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Investigation of Attachment Orientation, and Affect Regulation: Use of a Novel Affect Regulation Mapping Tool in Japanese Athletes

Osamu Kobori, Yoko Sawamiya, Naoki Yoshinaga, Angela C. Rowe and Laura L. Wilkinson

*Department of Psychology, International University of Health and Welfare, Japan.

b College of Psychology, School of Human Science, University of Tsukuba, Japan.

c Organization for Promotion of Tenure Track, University of Miyazaki, Japan.

d School of Experimental Psychology, University of Bristol, U.K.

* Correspondence concerning this article should be addressed to Osamu Kobori, Department of Psychology, International University of Health and Welfare, 4-1-26, Akasaka, Minato-ku, Tokyo 1078402, Japan. E-mail: O.Kobori@iuwh.ac.jp; Tel.: +81-3-5574-3900.

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Investigation of Attachment Orientation, and Affect Regulation: Use of a Novel Distance Affect Regulation Mapping Tool in Japanese Athletes

Introduction

Emotions in sport

Emotions are important as they have physiological, motivational, and cognitive consequences for performance and wellbeing in sport (Babkes Stellino, Partridge, & Moore, 2012; Chen et al, 2019; Uphill & Jones, 2012). Whether it is anxiety about returning after an injury, embarrassment about making a mistake, anger at a contentious decision by a referee, or excitement at the prospect of winning, athletes experience a range of emotions prior to, during,
and after competitive sports events (Hanin, 2000; Lewis, Knight & Mellalieu, 2017; Uphill & Jones, 2007). Cerin (2003) showed that emotions such as interest/excitement, enjoyment, sadness, guilt, and self-hostility are important for athletes’ sport performance. For example, Woodman et al (2009) found that anger was associated with enhanced gross muscular peak force performance and that hope yielded faster football-related reaction times in football players. In addition, Uphill et al (2014) showed that basketballers’ happiness can predict successful game involvement, while anger and embarrassment were significant predictors of unsuccessful game involvement.

Researchers have shown that athletes also report fluctuations in the intensity and frequency of different positive and negative emotions prior to, during, and after competitions (Cerin & Barnett, 2006; Robazza et al., 2012). Emotions are not only an intrinsic part of competitive sports, they are also widely believed to influence sport performance. There is a large literature that considers the antecedents and outcomes of various emotions in sport and athletes’ perceptions of the functionality of emotions for performance outcomes (e.g., Martinent, Campo, & Ferrand, 2012; Uphill & Jones, 2007). Thus, successful regulation of emotion is considered to be an important psychological skill (Gould & Maynard, 2009; Jones, 2003; Robazza, Pellizzari, & Hanin, 2004).

**Affect regulations and its relationship to attachment orientation**

Affect regulation refers to “processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). An organizing framework of affect regulation considers processes aimed at decreasing, maintaining, or increasing the intensity and duration of one’s own emotional experiences (i.e., affect and its regulation are a response to emotion and its regulation). Athletes are believed to use a number of strategies to regulate their emotions and affect, including distraction, redirection of attention, cognitive reappraisal, goal setting, self-talk, imagery,
relaxation, and suppression, and further, athletes’ ability to regulate their emotions is associated with successful performance (for a review, see Jones, 2012).

A framework often used for understanding emotion regulation and affect regulation is attachment theory (Kobak, Holland, Ferenz-Gillies, Fleming, & Gamble, 1993; Mikulincer, Florian, & Tolmacz, 1990). The attachment framework models cognitive representations of close relationships (benefits and reciprocal expectations) that we all possess, and which tend to be abstracted from experiences in early relationships (Bowlby, 1969). Adult attachment orientation is conceptualized in terms of two dimensions: attachment anxiety (characterized by a fear of abandonment) and attachment avoidance (fear of intimacy). Low attachment anxiety and avoidance indicates attachment security, whereas high attachment anxiety and/or avoidance are associated with attachment insecurity (Brennan, Clark, & Shaver, 1998).

Importantly, attachment orientation remains relatively stable across the lifespan, with any shifts occurring in response to major attachment-related events (Waters et al., 2000).

In terms of affect regulation, attachment orientation predicts the extent to which individuals rely on internal and/or external strategies to help them manage emotion (for a review, see Mikulincer, 1998). For example, when distressed, securely attached individuals will seek proximity to or activate symbolic representations of an attachment figure in order to self-soothe (notably, they are also likely to engage in reappraisal in the first place; Karreman & Vingerhoets, 2012). By contrast, individuals who are high in avoidant attachment respond to distress by detaching themselves from its source (Bowlby, 1988; Faber, Dube, & Knauper, 2018). The attachment system deactivates, distress is not acknowledged, and there is no emotional response to manage (i.e., affect regulation). Individuals high in attachment anxiety are relatively poor at managing their emotions. The attachment system in high attachment anxious individuals is hyperactivated, which means they become hypervigilant to distressing cues in their environment (Mikulincer & Florian, 1998), and they will seek an external source of comfort such as food (e.g., Faber et al, 2018; Wilkinson, Rowe, Bishop & Brunstrom, 2010;

Measurement of affect regulation

A number of measures have been used to assess emotion regulation and affect regulation in athletes, but two of the most commonly used are The Emotion Regulation Questionnaire (ERQ; Gross & John 2003) which, as its name suggests, focuses on emotion regulation and the COPE (Carver, Scheier, & Weintraub, 1989) which contains items relating to both emotion regulation and affect regulation. The ERQ is the most frequently used tool to measure individual differences in the use of cognitive reappraisal and expressive suppression to regulate emotion. While it is short, easy to administer, and frequently used in sport psychology, it is also limited; it quantifies emotion regulation on two ‘high-level’ abstract dimensions (reappraisal and suppression) only. The COPE inventory is a long questionnaire with 13 factors assessed by four items each. These factors include (a) active coping, (b) planning, (c) suppression of competing activities, (d) restraint coping, (e) seeking social support for instrumental reasons, (f) seeking social support for emotional reasons, (g) focusing on and venting of emotions, (h) behavioural disengagement, (i) mental disengagement, (j) positive reinterpretation and growth, (k) denial, (l) acceptance, and (m) turning to religion. It has generally good psychometric properties (Carver et al., 1989) but is lengthy and time-consuming to administer and complete. Furthermore, findings resulting from the administration of the ERQ and COPE are limited in terms of fully capturing the intra- and inter-individual variability in strategies used by athletes. For example, activities that are central to a person’s coping strategy may not be included in these questionnaires because they are, for example, relatively new (e.g., specific apps) and/or were previously more taboo (e.g., changes in attitude towards sexual activities).

A novel tool has been developed, underpinned by attachment theory, to capture the breadth of information associated with affect regulation, this is the ‘distance affect regulation
mapping’ (DARM) tool (Wilkinson & Rowe, 2016). The DARM is based on the pictorial hierarchical mapping tool (HMT; Rowe & Carnelley, 2005), which is a validated way to assess the content and structure of attachment networks. However, rather than quantifying attachment networks alone, the DARM also allows for the mapping of a range of internal and external affect regulation strategies including seeking proximity to people (e.g., romantic partner), practices (e.g., meditation), substances (e.g., food), or anything else used to manage affect in times of stress. The DARM could have advantages over other measurement tools such as ERQ and COPE. First, the DARM allows participants to specify their own regulation strategies, in other words, the strategies are not limited to those proposed by the measure, as is the case with other tools. This is especially important when researchers investigate a specific group of people such as athletes, because people who belong to the group may employ strategies that other people outside the group may not. Second, similar diagrammatic measures are recognized as quick and easy to use and intuitive to complete (Kahn & Antonucci, 1980; Rowe & Carnelley, 2005). Moreover, the pictorial hierarchical mapping tool can provide participants with the opportunity to reflect on what is assessed; items of the questionnaires such as the ERQ and COPE can be abstract and hard to apply to participants’ own lives, whereas the DARM is more likely to engender self-reflection because participants complete it in a way that is meaningful to them. For example, after they specify their own regulation strategies, participants are asked to place the stickers representing each of affect regulation strategies into in the diagram, in relation to the centre (labelled ‘stressed me’), where closeness to the centre represents the likelihood of they use the strategy when stressed. This may facilitate their self-reflection on what strategies they use and how often.

The purpose of this study

The first aim of this study was to quantify the full complement of athletes’ existing affect regulation strategies using the DARM in order to better understand the strategies college athletes use and how often they are employed. In addition to the description of the affect
regulation strategies, this study explored whether completing the tool could be of some practical benefit by helping athletes reflect on and identify ways to develop and improve their affect regulation strategies. As the DARM allows participants to write down their own regulation strategies, which other tools may not include, we hypothesised that:

1) Participants would report a range of affect regulation strategies, some of which may not be captured by existing scales (ERQ and COPE). Additionally, as diagrammatic measures are recognized as easy to use and intuitive to complete (Kahn & Antonucci, 1980; Rowe & Carnelley, 2005), we also hypothesised that:

2) Participants would have positive views about the DARM.

As discussed above, attachment orientation predicts the extent to which individuals rely on internal and/or external strategies to help them manage affect. When distressed, securely attached individuals will seek proximity to or activate symbolic representations of an attachment figure in order to self-soothe (Karreman & Vingerhoets, 2012), while individuals high in attachment anxiety become hypervigilant to distressing cues in their environment (Mikulincer & Florian, 1998), and they will seek an external source of comfort such as food (e.g., Faber et al, 2018; Wilkinson, Rowe, Bishop & Brunstrom, 2010; Wilkinson, Rowe & Heath, 2013; Wilkinson, Rowe & Millings, 2019; Wilkinson et al, 2018). Based on this, a secondary aim was to offer some evidence of construct validity associated with the use of the DARM. Considering the theoretical antecedents of the DARM tool (attachment orientation) and the subject being assessed (affect regulation), we reasoned that establishing construct validity using published measures of attachment orientation would be of value. As individuals who have secure attachment orientations would seek proximity to someone, we first hypothesised:

3) Participants who included affect regulators to seek proximity to someone in the DARM (i.e., interpersonal relationships relied on for affect regulation), as opposed to external affect regulators (such as food or drink), would be more attachment secure than those who did not.
Finally, as the distance between the centre of the DARM (labelled ‘stressed me’) and the strategy placed on the diagram represents how frequently the participants use the affect regulation strategy, we also hypothesised that:

4) Among those who included affect regulators involving proximity to someone, the distance of the strategy to the centre of the DARM would be related to higher secure attachment orientation.

Method

Participants

A total of 96 college athletes were recruited to participate in this study. The sample consisted of 36 female athletes and 59 male athletes with a mean age of 18.93 years old ($SD = .46$), and 91% of them identified as Japanese. The remaining 9% were Asian, White, or Mixed. Their average practice hours per week was 14.18 hours ($SD = 7.74$), and the average career history as an athlete was 9.78 years ($SD = 3.8$). They competed in different sports, including football, tennis, dancing, swimming, basketball, badminton, volleyball, handball, lacrosse, gymnastics, kendo, table tennis, judo, dive, baseball, and track and field.

Standardized Measures

Experiences in Close Relationships Scale – Short version (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007). The ECR-S is a 12-item self-report questionnaire used to measure an athlete’s attachment orientation by assessing how they generally experience close relationships. The ECR-S possesses the psychometric properties of the long version of the ECR (Brennan, Clark, & Shaver, 1998). The ECR-S is composed of two 6-item sub-scales, the anxious subscale (e.g., “I worry that others won’t care about me as much as I care about them”) and the avoidant subscale (e.g., “I want to get close to my partners, but I keep pulling back”). The items were rated on a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). Several items were reverse scored before scores for anxious and avoidant attachment were computed. Because the Japanese version of ECR-S was not available, we translated the items into Japanese
using standard back-translation procedures recommended by Brislin (1970, 1986). Cronbach’s alphas for the current study were .70 for the avoidant items and .72 for the anxious items.

**DARM tool (Wilkinson and Rowe, 2016).** The Japanese version of the DARM was developed using standard back-translation procedures recommended by Brislin (1970, 1986).

Participants were asked to think about the different ways that they might cope with stress. A list of examples was provided that included items that might be considered embarrassing or illegal. However, they were told that coping strategies they might use might not be on that list but could still be used as part of the task. Participants were then provided with round, blank, sticky labels on which to write their chosen coping strategies (unlimited number). Participants are instructed in the following ways.

*Below is a diagram, the centre of which represents 'stressed you'. Different people engage in various activities to cope with stress. We represent some but not all of these in the list below. Please recall times when you have been stressed. It may be that you engage in some of the activities from the list to cope with stress or you may engage in activities that are not on the list".*

1) *Please write the behaviours YOU turn to when stressed on the stickers provided (YOU SHOULD HAVE ONE BEHAVIOUR PER STICKER).*

2) *Place the stickers representing each of these activities you chose into in the diagram below in relation to the centre, where closeness to the centre represents the likelihood of you engaging in this activity when stressed.*

3) *Once you are happy with the arrangement of your stickers, please stick them in this arrangement onto the diagram.*

**Procedure**

The questionnaire was administrated only in the Japanese language. At the end of a psychology lecture, college athletes were asked to complete a questionnaire that included the ECR-S, and DARM. The DARM was analyzed using the following steps. First, the number of
stickers each participant used was recorded. Second, the distance between the centre of the
diagram (i.e., bull's eye) and each sticker (i.e., centre of the round sticker) was measured in
millimeters and recorded. Finally, participants were asked to briefly write down their comments
on the DARM.

Using content analysis (Krippendorff, 2004), affect regulation strategies written on the
stickers were grouped into categories according to their similarities, and each category was
assigned a name by the first author. The audit was conducted by consulting the third author
about the accuracy of the name of the strategy categories and comments that did not fit in any
category or that could belong to more than one category. Differences in opinions were resolved
via discussion. Finally, the inter-rater reliability (Cohen's kappa coefficient) between the first
and second authors was calculated with 10% of the all items (Lombard, Snyder-Duch & Bracken,
2005). The same procedure was employed for the analysis of participants' brief comments on
DARM.

Results

In total, 1135 stickers were used (on average 11.81 per person), and one-hundred
twenty regulators were excluded from the analysis either because (1) they were not specific
enough (e.g., “Mobile,” “Play,” “Grumble”) or (2) the category consisted of less than five stickers
and could not be collated to any other categories (e.g., “Save money,” “Stargazing,” “Haircut”). As
a result of content analysis, the regulators written on the stickers were classified into 23 groups.
The inter-rater reliability suggests almost perfect agreement (kappa coefficient = .907) between
the two independent raters. Table 1 illustrates the names of the categories, the number of
stickers that belong to the category, and the mean distance (in cm) between the centre of the
diagram and stickers.

Almost all participants (N = 95) provided their feedback on the DARM, and comments
were classified into six categories (Table 2). The inter-rater reliability suggests substantial
agreement (kappa coefficient = .744) between the two independent raters. The results suggest that the majority of participants found the DARM to be a helpful way to understand the strategies that were effective for them in coping with stress, to identify more strategies, to understand themselves, and to discover the need to increase or change their existing strategies. Some participants found it to be fun and interesting to map their strategies on the diagram.

For the validation of DARM, we first compared the scores between participants who included seeking proximity to someone in the affect regulation strategies such as “Call my boyfriend” or “Talk to my mother” and participants who did not include such strategies, but included strategies that they can do on their own, such as ”Listen to music” or “Take a bath” (Table 3). Relative to participants who did not include seeking proximity to someone in the DARM, those who did scored significantly lower on the total scores of ECR-S, and ECR-S Anxiety, suggesting they were more secure. They also included a higher number of stickers on the DARM, reflecting a broader range of affect regulation strategies.

The correlations between attachment orientations and DARM are presented in Table 4. The total score of ECR-S was negatively correlated with the average number of stickers they used for DARM. In addition, the total scores of ECR-S and ECR-S Anxiety were positively correlated with DARM Proximity.

Discussion

The first aim of this study was to investigate the strategies that college athletes use to regulate their affect (specifically stress) and how these relate to attachment orientation. We were also interested in how the DARM was received by athletes, and particularly, whether they thought the DARM was helpful in improving affect regulation. The mapping of the common regulation strategies (Table 1) suggests that athletes utilize a range of strategies, some of which
may not be captured by existing scales. Moreover, college athletes use both exercise, activities not related to their sport (e.g., “Cycling,” “Bowling,” “Walking”) and training, activities related to their sport (e.g., “Running,” “Weight training,” “Throwing”), which may be an athlete-specific division in strategies. In addition, some strategies are associated with Japanese culture, such as Karaoke. These results suggest that the DARM is able to obtain rich data regarding affect regulation strategies that are specific to the target group and culture, how popular each strategy is, and how often each strategy is used.

The second aim of this study was to validate the DARM with athletes. The results suggest that those who included seeking proximity to someone in their affect regulation strategies have more secure attachment orientations, and they have more options to relieve stress. This is consistent with the literature on attachment and affect regulation, confirming the validity of the DARM. Security of attachment is associated with the ability to trust and depend on others to help the self in times of stress, whereas attachment insecurity is associated with problems relying on others (Mikulincer, 1998). Moreover, athletes with secure attachment orientations had a more comprehensive plan for coping with stress; they had strategies that included somebody in addition to strategies that they can do on their own. The result of correlations, among those who included seeking proximity to someone in their responses, revealed that the more secure attachment orientation they had, the closer the sticker (strategy) was placed to the centre of the diagram. This suggests that athletes with secure attachment orientations are more likely to utilize strategies that include someone.

The comments suggest that the majority of participants had positive views about the DARM, suggesting the preliminary acceptability of the use of the tool with this participant group. Moreover, their feedback suggests that the DARM may help the athletes to identify, reflect on, and further develop their affect regulation techniques. Participants found it helped them identify the effective strategies they used to cope with stress, to discover more strategies, to understand themselves, and to discover the need to increase usage of or change their existing strategies. As athletes train 14.18 hours per week on average, their time for reflecting on stress
coping is limited compared to other college students. Thus, it can be a good opportunity for college athletes to reflect on the effective activities they use to cope with stress by using a tool such as the DARM.

**Limitations, future directions, and practical implications**

The present study has a couple of limitations. First, the study investigated college athletes. Consequently, future studies need to explore if the present findings generalize to professional athletes and youth athletes who may face different stress and pressure as compared to college athletes. Further, this study asked what athletes *generally* do when they are stressed. Future studies may need to assess what athletes do when they are stressed *during the competition* such as briefly talking to coaches, shouting, smashing their racket, and so on, as this may have an effect on their performance as well as their well-being. Hence, the results of the correlation analyses cannot be interpreted in a causal sense. Following that, the study employed a cross-sectional design, and it was administered only in the Japanese language. Hence, the results of the correlation analyses cannot be interpreted in a causal sense, and some participants might have struggled to read and write in the Japanese language. Future studies need to address such language barriers, and employ longitudinal designs such as week-to-week assessments (e.g., Sherry et al., 2012) to examine whether attachment orientation predicts affect regulation strategies and well-being. Most importantly, although the participants of this study had positive views about the DARM, we need to investigate whether administration of the DARM can actually improve athletes' affect regulation strategies.

Second, the DARM has its own limitations. For example, the reliance on self-report makes more readily accessible strategies that athletes are consciously aware of attempting and may be less adept in "tapping into" strategies that can be more automatic. Moreover, the DARM aims to assess how individuals cope with stress, which is only one example of affect regulation, and it does not include other attempts such as ones to enhance positive emotions. Despite our efforts to reassure participants that they may be honest when completing the DARM,
participants might hesitate to report maladaptive strategies because such a strategy may be illegal or embarrassing.

Also notable is that the number of stickers, rather than the number of categories, were analysed in relation to attachment orientation. Clinically speaking, the numbers of regulation strategies, even in the same category, may be more important than the number of categories. If a person can talk to his or her father as well as mother to relieve stress, s/he has more options when one of them is not available or when the relationship with one of them becomes bad.

Therapists usually try to help the client to discover similar but slightly different strategy to the ones s/he already uses, or help the client to modify and improve the ones they already use. This can be more cost-effective and achievable than suggesting completely different strategies.

In future studies, the instructions to the participants and the coding of the strategies could be more specific, in order to better reflect complex behaviours and their contribution to affect regulation. For example, our understanding and interpretation of ‘seeking proximity to someone’ was that this intention is clearly reflected in the reported behaviour, i.e., calling, meeting or talking to someone in order to relieve stress. However, this may be overly simplistic as proximity seeking may underly other activities too (e.g., to sing, drink, travel). In other words, many activities that people use to cope with stress may involve a social component that constitutes proximity seeking (e.g., ‘drinking’ may actually mean ‘drinking with a friend’). In these cases it can be difficult to disentangle stress relieving components. Importantly, due to the tools’ inherent flexibility, the DARM may be uniquely placed to reflect such complexity – indeed, more conventional questionnaires often include broad categories and fail to reflect ‘compound’ behaviours. One way that the DARM tool could be delivered to capture this kind of nuanced information is to explicitly instruct participants to split compound activities or to indicate whether they involve a social element (if it is not obvious) and indicate the importance of each element (e.g., ‘for me, it would be meeting a friend and it is unimportant to me whether it is over an alcoholic drink or a coffee as long as it helps me to cope by talking to my friend’ or ‘for me it might be very important that alcohol is a part of an interaction’).
This study has some more practical and clinical implications. For example, by keeping a copy of their completed DARM for future reference, and sharing it with friends, family, teammates and their coach, they could potentially develop better strategies and better ways of attaining the interpersonal support they need. Such sharing can be done as a team-building activity in which junior athletes may discover and learn new affect regulation strategies from senior athletes and replace ineffective strategies with more effective ones. This could enhance their expectancy that they can regulate their own negative moods, which may in turn improve their athletic performance (Totterdell & Leach, 2001). As discussed above, the DARM can be used in clinical settings in which clients are sometimes stressed by filling a lot of "conventional" forms. Moreover, working on the DARM with the therapist can contribute to building a collaborative relationship between therapist and client. The therapist then will have a better understanding of the client, as the diagram informs not only a potential attachment orientation of the client, but also protective factors such as who is close to the client and what the client likes to do. In addition, the therapist could ask what the client has stopped doing since the onset of the psychological problem (e.g., depression), which may give them a short-term goal of re-activating such behaviour.
References


<table>
<thead>
<tr>
<th>Category name</th>
<th>Definition</th>
<th>Examples</th>
<th>Number of stickers</th>
<th>%</th>
<th>Mean distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>Seeking proximity to someone by meeting, calling, or talking to them</td>
<td>&quot;Call my boyfriend&quot;, &quot;Talk to my mother&quot;</td>
<td>117.00</td>
<td>11.82</td>
<td>39.21</td>
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<tr>
<td>Exercise</td>
<td>Physical activities not related to their sport</td>
<td>&quot;Take a walk&quot;, &quot;Bowling&quot;</td>
<td>57.00</td>
<td>5.76</td>
<td>49.46</td>
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<tr>
<td>Training</td>
<td>Physical activities related to their sport</td>
<td>&quot;Running&quot;, &quot;Muscular workout&quot;</td>
<td>56.00</td>
<td>5.66</td>
<td>45.71</td>
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<td>Internet Browsing</td>
<td>Going online to read something or to do some search</td>
<td>&quot;Web surfing&quot;, &quot;Googling&quot;</td>
<td>14.00</td>
<td>1.41</td>
<td>38.50</td>
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<tr>
<td>SNS</td>
<td>Engagement in social networking services</td>
<td>&quot;Twitter&quot;, &quot;LINE&quot;</td>
<td>14.00</td>
<td>1.41</td>
<td>39.93</td>
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<td>Music</td>
<td>Listening to music</td>
<td>&quot;Listen to music&quot;, &quot;Listen to songs&quot;</td>
<td>68.00</td>
<td>6.87</td>
<td>33.00</td>
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<td>Watching video/TV</td>
<td>Watching videos online or watching TV</td>
<td>&quot;Watch films&quot;, &quot;Watch TV&quot;</td>
<td>99.00</td>
<td>10.00</td>
<td>41.28</td>
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<td>Gaming</td>
<td>Playing video games or mobile games</td>
<td>&quot;Gaming&quot;, &quot;Mobile games&quot;</td>
<td>33.00</td>
<td>3.33</td>
<td>38.36</td>
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<td>Housekeeping</td>
<td>Activities to keep the house clean and tidy</td>
<td>&quot;Cleaning&quot;, &quot;Washing&quot;</td>
<td>31.00</td>
<td>3.13</td>
<td>46.35</td>
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<td>Releasing Emotions</td>
<td>Behaviours to release and reduce the intensity of the emotions</td>
<td>&quot;Cry&quot;, &quot;Shout&quot;</td>
<td>35.00</td>
<td>3.54</td>
<td>42.03</td>
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<td>Reading</td>
<td>Reading books, magazines, or mangas</td>
<td>&quot;Read books&quot;, &quot;Read manga&quot;</td>
<td>38.00</td>
<td>3.84</td>
<td>47.97</td>
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<td>Alcohol</td>
<td>Drinking alcoholic drinks</td>
<td>&quot;Drink alcohol&quot;, &quot;Sake&quot;</td>
<td>12.00</td>
<td>1.21</td>
<td>57.25</td>
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<td>Non-alcohol drink</td>
<td>Drinking non-alcoholic drinks</td>
<td>&quot;Coffee&quot;, &quot;Drink something cold&quot;</td>
<td>14.00</td>
<td>1.41</td>
<td>38.14</td>
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<td>Eating</td>
<td>Eating food without cooking</td>
<td>&quot;Eat something sweet&quot;, &quot;Eat out&quot;</td>
<td>94.00</td>
<td>9.49</td>
<td>32.40</td>
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<td>Cooking</td>
<td>Cooking food to eat or to serve</td>
<td>&quot;Cooking&quot;, &quot;Baking&quot;</td>
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<td>2.02</td>
<td>52.15</td>
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<td>Shopping</td>
<td>Going shopping to buy something</td>
<td>&quot;Shopping&quot;, &quot;Buy cloths&quot;</td>
<td>52.00</td>
<td>5.25</td>
<td>47.56</td>
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<td>Bath</td>
<td>Taking a bath or going to hot springs</td>
<td>&quot;Take bath&quot;, &quot;Onsen&quot;</td>
<td>41.00</td>
<td>4.14</td>
<td>46.20</td>
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<td>Sleep</td>
<td>Going to sleep or sleeping longer than usual</td>
<td>&quot;Sleep&quot;, &quot;Sleep a lot&quot;</td>
<td>85.00</td>
<td>8.59</td>
<td>25.66</td>
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<td>Singing/Karaoke</td>
<td>Singing a song or going to Karaoke shop</td>
<td>&quot;Sing a song&quot;, &quot;Go to Karaoke&quot;</td>
<td>41.00</td>
<td>4.14</td>
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<td>Sex</td>
<td>Having a sexual intercourse or masturbating</td>
<td>&quot;Have a sex&quot;, &quot;Masturbating&quot;</td>
<td>7.00</td>
<td>0.71</td>
<td>42.57</td>
</tr>
<tr>
<td>Destructive behaviour</td>
<td>Venting negative emotions in socially unacceptable manners</td>
<td>&quot;Becoming violent&quot;, &quot;Smashing stuff&quot;</td>
<td>28.00</td>
<td>2.83</td>
<td>52.86</td>
</tr>
<tr>
<td>Being lazy</td>
<td>Stopping activities or engaging activities that need little effort</td>
<td>&quot;Do nothing&quot;, &quot;Daydreaming&quot;</td>
<td>29.00</td>
<td>2.93</td>
<td>26.70</td>
</tr>
<tr>
<td>Traveling</td>
<td>Traversing or going somewhere far from the current location</td>
<td>&quot;Go back to hometown&quot;, &quot;Go on a trip&quot;</td>
<td>31.00</td>
<td>3.13</td>
<td>54.13</td>
</tr>
</tbody>
</table>
### Table 2

**Category, Name, Definition, Number of Comments, and Examples**

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
<th>$N$</th>
<th>Examples of comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding my strategies</td>
<td>Participants found the DARM to be helpful to understand what strategies are effective for them</td>
<td>46</td>
<td>“I re-discovered that my best strategy is to talk to my friends. I think I like to interact with people.”</td>
</tr>
<tr>
<td>More strategies</td>
<td>Participants found the DARM to be helpful to discover more strategies</td>
<td>11</td>
<td>“After writing them down I was surprised to discover many strategies.”</td>
</tr>
<tr>
<td>Understanding myself</td>
<td>Participants found the DARM to be helpful to understand themselves</td>
<td>8</td>
<td>“I felt that I understood myself better.”</td>
</tr>
<tr>
<td>Interesting tool</td>
<td>Participants found the DARM to be interesting to map the strategies</td>
<td>15</td>
<td>“It was interesting to visualize how I behave by writing them down and put stickers.”</td>
</tr>
<tr>
<td>Understanding the need to change</td>
<td>Participants found the DARM to be helpful to discover the need to change or increase my strategies</td>
<td>12</td>
<td>“I discovered that I have only a few things to do when I’m stressed. I’d like to try something different from now on.”</td>
</tr>
<tr>
<td>Not helpful</td>
<td>Participants found the DARM not to be helpful</td>
<td>3</td>
<td>“Nothing special.”</td>
</tr>
</tbody>
</table>
### Table 3

**Descriptive Statistics for Each Scale between Groups**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Participants with seeking proximity to someone to cope with stress ($N = 60$)</th>
<th>Participants without seeking proximity to someone to cope with stress ($N = 35$)</th>
<th>One-way ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>ECR-S Total</td>
<td>6.08</td>
<td>1.87</td>
<td>5.59</td>
<td>1.60</td>
</tr>
<tr>
<td>ECR-S Avoidance</td>
<td>2.88</td>
<td>1.13</td>
<td>2.72</td>
<td>1.11</td>
</tr>
<tr>
<td>ECR-S Anxiety</td>
<td>3.18</td>
<td>1.31</td>
<td>2.88</td>
<td>1.01</td>
</tr>
<tr>
<td>DARM Number of Stickers</td>
<td>11.81</td>
<td>4.99</td>
<td>13.00</td>
<td>5.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32.07</td>
<td>16.17</td>
</tr>
</tbody>
</table>

*Note.* ECR-S = Experiences in Close Relationships Scale—Short version.
Table 4  
*Correlations between Attachment Orientations, and DARM*

|                  | ECR-S Avoidance | ECR-S Anxiety | DARM Number of Stickers | DARM Proximity  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ECR-S Total</td>
<td>.730**</td>
<td>.806**</td>
<td>-205*</td>
<td>.333**</td>
</tr>
<tr>
<td>ECR-S Avoidance</td>
<td>.184</td>
<td>-.193</td>
<td></td>
<td>.223</td>
</tr>
<tr>
<td>ECR-S Anxiety</td>
<td>-.130</td>
<td></td>
<td></td>
<td>.269*</td>
</tr>
<tr>
<td>DARM Number of Stickers</td>
<td></td>
<td></td>
<td></td>
<td>.187</td>
</tr>
</tbody>
</table>

Note. ECR-S = Experiences in Close Relationships Scale—Short version.  
N = 90, except for the DARM Proximity column.  
*p < .05, **p < .01.