 4.75). The differences between analogous means (M = 5.87, 5.36 respectively) for the high-securely participants did not reach a significant level (p > .05). Thus, the prediction, according to which the insecurely attached participants would experience less defensiveness towards the researcher after ecosystem thinking about a well-wishing person than thinking about him/her in an egosystem way, was supported partially. It is also worth noting that the impact of ecosystem perspective adoption on willingness to tell the researcher more about emotions did not change regardless of the participants' attachment security level.

DISCUSSION

The aim of this study was to examine the effects of thinking about a supportive person on different aspects of defensiveness towards the researcher depending on the kind of visualized person (close vs. non-close) and perspective (ecosystem vs. egosystem) adopted in thinking about him/her. These effects were examined both independently and in regard to attachment security levels.

Against expectations, thinking about a close wellwishing person caused less anticipated comfort in a conversation with the researcher than thinking about a well-wishing acquaintance. This relationship was found among all the participants, especially those with high levels of security attachment – but not among low-securely attached ones. Contrary to the results presented by Cyranowski et al. (2011) or Kumashiro and Sedikides (2005), it might seem that recalling close supportive relationships does not lower the stress level among individuals who most likely have had positive experiences with their visualized loved ones. Why?

A possible explanation involves the specific measures of defensiveness used in this study. All the three measures (unwillingness to receive more information about unfavorable test results, anticipated discomfort in a conversation and unwillingness to tell the researcher more about emotions) were evaluated in the context of a conversation with a newly known researcher. Thus, there was incompatibility between an induced experience of a supportive relationship with a close person and an anticipated experience of a conversation with the researcher. Imaging a close supportive person could provide not only a sense of security but also a sense of intimacy, which did not fit a simple situation of having a conversation with a newly known researcher. Hence, an invitation to share personal information with a stranger could perplex an individual and create a sense of discomfort. This way of explanation is consistent with the Baum and Andersen (1999) results obtained in their



Egosystem perspective adoption

Figure 2. Mean values representing willingness to tell the researcher more about own emotions depending on ecosystem and egosystem thinking about a well-wishing person for the high- and low-securely at-tached participants. Standard errors are represented by the error bars attached to each column.

study on transference. They found that activating representations of positive significant others in the context of a newly met person resulted in increasing a negative mood if the latter had a role incongruous with significant others. In this study incompatibility between the roles played by a close (and perforce significant) visualized person and a non-close researcher was evident, and this was what probably undermined the expected stress-buffering effect of close person visualization among the securely attached participants. The incompatibility of these roles could not be perceived clearly by the insecurely attached participants because of their presumably limited access to positive experiences of close relationships and their tendency to look for their substitutes in non-close relationships (cf. Whitfield, 1993).

An additional comparison showed that the highsecurely attached participants can take better advantage of thinking about a well-wishing acquaintance than the low-securely attached ones. The former experienced greater anticipated comfort in a conversation with the researcher than the latter. This result provides further evidence for a general thesis that a stress-buffering effect derived from recalling supportive relationships is more typical of individuals with higher levels of attachment security (see Mallinckrodt, 2007; Mikulincer et al., 2011).

Ecosystem thinking about a well-wishing person, compared to egosystem thinking, caused more willingness to tell the researcher about emotions. As hypothesized, this relationship was found both for people in general and the low-securely attached participants. In other words, there were more favorable effects of the ecosystem than of the egosystem perspective, which can be observed not only among people in general (cf. Canevello & Crocker, 2010; Crocker, 2011) but also among those who may have some problems with close relationships.

To understand better what the advantage of the ecosystem over the egosystem perspective exactly means, it is necessary to take a look at the three different measures of defensiveness used in this study. Among the three measured aspects of defensiveness (unwillingness to receive more information about unfavorable test results from the researcher, anticipated discomfort in a conversation with him/her and unwillingness to tell him/her more about emotions) only one was found to be dependent on ecosystem/ egosystem manipulation: unwillingness to tell the researcher about emotions. This aspect of defensiveness was the most focused on another person (i.e. the researcher who needs emotional feedback to improve his/her test) while the other two were more focused on the self (i.e. the participants' interest in their unfavorable test results or in their internal state during a conversation with the researcher). Thus, people in general or the low-securely attached participants could benefit from ecosystem thinking to a limited extent, by strengthening their interpersonal orientation, rather than by increasing their openness to unfavorable information or by reducing their distress in conversation. However, reinforcing the interpersonal orientation in an ecosystem way (taking the initiative and starting a positive exchange with others) can be enough to overcome egosystem thinking and create upward spirals of positive emotional interactions with other people (Canevello & Crocker, 2010; Crocker & Garcia, 2009). This, in turn, can lead to more supportive relationships and progressively weaken the other aspects of defensiveness.

Interestingly, the considerable benefits of ecosystem thinking with respect to egosystem thinking were not found among the high-securely attached participants. This can be explained by their access to highly positive memories of supportive relationships regardless of perspectives in which they can be recalled. Securely attached people can recall happy memories even by using an egosystem perspective. They may recall how good it felt to be appreciated, which stimulates them to do something good for others. On the other hand, low-securely attached individuals, when applying egosystem thinking about relationships, can trigger not necessarily good memories, followed by uncertainty whether they really deserve to be appreciated, which eventually fosters defensive focusing on themselves.

No matter how much the egosystem perspective undermines the benefits derived from thinking about supportive relationships for individuals with insecure attachment, the effects of the ecosystem perspective on emotional openness towards the researcher proved to be very similar in the groups of the high- and low-securely participants. This raises hope that therapeutic interventions based on thinking about supportive relationships in the ecosystem perspective could be quite effective even for people with attachment problems.

CONCLUSIONS

Contrary to predictions, thinking about a supportive non-close person, in comparison with a close person, reduced discomfort in a conversation with the researcher about issues threatening "the self" only for securely attached individuals. As predicted, the ecosystem perspective in thinking about a supportive person caused greater anticipated emotional openness to the researcher than the egosystem one, especially for the low-securely attached participants. The obtained results revealed that overcoming some of the potentially undesirable effects of explicit thinking about supportive relationships among insecurely attached people can be reduced by controlling the perspective of thinking rather than the kind of visualized person. In particular, the key results suggest that people with attachment problems are likely to increase emotional disclosure by a shift from an egoto ecosystem perspective of thinking about their relationships. In the next step, it would be worthwhile to explore whether therapeutic work focusing on ecosystem orientation can overcome, in the long run, the attachment problems in relationships.

LIMITATIONS

Although the results obtained can be inspiring, several limitations of this study should be noted. The basic one refers to the artificial laboratory context, which very clumsily imitates imagery technics used in clinical conditions. The effectiveness of ecosystem interventions should also be tested on true patients with attachment problems and in comparison with placebo effects and other techniques (see Nathan, Stuart, & Dolan, 2000). Then, there are some other drawbacks resulting from the plan of this research. To exclude in advance positive affect as an alternative explanation of the examined effects, all the participants were instructed to think about somebody who wishes them well. Unfortunately, it made it impossible to compare the impact of ecosystem perspective adoption and positive affect. To overcome this disadvantage, positive affect induction as a separate control condition should be planned in the further study. Next, the overrepresentation of women provides no assurance that the obtained results are characteristic of both genders. Therefore, future studies should include more men.

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