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**Being Moved:
How do attachment styles and emotion regulation affect the
experience of being moved?**

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Master in Social and Organizational Psychology

by

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Resumo

O presente trabalho procura contribuir para uma melhor compreensão das emoções positivas a nível geral e, mais especificamente, da experiência emocional de nos sentirmos comovidos. Deste modo, foi explorada a sua relação com a vinculação e com as estratégias de regulação emocional (reavaliação e supressão).

Foram recolhidas de forma *on-line* 387 respostas de participantes de nacionalidade Portuguesa e Norueguesa, entre os 18 e 66 anos de idade. A experiência emocional foi desencadeada através da apresentação aleatória de três vídeos, cuja eficácia no desencadear de experiências emocionais de comoção foi previamente testada. Os vídeos foram precedidos por diferentes instruções, com o intuito de manipular o tipo de regulação emocional (ausência de instruções, reavaliação e supressão). Posteriormente a cada vídeo os participantes responderam a uma medida que avaliou a comoção. Foi ainda pedido aos participantes que respondessem a uma medida de vinculação.

Verificou-se que tanto a reavaliação como a supressão emocional diminuem a experiência emocional de comoção e o relato de lágrimas (comparativamente com a condição na qual não são dadas instruções específicas de regulação emocional). A redução da comoção e das lágrimas é mais elevada na condição de reavaliação (comparativamente com a condição de supressão).

Verificam-se também relações no sentido positivo entre o estilo de vinculação ansioso e sentirmo-nos comovidos, o auto-relato de lágrimas e nó na garganta. Por fim, a nacionalidade é também uma variável preditora desta experiência emocional. Comparações entre a amostra Portuguesa e Norueguesa mostram diferenças significativas na experiência de comoção: os Portugueses referem maior nível de comoção, mais lágrimas e nó na garganta, e menos sensação de calor no peito.

De forma geral, conclui-se que a experiência de nos sentirmos comovidos e as sensações corporais que lhe estão associadas são sensíveis às estratégias de regulação emocional que activamos e também ao estilo de vinculação.

Palavras-chave: comoção, *kama muta*; reavaliação; supressão; estilos de vinculação.

Abstract

This work intends to contribute to the empirical body of research on positive emotions in general, having a particular interest in the emotional experience of being moved or touched. The being moved experience was also explored with attachment and emotion regulation strategies (reappraisal and suppression).

A sample of Portuguese and Norwegian participants (aged 18 to 66 years old) was collected through an online procedure resulting in a total of 387 answers from the general population. The emotional experience of being moved was elicited by three different videos (presented randomly and previous tested) and manipulated by different instructions that asked participants different emotion regulation strategies – no instructions, reappraisal instructions and suppression instructions. After each movie participants answered a being moved scale and an attachment scale was also rated.

Results suggest a significant relation between being moved and the manipulation of emotion regulation strategies (reappraisal and suppression). Reappraisal and suppression downregulate the experience of being moved and tears (comparing with no instructions regarding to emotion regulation strategies). Comparing both emotion regulation strategies, reappraisal downregulates more the being moved experience and tears than suppression. On the other hand, an anxiety attachment style proved to be significant and positively correlated with experiences of being moved as well as with feelings of choking up and tears. Nationality is also an important variable predicting being moved experiences. The comparison between the Portuguese and Norwegian samples showed significant differences in how participants feel touched. Results showed that Portuguese participants reported higher levels of being moved, higher levels of tears and feeling choked up, but lower level of feeling a warmth in their chest.

In general, the being moved experience and their bodily sensations are sensitive to emotion regulation activity and to the attachment styles.

Key words: being moved; being touched; kama muta; reappraisal; suppression; attachment styles.

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INTRODUCTION

When we think retrospectively about our lives, the most important memories that arise are situations shared with significant others, such as moments when we shared an exceptional feeling of union with our romantic partner, the generosity shown by a friend, or when we realize the efforts made by our parents to raise us. Usually, in all these moments we can say we are *moved* or *touched*. Despite the being moved feeling can point out extraordinary moments, sometimes that feeling emerges from more ordinary situations. Everyday we search, watch, read and/or share stories, movies, books, news, or pictures by which we feel touched. Probably, during this paragraph, the reader thought of some personal moving moments, most likely not only the most special, but some daily ones. Although this is a common and familiar emotional experience for most people, it has received little systematic attention, and empirical studies about the topic are scarce. As a result, some aspects of the experience of being moved are not yet understood and additional variables might be helpful to better understand and explain the experience of being moved.

The attachment theory argues that the attachment system plays an important role in how we experience and deal with our emotions (Gentzler, Kern, & Keener, 2010). The attachment system is of great importance also during adulthood (Fraley, 2002) but we should not ignore inter-individual differences in emotional regulatory processes (Brans, Koval, Verduyn, Lim, & Kuppens, 2013). Nonetheless, attachment styles and emotion regulation processes have been studied less often for positive emotions comparing to negative emotions.

The present work aims to explore the emotional experience of being moved and the role of the attachment system and of emotional regulation strategies in the experiences of being moved.

I. Kama muta

The experience of being moved or touched is expressed by different languages through different expressions. We could name it as “being moved” or “being touched” in the English language, “comover-se” or “sentir-se tocado” in Portuguese, “estar

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commovido” in Spanish, “être ému” in French, “commuoversi” in Italian, “bewegt sein” or “gerührt sein” in German, and “blir rørt” in Norwegian (Fiske, Seibt, & Schubert, 2015b). All these examples show that several languages, from different language families, accommodate this emotional experience in specific terms or expressions, whose meaning has substantial overlap. According to Fiske and colleagues (Fiske, et al., 2015a) the congruence between terms is an argument supporting the ontological status of this emotional experience. Nevertheless, all those terms did not overlap completely (Fiske, et al., 2015b) and Fiske et al., 2015a have therefore proposed to designate this emotional experience as *kama muta* (Sanskrit for “moved by love”) to reflect the psychological construct more accurately.

Also important is to understand adjacent features to this emotional experience. First, *kama muta* has been reported with a positive valence (Cova & Deonna, 2014; Menninghaus et al., 2015). Second, a set of physiologic correlates have been linked with *kama muta* experience, with particular reference to cry, piloerection, and a warm feeling in the chest.

A study designed by Strick, de Bruin, de Ruiter, and Jonkers (2015) showed a moving clip with or without moving music to some participants, who were further asked whether they have cried or experienced piloerection. The results showed higher average for the physiologic correlates when moving music was present (Strick, et al., 2015). Panksepp (1995) concluded that chills (usually understood as a subjective experience) are reported more often when participants were listening to music they considered “thoughtful/nostalgic” or “sad/melancholic”. Also, tears, weep and a choking sensation in the throat have been associated to the experience of being moved (Cova & Deonna 2014; Miceli & Castelfranchi, 2003; Scherer & Zentner, 2001; Wassiliwizky, Wagner, Jacobsen & Menninghaus, 2015), as well as a flash of warmth in the centre of the chest (Cova & Deonna, 2014; Schnall, Roper & Fessler, 2010). There are several situations which trigger *kama muta* feelings. The most common elicitors are births, deaths and weddings, and the prototypical protagonists are family and friends (Kuehnast, Wagner, Wassiliwizky, Jacobsen, & Menninghaus, 2014). People seem to feel moved when they experience a great unexpected kindness, when they are reunited with someone they love after a separation, or when they feel love or union. These examples have in common a high social and personal meaning and these situations *connect the experiencers to emotionally salient types of social bonds* (Kuehnast, et al., 2014). According to Seibt, Schubert, Zickfeld and Fiske (2015) *kama muta* is a “culturally implemented social

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relational emotion responding to and regulating behaviour in communal sharing relations". This relates the concept of *kama muta* to relational models theory (Fiske, 1992, 2004).

According to relation models theory, humans coordinate their behaviour through developing relations with others. Despite the variety of relationships that we can develop, either by intrinsic factors (e.g. developmental stage) or extrinsic factors (e.g. culture), we can identify certain elementary kinds of relations. Relation Models Theory (RMT; Fiske, 1992, 2004) supports that humans construct relationships by using four relational models. The theory also points out the combination of two components underlying to relational models: evolved templates and culturally specified implementation. These two components enable people to generate actions, recognize other's actions, communicate, regulate and coordinate behaviour according to the model (Seibt, et al., 2015). One of these relational models is the Communal Sharing (CS). Individuals in a communal sharing relation focus on what they have in common, such as blood kinship, religion, attendance at a school or membership on the same team (Fiske, 2004). This perception of shared characteristics motivates people to be united and caring (Seibt, et al., 2015).

In a study with 151 U.S. Americans and 89 Norwegians participants it was found that experiencing closeness is positively associated with having a communal sharing relation (Seibt, et al., 2015). On the other hand, closeness was also positively related to *kama muta* feelings, supporting that closeness can predict *kama muta* (Seibt, et al., 2015). Another study, developed by Schubert, Zickfeld and Seibt (2015) collected data from 900 participants who reported their feelings (being moved or touched, happiness, sadness and closeness) and physiological symptoms continuously during some videos display. The results showed that *kama muta* experience and judgments of closeness among the characters in the movies followed the same time course.

Another important aspect of *kama muta* is that it can be elicited by first, second, or third person experiences. When one's feelings of communal connection with someone (or some entity, animal or spirit) suddenly intensify, we may say that we are experiencing a *kama muta* feeling in the first person; when someone unexpectedly has a very kind attitude to you the *kama muta* experience emerges in a second person's surprising intensified CS; finally, we can also be moved when observing a father's reunion with his family after a long journey, or during his daughter's marriage, and this could be a third person experience (Fiske, et al., 2015b). Supporting this idea, Seibt,

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Schubert, Zickfeld and Fiske (2014) designed a diary study. Over 2-weeks, participants reported their feelings of being moved, which were described as 1st, 2nd and 3rd person experiences. In another study, while trying to understand the same question, 166 participants have watched a set of videos and were then asked “How moved were you by the movie?”, and “How touched were you by the movie?”. Results showed that the movies display had evoked varying degrees of kama muta (Seibt, et al., 2015), and that this was predicted, among others, by judgments of interpersonal closeness among the characters in the video.

A set of other studies also support these ideas. Firstly, 302 U.S Americans participants were asked to write a brief story about their mother. Participants were randomly allocated in one of three conditions – kama muta condition (participants were asked to write a moving story with the caregiver), amusement condition (funny or amusing story) and neutral condition (description of a normal day in the life of the participant’s caregiver). This experiment has focused on the 1st or 2nd person experiences and it has found that kama muta increases closeness, evokes stronger communal sharing feelings and was associated with increased reports of feelings of warmth in the chest (Zickfeld, 2015). The author has repeated the same design, now focusing on the 3rd person perspective. When accessing a sample of 400 U.S. Americans kama muta was found to be a significant emotional experience even when experienced in a 3rd person perspective (Zickfeld, 2015). The results also showed that kama muta predicted higher communal sharing motivation (comparing with amusement or neutral condition) and it triggered experiences of communal sharing and feelings of warmth in the chest (Zickfeld, 2015).

II. Attachment system

According to Bowlby, attachment is an innate self-regulatory system. It motivates to seek proximity to significant others in order to get protection and decrease distress (Bowlby, 1988; Cassidy, 2000). The attachment system constitutes a repertoire of species-characteristic behaviours and has evolved, argued Ainsworth (1989), because when infants seek proximity to significant others they increase the chances of being protected by them, which represents a great survival advantage.

Experiences with caregivers are usually early / precocious and repeated along childhood. The combination of these factors has an important role in how the child organizes his or her attachment behaviour (Fraley, 2002) and how he or she establishes and expresses his or her behavioural repertoire (Mikulincer & Shaver, 2007). When significant others are consistent and supportive, the child may learn that others are available (Maas, Laan, & Vingerhoets, 2010) and responsive to their needs (Ainsworth, Blehar, Waters, & Wall, 1978; Fraley, 2002). Likewise, the same kind of positive experiences with significant others could lead to believing that emotions can be alleviated and others can be helpful to cope with them (Maas, et al., 2010). Furthermore, these experiences have an important impact on the development and maintenance of later relationships (Fraley, 2002). After these considerations, we can conclude that the attachment system is not limited to providing primary or basic care to children and has an important role for the psychological functioning in general (Maas, et al., 2010). In fact, the attachment system may be regarded as a meta-theory that can help us understand certain developmental processes underlying some psychological constructs, such as self-representations, emotions' regulation, or interpersonal skills.

Based on children's behavioural repertoire, Ainsworth identified three attachment styles: secure, anxious, and avoidant (Ainsworth, et al., 1978), which reflect differences in psychological organization and mirrors internalizing abstractions from early experiences with caregivers (Collins, 1996). The secure attachment style is associated with consistently responsive caregivers (Gentzler et al., 2010); when distressed children seek their caregiver's proximity and are quickly soothed (Bartholomew & Horowitz, 1991; Cooper, Shaver, & Collins, 1998).

However, when caregivers are not available, not supportive and inconsistent they are not a source of relief from distress and do not fulfil the main goal of attachment system, which is safety (Maas, et al., 2010). In these cases, the child further develops alternative attachment strategies: hyperactivation (or anxious attachment style) or deactivation of the attachment system (avoidant attachment style) (Shaver & Mikulincer, 2007). Anxious attachment style, according to Ainsworth, is characterized by children seeking intensely proximity with the mother (Moreira, et al., 2006). Nevertheless, the child continues to be distressed despite the mother's efforts (Shorey & Snyder, 2006) and it takes longer to sooth him or her (Bartholomew & Horowitz, 1991). This pattern of behaviour can be considered as a hyperactivation of the attachment system, which is motivated by inconsistent, or in other words, unpredictable caregivers

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(Mikulincer & Shaver, 2007). The child's concern about being rejected or abandoned leads to an increase in the attachment behaviours, such as seeking proximity and displaying affections in order to elicit care from the caregiver (Gentzler, et al., 2010). The child also becomes hypervigilant to any sign of rejection from the caregiver (Shorey & Snyder, 2006). Finally, the avoidant attachment style is present when the child avoids the proximity or interaction with the mother (Bartholomew & Horowitz, 1991) and does not seek physical contact or comfort (Cooper et al., 1998). This attachment style is associated with the deactivation of the attachment system. According to Shorey and Snyder (2006), this does not mean the child does not want closeness from his or her caregiver, but instead that caregivers are most often non responsive or psychologically unavailable (Gentzler, et al., 2010). Thus, in order to maintain proximity to his or her parents and to avoid being frequently rejected (Shorey & Snyder, 2006) the child learns how to suppress expressions of overt distress (Shorey & Snyder, 2006) and does not seek for proximity or attention (Ainsworth et al., 1978).

Despite the highest influence of the attachment system during childhood, Bowlby wrote that *attachment contributes to personality and social development from the cradle to the grave* (Bowlby, 1979, p. 129). On the other hand, even though representations of self and others continue developing during life-span, attachment styles remain a useful variable in inter-individual differences in adulthood (Ainsworth, 1989; Collins, 1996). A meta-analysis has found a moderate degree in attachment stability (Fraley, 2002). According to this study, the continuity between early attachment security and attachment security at any point later in the life course, presents a correlation of .39 (Fraley, 2002). This result shows a moderate stability in attachment styles.

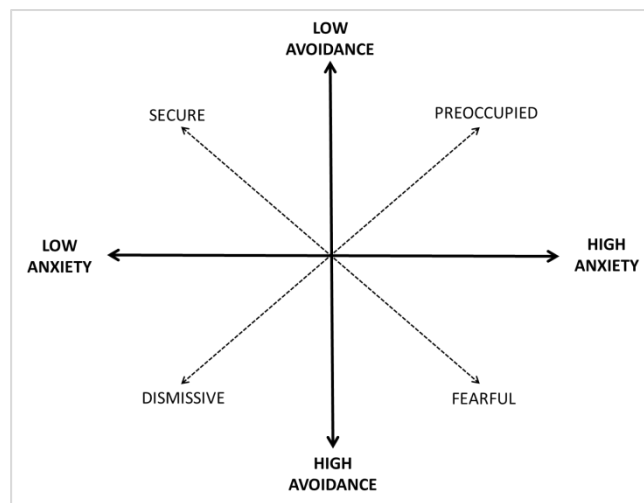
Research suggests that attachment patterns in adulthood can be better understood through a continuous approach between anxiety and avoidance (Griffin & Bartholomew, 1994). Anxious attachment shows some sensitivity to triggers of rejection and abandonment (Fraley, Hudson, Heffernan, & Segal, 2015) and has been linked with emotional hyperarousal (Mallinckrodt, 2000). Otherwise, avoidant attachment is characterized by discomfort with closeness, dependency and difficulty in relying on others for support in times of need (Fraley, et al., 2015).

Empirical data suggests that individual differences are more accurate with a dimensional rather than a categorical one (Fraley, et al., 2015). Based on this dimensional approach Bartholomew and Horowitz (1991) have designed an orthogonal

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model (see Figure 1.) that allowed them to describe four attachment styles in adulthood: secure (low in both anxiety and avoidance), preoccupied (high anxiety and low avoidance), dismissive (high avoidance and low anxiety), and fearful (high on both anxiety and avoidance).

Figure 1. Orthogonal model of adult attachment styles (adapted from Bartholomew, K. & Shaver, 1998, p. 31)



These four attachment styles also vary in two underlying dimensions: the internal model of self and the internal model of others. Thus, secure attachment style presents a positive representation of self and others. People who report a secure attachment style are, in general, comfortable with closeness and intimacy, show low levels of dependency and avoidance, they see others as responsive and available, and perceive themselves as lovable. People described as preoccupied have a negative self-representation and a positive one about others. Preoccupied people are dependent on others, report higher levels of anxiety and seek continuously closeness and support from others. Emotionally, they are easily overwhelmed by negative emotions and over-rely on others as a strategy to cope with their arousal. Dismissive style has a positive self-representation and a negative representation about others. They are more likely to avoid proximity and closeness, and view themselves as self-reliant and autonomous. Emotionally, they underestimate their psychological needs and suppress their arousal. Lastly, fearful attachment style holds negative representations about others, so they

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avoid intimate relationships and tend to see themselves as unlovable (e.g., Bartholomew & Horowitz, 1991; Fraley, et al., 2015).

III. Emotion regulation

Emotions emerge from any situation we consider relevant for our goals (Gross & Thompson, 2014). According to Carver and Scheier (1990), the emotional system continuously monitors the discrepancy between personal goals and reality. A high discrepancy between goals and reality tends to trigger the emotional system and emotions are activated. In other words, emotions are response tendencies (temporally brief and poorly coordinated) that cut across cognition, behaviour and physiology systems to mobilize individuals to action (Dillon & Pizzagalli, 2010; Gross, 1998b). When a situation is appraised in line with one's objectives, a positive emotion tends to arise. In contrast, when a situation blocks one's goals, a negative emotion might be displayed (Werner & Gross, 2010). Although research has mainly focused on the importance of negative emotions, there is evidence of the critical role of positive emotions. According to Lang (1995), positive emotions are connected with the activation of the brain's approach system, and are characterized by a pleasant valence and moderate levels of arousal. Positive emotions are also fundamental, according to Fredrickson (2004) they improve attention and cognition processes and through them people build physical, intellectual and social resources.

Gross and Thompson (2014) add that these goals can be enduring (e.g. staying alive) or temporary (e.g. to do a nice trip during the Summer); primary to one's sense of self (e.g. being a good father) or secondary (e.g. win a football match); complex (e.g. take revenge from someone) or simple (e.g. call a friend who we miss); widely shared (e.g. having friends) or idiosyncratic (e.g. do not fail the math test). Emotional activity can also take place consciously (e.g. trying to hide anxiety in a job interview) or without our conscious awareness (e.g. hiding our jealousy when our partner is giving more attention to someone else) (Gross, 1998).

When emotions arise or, in other words, when arousal emerges, we need to manage it according to our goals. We can modulate the experience and expression of emotional states by influencing the valence, intensity or duration of emotional arousal, and this process is called emotion regulation (Brans, Koval, Verduyn, Lim, & Kuppens,

2013; Heij & Cheavens, 2014). Gross (1998a) defined emotion regulation as the process by “which individuals influence which emotions they have, when they have them, and how they experience and express these emotions”. Later, Gross (2013) added that the emotion regulation processes may also impact the “occurrence, timing, nature, experience, and expression of emotions”.

From a functionalist perspective, emotions have evolved because they prepare individuals for specific responses (Levenson, 1994; Gross & Thompson, 2007). This tendency for action in emotions can also be noticed in one’s language when, for example, people say they are “moved to tears” or “frozen with fear” (Gross & Thompson, 2014). Emotions have an important role in human functioning as they influence multiple areas, such as social functioning (Eisenberg, Farbes, Guthrie, & Reiser, 2000), mental and physical health (Gross & Muñoz, 1995), or interpersonal behaviour (Murray, 2005).

According to Brand and colleagues (2013) emotion regulation is a multidimensional construct that involves a) consciousness and understanding of emotions, b) the acceptance of these emotions, c) capability to control impulsive behaviours and ability to behave according to important personal goals, and d) ability to use situational appropriate emotion regulation strategies in order to meet individual goals and effectively adapt to one’s social environment (Gratz & Roemer, 2004).

Some perspectives have highlighted the control over emotional experiences and the decreasing of emotional arousal (see Garner & Spears, 2000; Gratz & Roemer, 2004). In contrast, other authors emphasize the functional nature of emotions and argue that emotion regulation does not necessarily involve control or evident efforts to decrease emotional arousal (Gratz & Roemer, 2004). Some authors consider it more relevant to think about emotion regulation as a continuum from an effortful and controlled regulation to an automatic activity (Gross, 1998a; Shiffrin & Schneider, 1977). Along this continuum, emotional regulation strategies can be intrinsic (e.g. trying to deal with our emotions alone) or extrinsic (e.g. calling a friend when we are sad). In general, developmental research typically focuses on extrinsic strategies, as in the case of the large number of studies that focus is the role played by caregivers in their children’s emotions regulation (see Gross, 1998a; Werner & Gross, 2010). On the other hand, studies on adulthood emphasize intrinsic strategies (how people regulate their own emotions) (Gross & Thompson, 2014). However, emotional regulatory processes

attend both intra-personal and inter-personal effects and intrinsic and extrinsic processes are essential during all life-span (Gross & Thompson, 2014).

In fact, people may regulate emotions in two different directions, by down-regulating (dampening) or up-regulating them (savouring) (Gross & Thompson, 2014). Intuitively, we may think that we mostly increase positive emotions and decrease the negative ones, but people do not always try to improve how they feel. Sometimes, for instrumental reasons, we are motivated to experience unpleasant emotions (Simons, Bruder, Lowe, & Parkinson, 2013). For example, when someone is afraid of flying but sees it as the only way to reunite with his or her family. At other times it is necessary to direct regulation strategies at positive emotions, for example when we try to suppress a laugh during a funeral. Supporting these examples, Gross, Richards and John (2006) developed a study with young adults and the results showed that people regulate both positive and negative emotions. In line with these assumptions we can conclude that any particular form of emotion regulation is not necessarily good or bad (Werner & Gross, 2010). According to a functionalist perspective, the leading role in emotional regulation is not played by specific strategies themselves (Gross & Thompson, 2014) but by the suitability of the strategies to the context. For example, the suppression of emotions may help a policeman in a crime scene but also deactivate emotions related to empathy, thereby decreasing a helping attitude towards others.

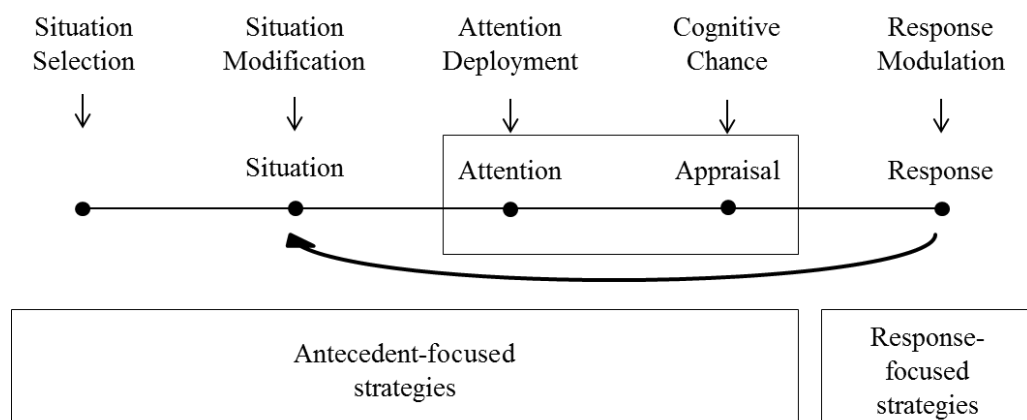
Another important aspect is differentiating emotion regulation from coping. Although they may often seem like interchangeable terms, other times they are presented as different constructs. Furthermore, there is weak consensus concerning the best definition for each of these terms (Compas, Jaser, & Benson, 2009). The most cited definition for coping was made by Lazarus and Folkman (1984) – *constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person*. This definition underlines the role of cognitive and behavioural processes, assessing the coping responses as stressful demands, in that they require the individual's resources and, in some cases, can exceed it (Compas et al, 2014). Later definitions, such as the one given by Skinner and Wellborn (1994), see coping resources as *the ways that people mobilize, guide, manage, energize, and direct behaviour, emotion, and orientation under stressful conditions* and Compas and colleagues (2001) point out the *conscious efforts to regulate emotion, cognition, behaviour, physiology, and the environment in response to stressful events or circumstances*. These later definitions bring more consensus into this field and

emphasise the fact that coping is related to controlled, conscious and effortful processes, which are goal-directed and it is a response to stressful events or circumstances. On the other hand, these definitions also point out that coping can be conceptualized as a form of regulation of diverse functions, such as emotion, behaviour, cognitions, physiology, and the environment (Compas et al., 2014).

So far, the emotion regulation construct appears to be not a unitary construct and presents itself in different ways. As previously mentioned, the regulatory activity includes a group of automatic and controlled processes, such as the modification of the occurrence, intensity and duration of the emotion (Gross, 1998a), which take place in distinct moments – the initiation, maintenance and modification of one’s emotion (Eisenberg et al., 2000; Gross & Thompson, 2007). In order to give structure and theoretical context to this field, Gross (1998a, 1998b, 2001) developed a model in which different emotional regulatory strategies correspond to different moments within emotional activity (Gross, 2001; Gross & John, 2003). On a wider level, the author differentiates between antecedent-focused and response-focused emotion regulation strategies. Within these two moments, five emotion regulation processes are distinguished which, in turn, also result in different strategies (see Figure 2; for a review, see Gross & Thompson, 2007).

Figure 2. The process model of emotion regulation

(Werner, K. & Gross, 2010, p. 18)



More precisely, antecedent-focused strategies take place before appraisals emerge (Webb, Miles, & Sheeran, 2012). In other words, they relate to the moment in

which the emotional response is still not completely activated and the behavioral and physiologic responses not yet fully determined (Gross & John, 2003). This category includes four distinct processes: situation selection, situation modification, attentional deployment and cognitive change. Situation selection occurs when we actively determine the situation in which we are involved in, such as when we approach or avoid certain people, places or objects in order to impact our feelings (Gross, 1998b). Examples include the avoidance of social events to not meet an ex-boyfriend, taking a different route to avoid a dark and empty street at night, or eating chocolate to feel better. Situation selection assumes knowledge about the underlying characteristics of certain situations and their emotional impact (Gross, 1998b).

When a situation has already started and we cannot avoid it, we can still actively change their characteristics (Gross, 1998b). Situation selection is an important form of emotion regulation that has a significant emotional impact (Gross, 1998b). For example, when rather than clarifying a doubt with a teacher personally one chooses to send an e-mail, or when one takes the stairs instead of the elevator to visit a friend who lives on the fourth floor.

Some correlational studies have explored how people change situations as a way of coping (e.g., Belzer, D’Zurilla, & Maydeu-Olivares, 2002; D’Zurilla, Chang, & Sanna, 2003; Jaffee & D’Zurilla, 2003), while others have focused on how caregivers modify their children’s situations in order to alter their emotions (e.g., Eisenberg, Cumberland, & Spinrad, 1998; Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996). However, there is still little investigation on how people use situation selection or situation modification to regulate their own emotions (Webb et al., 2012). That is, most studies related to antecedent-focused regulatory activity assume that people could not avoid or choose situations and so they need to find a way to deal with the situation after being already involved in it (Webb et al., 2012). Therefore, many studies have been focused on other processes, such as attentional deployment and cognitive change (Webb et al., 2012).

The way people direct their attention in a particular situation is spotlighted by Gross and Thompson (2007) as attentional deployment, with its related strategies being distraction and concentration (Gross, 1998b). As for cognitive change, it is relating to “changing how we appraise the situation we are in and to alter its emotional significance by changing how we think about the situation” (Gross & Thompson, 2007). That is, cognitive change impacts the emotional experience (Webb et al., 2012), as for when an

experience of failure is reframed as a learning opportunity. Cognitive change is achieved through a specific strategy, which has been widely investigated – reappraisal (Gross, 1998b). Reappraisal involves a cognitive change of the situation and, consequently, its emotional impact (Gross, 1998b). Most studies have looked at how reappraisal influences the experience of negative emotions and their authors have developed several ways to induce this cognitive change. Hajcak and Nieuwenhuis (2006) instructed participants to “come up with a less negative interpretation of the picture content (e.g., a bloody crime scene could be seen as the place where a murder investigation was finally solved)” and Ochsner and collaborators (2004) asked participants to “increase their sense of objective distance, viewing pictured events from a detached and third-person perspective”.

Even after the attentional and cognitive triggers have been attended, the emotional experience is still not fully determined. Response-focused strategies take place after the emotional response is initiated. As opposed to what was discussed previously, response modulation comes later in the emotional regulatory activity, after the response tendencies have been generated (Gross & John, 2003). Response modulation refers to “directly influencing physiological, experiential, or behavioral responding” (Webb et al., 2012) and its specific strategy is suppression. Expressive suppression is defined as the act of inhibiting the emotional expressive or behavioral components of an ongoing emotion (Butler et al., 2003; Gross & Levenson, 1993; Gross & Thompson, 2007). As an example, Gross (1998a) elicited it by requesting participants to “try to behave in such a way that a person watching you would not know you were feeling anything”.

This model points out five emotion regulation processes that unfold in specific strategies. Although all strategies play an important role in the emotional regulation system, we have decided to focus the present work on reappraisal and suppression. As Gross and John (2003) mentioned, these two strategies should be the most widely used both in research and in everyday life, can be experimentally manipulated and reflect individual differences.

Webb and colleagues (2012) made additional important distinctions within these two emotion regulation strategies (see Figure 2).

Figure 2. A taxonomy for linking emotion regulation processes with specific strategies (adapted from Webb et al., 2012, p. 778)

Process	Strategy	Subtype	Definition
Cognitive change	Reappraisal	Reappraise emotional response	Interpreting the emotion in a particular way (e.g., thinking about the emotion as something normal that should be accepted.).
		Reappraise emotional stimulus	Reinterpreting the causes of emotional stimuli, such as their motives or context (e.g., thinking of a negative experience as a positive event.).
		Reappraise via perspective taking	Adopting a more objective perspective on the emotional stimulus (e.g., trying to look at the emotional experience through a detached, or a third-person perspective.).
		Reappraisal –mixed	Interpreting the emotional experience using some or all of the above mentioned reappraisal subtypes.
Response modulation	Suppression	Suppress the expression of emotion	Trying to hide what one is feeling (e.g. trying not to cry or not to laugh.), making observers unable to understand what kind of emotions he or she is experiencing.
		Suppress the experience of emotion	Controlling the emotional experience (e.g., not allowing oneself to feel certain emotions.)
		Suppress thoughts of the emotion eliciting event	Controlling thoughts or trying not to think about the emotion-eliciting event.
		Suppression –mixed	Interpreting the emotional experience can be interpreted using some or all of the above mentioned suppression subtypes.

A meta-analysis explored the effectiveness of strategies from the model of emotion regulation. Webb and colleagues (2012) have carried out a systematic review for which they have identified 306 experiments that included different emotion regulation strategies assessed by experiential, physiological and behavioral measures. On a wider level, the results showed some differences between emotion regulation processes: attentional deployment presented no effect on emotional outcomes ($d+=0.00$), response modulation produced a small effect ($d+=0.16$) and cognitive change presented a small-to-medium effect ($d+=0.36$) (Webb et al., 2012). Their findings also highlighted some important differences within processes. While the suppression of emotional expression was effective ($d+=0.32$), the suppression of emotional experience and the suppression of thoughts were not ($d+= -0.04$ and -0.12 , respectively) (Webb et al., 2012). Reappraising the emotional response also proved effective ($d+=0.23$), as well as emotional stimulus reappraisal ($d+=0.36$) and perspective taking ($d+=0.45$) (Webb et al., 2012). Furthermore, Augustine and Hemenover (2009; in Webb et al., 2012) found an even greater effect of reappraisal ($d+=0.68$), although this result should be taken with caution since it was only based on two studies.

The effect of suppression in an ongoing emotion has already been studied. Results indicate that suppressing expressive behaviour decreases self-reported experiences of specific emotions (e.g. pride or amusement) but does not have the same result for other emotions (e.g. disgust and sadness). Moreover, during the suppression effort the sympathetic nervous system response increases (Gross, 2001; Gross & Levenson, 1997). There is consensus about the idea that suppression decreases the behavioral expression but the emotional experience remains (Gross & Levenson, 1993; Quartana & Burns, 2007). However, despite suppression effectively decreasing the emotional expression, there are negative personal and social consequences associated with this (e.g., Butler et al., 2003). On the one hand, it is more difficult to build interpersonal relationships for someone who does not show their emotions. On the other hand, suppression seems to create a sense of incongruence – the individual feels one thing and shows another (Rogers, 1951) – as well as to tax cognitive resources, since continuous efforts are required to manage the emotional response tendencies as they continually arise (Gross & John, 2003). Additionally, this set of results suggests that suppressing emotional expressions is conceptually and empirically different from suppressing thoughts (Webb et al., 2012). Koole (2009) reinforces that idea and points

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out that the two subtypes of suppression have different underlying systems – “attention in the case of thought suppression, the body in the case of expressive suppression”.

IV. Attachment System, Emotion Regulation, and Positive Emotions

After introducing the main concepts relevant for this thesis I will now discuss how they interact. As explained before, and according to previous literature, when a child perceives a threat, the attachment system is activated. Therefore, a secure child will look for proximity with a caregiver in order to seek safety. Although it was the threat that triggered the attachment system, the emotional state was what motivated the child to act in order to find relief from her/his caregiver. Thus, we may think that the emotional state is the attachment system’s operationalization and relief works as a positive reinforcement that reinforces the emotion regulation strategy. From these assumptions it is reasonable to think that the attachment system, emotion regulation and emotions share important connections between them. Additionally, and considering empirical data previously discussed that showed a moderate stability in attachment styles, we can consider that some relations between these three variables remain significant in adulthood. For this reason we believe that these two variables are important contributors to explain and understand kama muta experiences.

Empirical data support the idea that the emotional regulatory activity significantly affects the experience and expression of positive emotions (Dillon & Pizzagalli, 2010; Kalokerinos, Greenaway & Denson, 2015; Webb, Miles, & Sheeran, 2012). Several studies have studied the relations between emotion regulation strategies (suppression and reappraisal) and their effects on positive emotions.

Gross and Levenson (1997), for example, explored the effect of inhibiting positive emotions by asking 180 female participants to view and rate neutral, sad and amusing films (preceded by no-instructions or suppression instructions). Their results showed that the inhibition of expressive behaviour decreased the amusement self-reports in amusing films as well as the expressive behaviour itself (although it did not eliminate it). The authors stated that suppression has a significant impact on subjective emotional experiences of positive emotions. The same conclusions were obtained by Dan-Glauser and Gross (2011) in a study that explored the impact of expressive and physiological suppression on an ongoing emotion. Their study examined the first 8

seconds of participants' emotional responses while looking at 125 pictures. These pictures were selected from the International Affective Picture System (IAPS) (Lang, Bradley, & Cuthbert, 2005) and differed in terms of their valence (25 neutral pictures; 75 negative pictures; and 75 positive pictures). According to their results, both expressive suppression and physiological suppression have an early impact on experiential, expressive and physiological positive emotional responses (Dan-Glauser & Gross, 2011).

Other research has shown different results. Although suppression is often associated with downregulating positive emotions (Dan-Glauser & Gross, 2011; Gross & Levenson, 1997; Vrticka, Sander, & Vuilleumier, 2011), some studies found no effect between these two variables (Korb, Grandjean, Samson, Delplanque, & Scherer, 2012). As an example, Vrticka and colleagues (2011) have studied the neural impact of suppression and reappraisal on positive emotions through the observation of visual scenes. Their results indicated a significant decrease of subjective emotion ratings during the reappraisal condition, but not for the suppression condition.

Cognitive reappraisal has also been an important research topic. A neurophysiology study of emotion regulation focused on reappraisal and suppression by evaluating the responses of 22 female participants when shown sequences of humorous and non-humorous pictures (Korb et al., 2012). Results indicated that reappraisal reduced the experience and expression of positive emotions compared to the control condition, while in the suppression condition only the expression was reduced (Korb et al., 2012). The same result was found for reappraisal when Kalokerinos, Greenaway, and Denson (2015) assessed 1300 participants that had watched two videos – an amusing and a sad one. Their results suggested that participants who had successfully reappraised downregulated the experience of positive emotions. In other words, reappraisal successfully reduced the experience of positive emotions (Kalokerinos et al., 2015). In conclusion, empirical data agrees on the idea that reappraisal reliably downregulates positive emotional experiences (Gruber, Hay, & Gross, 2014; Kalokerinos et al., 2015; Lalot, Delplanque, & Sander, 2014; Webb et al., 2012).

These empirical data leads us to think that emotion regulation strategies can also influence the being moved self-report and, particularly, that both strategies can downregulate the kama muta experience. Additionally, the reappraisal and suppression effect on positive emotions seems to be different. Some studies points out that suppression influence the expression of emotions while reappraisal impacts also the

experience (Korb et al., 2012; Vrticka et al., 2011). For this reason is expected that reappraisal has a greater impact on kama muta self-report.

The literature also indicates specific relations between emotions and attachment styles. Although research has given more attention to negative emotions, some evidence suggests that attachment-related differences also exist in positive emotional experiences. In a study about nostalgia, described by the authors as a *bitter sweet emotion* and a facilitating factor on social bonding (Wildschut, Sedikides, Arndt, & Routledge, 2006), it was seen that dismissively attached people reported lower levels on two nostalgia measures (Vingerhoets, Laan, Wildschut, Kalle, & Huis in't Veld, 2009).

According to Goodall (2015), it is still not clear that the processes related to positive emotions are the same as for negative emotions. Empirical data shows consistent results related to both secure and avoidant attachment styles. Securely attached individuals tend to engage in greater processing of positive experiences (maximization) (Gentzler et al., 2010); and a secure attachment style is positively correlated with positive emotions (Shiota, Keltner, & John, 2006; Simpson, Collins, Tran, & Haydon, 2007; Magai, Distel, & Liker, 1995). In contrast, people who are more avoidant tend to minimize their positive experiences (Gentzler, et al., 2010; Goodall, 2015) and to report less positive emotions when exposed to positive stimuli (Gentzler & Kerns, 2006; Magai, et al., 1995; Shiota et al., 2006).

However, the anxious attachment style does not show a clear pattern concerning positive emotional experiences. Different studies have had inconsistent results regarding the relation between anxiously attached people and positive emotions, concluding that these two variables were not related (Goodall, 2015; Shiota, et al., 2006). A different result was described by Gentzler & Kerns (2006), with results showing that anxiously attached individuals reported lower levels of recalled positive emotions. Thus, it may be that anxiously attached individuals underestimate earlier positive affections. Finally, Laan, Van Assen, and Vingerhoets (2012) conducted a study exploring the relation between attachment style and crying in adults. Two different operationalisations were designed in this research – crying in general and in response to music - and results showed that secure people reported more crying over positive emotions, dismissive individuals reported more crying inhibition in both conditions, and anxious individuals cried more intensely than secure people (Laan, et al., 2012).

These empirical data indicate that attachment styles have a significant relation with positive emotions and this leads us to think that this relation can be extended to

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kama muta experience. On the other hand, different studies point that avoidant attachment style is negatively related to positive emotions (Gentzler, et al., 2010; Gentzler & Kerns, 2006; Goodall, 2015; Shiota et al., 2006) and according to Laan and colleagues (2012) anxious attached people report higher levels of positive emotions.

V. Goals and hypotheses

Based on the reviewed theories and empirical data it is hypothesized that 1) the emotion regulation strategies of reappraisal and suppression influence the experience of kama muta. Particularly we expected that 1.1) both emotion regulation strategies downregulate kama muta experiences compared to a neutral condition; and that 1.2) reappraisal decreases kama muta levels more than suppression.

We expect these patterns because was suggested by different empirical studies that emotional regulation strategies affect positive emotions (Dillon & Pizzagalli, 2010; Kalokerinos, Greenaway & Denson, 2015; Webb, Miles, & Sheeran, 2012) and this lead us to think that kama muta experience it will be also influenced by them. Research also indicates that this is a negative effect (Dan-Glauser & Gross, 2011; Gross & Levenson, 1997) and reappraisal showed a more marked reduction in positive self-report (Korb et al., 2012; Vrticka et al., 2011) because drive away the attention from the emotional content.

Our second main hypothesis is that 2) attachment styles will be differently associated with kama muta. Specifically, we expected that 2.1) anxious attachment styles will be positively associated with kama muta, and 2.2) avoidant attachment styles will be negatively related with it.

Different studies were succeeded to show the association between attachment and positive emotions (Wildschut, Sedikides, Arndt, & Routledge, 2006) and hence it is reasonable to expect the same pattern for kama muta emotional experience. The pattern expected for anxious attachment style is based in the idea that anxious people are characterized by a chronically hyperactivated attachment system (Shaver & Mikulincer, 2007), which should resonate with the core theme evoking kama muta, namely a suddenly increased communal sharing relation. Conversely, an avoidant attachment should decrease kama muta because a chronically deactivated attachment system

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(Shaver & Mikulincer, 2007) makes it harder to recognize and respond to communal sharing intensification.

OVERVIEW OF THE CURRENT STUDY

The present work examines the relations between kama muta, attachment, and the induction of emotion regulation strategies (reappraisal and suppression) with a mixed (within and between subjects) design study. We recruited over 400 participants in Norway and Portugal for an online study. Each participant watched three moving videos and answered a questionnaire on being moved after each. Prior to the presentation of the second video, participants were instructed to either reappraise the video or to suppress the expression of any emotion it may evoke, using standard instructions (Richards & Gross, 2000). The third video was preceded by the remaining instruction, suppression or reappraisal. We also constructed a manipulation check for these instructions and presented it after the being moved questionnaire for both instructions. Adult Attachment style (Collins & Read, 1990) was either assessed before or after the videos, and the influence of order was analysed.

We first tested whether participants indicated using the emotion regulation strategies we had instructed in two separate analyses of variance for each of the manipulation check questions (suppression and reappraisal). The design was a 3 (regulation condition: neutral vs. reappraisal vs. suppression) x 2 (country: Portugal vs. Norway) design with the first factor varying within, and the last factor between participants. We expected to find highest values on the reappraisal manipulation check questions in the reappraisal condition, and highest values on the suppression manipulation check questions in the suppression condition.

We next checked for potential carry-over effects from the first to the last regulation strategy. The within design we chose for emotion regulation greatly increases statistical power by controlling for within person variance and reducing the number of participants necessary. However, it has the potential disadvantage that the use of the second strategy is influenced by the first. The manipulation check allowed us to assess whether this may have been the case. Because condition order was not fully crossed with all three conditions, we tested its influence in a separate analysis without the neutral condition and without country, leading to a 2 (regulation condition: reappraisal

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vs. suppression) x 2 (regulation condition order: first reappraisal vs. first suppression condition) analysis of variance with the first two factors varying within, and the last factor between participants. We expected a significant Regulation Condition x Manipulation Check effect, indicating a successful manipulation and a carry-over effect would be visible in an interaction of regulation condition and regulation condition order such that the condition which came second receives higher values for both manipulation check questions.

To test our first main hypothesis, we analysed the influence of emotion regulation strategies on the kama muta experience using a 2 (country: Portugal vs. Norway) x 2 (order: first reappraisal vs. first suppression) x 3 (condition: neutral vs. reappraisal vs. suppression) analysis of variance with the first two factors varying between participants and the last factor varying within participants. We then repeated the same analysis for each of the bodily sensations. We expected reappraisal to reduce the kama muta experience most, and suppression to reduce it somewhat compared to the neutral condition. Furthermore, we expected the reappraisal condition to reduce all bodily sensations because of the reduced emotional experience, and the suppression condition to reduce tears because participants are instructed to suppress expressive signals.

To analyse the relation between attachment style and kama muta experiences, we first examined if the means for the two subscales (anxious vs. avoidant attachment styles) depended on position and country in a 2 (position: first vs. last) x 2 (country: Portugal vs. Norway) analysis of variance with both two factors varying between-participants. We expected to find no differences, which would allow us to collapse across these factors for the main analysis. However, it is conceivable that watching moving videos changes responses to the attachment scale. Therefore it was important to check for order effects.

Subsequently, we tested our second main hypothesis regarding the relation between attachment styles and the experience of kama muta and related bodily symptoms. Was tested H2.1 and H2.2 that attachment styles have a main effect on kama muta experiences. This resulted in a 2 (attachment style: anxious vs. avoidant) x 3 (regulation strategy: neutral vs. reappraisal vs. suppression) analysis of covariance with all variables varying within participants, attachment styles as covariates and regulation strategy as factor. We predicted an anxious attachment style to increase kama muta and an avoidant attachment style to decrease kama muta.

METHOD

Participants. Four hundred and ninety answers were collected, with the exclusion criteria being: a) not finishing the questionnaire; b) Norwegian students indicating that they wanted to participate for educational purposes only; and c) not having Portuguese or Norwegian nationality. The final sample had 387 participants, with 233 Portuguese (150 female, 3 unspecified gender) ranging from 18 to 66 years old ($M= 32.54$; $SD= 9.33$) and 144 Norwegians, all of them Psychology students (94 female, 2 unspecified gender), aged between 19 and 63 years old ($M= 23.85$; $SD= 7.24$).

Materials and measures.

Demographics. Participants were initially asked to provide a few demographic data, such as their gender, age and nationality.

Attachment style. Participants completed the revised Attachment Scale (AAS; Collins & Read, 1990; Collins, 1996). This 18-item scale (e.g. “I find it relatively easy to get close to others”; “I find it difficult to allow myself to depend on others”; “I do not worry about being abandoned”) comprises three subscales, each composed of six items. The Close subscale assesses to what extent one is comfortable with closeness and intimacy ($\alpha =.69$) and the Depend subscale measures the extent to which a person feels he/she depends on others ($\alpha =.75$) (Collins & Read, 1990). These two subscales combined reflect the degree to which individuals tend to avoid (vs. approach) intimacy and interdependence with others (Collins & Read, 1990; Collins & Read, 1994; Collins & Feeney, 2004). Participants were asked to respond to each item in a 5-point Likert scale, ranging from “Not at all characteristic of me” to “Very characteristic of me”, in terms of their general orientation towards close relationships. The Close, Depend, Anxiety and Avoidance subscales showed a reasonable internal consistency of .68, .66, .85, and .76 respectively for the Portuguese sample; for the Norwegian sample the Cronbach's alphas were higher, .81, .80, .85, and .88 respectively.

Film Stimulus. To elicit experiences of being moved, participants were shown three brief movies (short synopses of the stories and links are given in Appendix A). These movies were chosen based on previous findings to ensure that most participants would have the desired emotional response tendencies. Earlier non-published studies have already tested these movies across different cultural samples, resulting in moderate or high kama muta experiences. The Portuguese and Norwegian sample showed a level

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of kama muta between 2.79 and 3.55 (on 5-point scale from 0 to 4) (Seibt, Schubert, Zickfeld, & Fiske, 2015b).

Emotion regulation instruction (adapted from Richards & Gross, 2000). Three experimental conditions were established: neutral, suppression, and reappraisal. In the neutral condition, participants were given no specific instruction besides being asked to watch the video carefully. In the suppression condition they were told the following:

“While watching the next video try to refrain from showing any feelings you might experience, so that a person looking at you would be clueless regarding your emotions or the type of video you are watching. It is very important not to let your emotions show on your face, in gestures or body movements. Try to keep a neutral expression the whole time”.

In the reappraisal condition participants were given the following instructions:

“While watching the next video, take a detached, objective perspective. Try to behave like a film director whose task is to assess the performance of each actor. Keep in mind that what you see is purely fictional, it isn’t real. You’re only a film director and you have to take emotional distance in order to see all the technical details of the scene and actors’ performances. In other words try to think about the video objectively and analytically rather than as personally”.

Kama Muta. The kama muta experience was assessed by a being moved measure, the KAMMUS scale (Seibt, Schubert, Zickfeld, & Fiske, 2016). This study used a short version of 15 items that were answered in a 7-point Likert scale (ranging from 0 (*not at all*) to 6 (*a lot*)). The KAMMUS scale is divided in two sections: body sensations (four items: “Tears”, “A warm feeling in the center of the chest”; a feeling of “Choked up or a lump in the throat”; and goosebumps) and the description of a kama muta experience (10 items; e.g. “I was moved”; “I felt a part of something larger than myself”). Reliabilities, across subscales and conditions, between the Portuguese and Norwegian samples, were moderate to high (minimum Cronbach’s $\alpha = .68$; maximum Cronbach’s $\alpha = .94$).

Manipulation check questions (adapted from Richards & Gross, 2000). Eight items were developed to assess the success of the instructions given (e.g. “When I was getting involved with the video I tried to see things through another perspective”; “When I felt emotions I tried to not express them”). The items were rated in a 7-point Likert scale (ranged from “0=not at all” to “6= a lot”) and assessed the success of

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reappraisal instructions (Cronbach's $\alpha = .80$) and suppression instructions (Cronbach's $\alpha = .94$).

Procedure

All procedures were approved by the Ethics committee of the University of Oslo's Department of Psychology. All data were collected online, via the Qualtrics software. The Portuguese sample was recruited online, through social networks (Facebook) based on a snowball procedure. The Norwegian sample was recruited through an internal subject pool at the University of Oslo and the students who answered the questionnaire were rewarded with 2 credits.

The experiment had a within subjects design. After receiving instructions and giving informed consent participants were asked to answer the demographic data. After that, half of the sample completed an attachment measure, which was only given to the other half at the end of the questionnaire. This procedure aimed to test if the position of the scale influenced the attachment scale results.

Participants were told that they would view three short movies. Immediately before viewing the videos, they were given instructions – neutral, suppression and reappraisal instructions. The video sequence was randomized, as were the order of suppression and reappraisal instructions. After watching each movie, participants were asked to rate the being moved measure and answered the manipulation check items. Finally, participants were debriefed and thanked for their participation. The original questionnaire was developed in English and translated to Portuguese and Norwegian, so that participants could choose their preferred language.

RESULTS

All data were analysed with analyses of variance (ANOVA) with the software IBM SPSS Statistics 23.

Manipulation check

The first analysis tested whether participants used the emotion regulation strategies we had instructed before the second and third video. Two separate analyses were conducted for each of the manipulation checks (suppression and reappraisal) in a 3 (regulation condition: neutral vs. reappraisal vs. suppression) X 2 (country: Portugal vs. Norway) analyses of variance, with the first factor varying within-participants and the second one varying between-participants.

Mauchly's test indicated that the assumption of sphericity had not been violated, $\chi^2(2) = .991, p = .206$. The results (see Table 1) indicated a significant main effect of regulation condition on reappraisal manipulation check questions, $F(2, 680) = 55.244, p < .001$. Contrasts suggested that the manipulation check questions for reappraisal instructions were significantly different across all conditions (neutral vs. reappraisal condition: $p < .001$; neutral vs. suppression condition: $p = .013$; reappraisal vs. suppression condition: $p < .001$).

Table 1. Means and standard deviations of the manipulation check questions (reappraisal and Suppression) as a function of regulation condition.

	Neutral condition	Reappraisal condition	Suppression condition
Reappraisal's manipulation check	$M = 2.8$ ($SD = 1.1$)	$M = 3.8$ ($SD = 1.6$)	$M = 3.1$ ($SD = 1.5$)
Suppression's manipulation check	$M = 2.8$ ($SD = 1.6$)	$M = 3.8$ ($SD = 1.9$)	$M = 4.3$ ($SD = 2.1$)

No significant interaction was found between regulation condition and country, $F(2, 680) = 2.709, p = .067$; neither was there a main effect for country, $F(1, 340) = 1.744, p = .187$ (see Table 2).

Table 2. Means and standard deviations of the manipulation check questions (reappraisal and Suppression) as a function of regulation condition and participant's country.

	Portugal			Norway		
	Neutral condition	Reappraisal condition	Suppression condition	Neutral condition	Reappraisal condition	Suppression condition
Reappraisal's manipulation check	<i>M</i> = 2.7 (<i>SD</i> = 1.1)	<i>M</i> = 3.8 (<i>SD</i> = 1.6)	<i>M</i> = 3.1 (<i>SD</i> = 1.6)	<i>M</i> = 3.1 (<i>SD</i> = 1.1)	<i>M</i> = 3.9 (<i>SD</i> = 1.4)	<i>M</i> = 3.1 (<i>SD</i> = 1.2)
Suppression's manipulation check	<i>M</i> = 2.7 (<i>SD</i> = 1.5)	<i>M</i> = 3.7 (<i>SD</i> = 1.9)	<i>M</i> = 4.1 (<i>SD</i> = 2)	<i>M</i> = 2.9 (<i>SD</i> = 1.6)	<i>M</i> = 4.1 (<i>SD</i> = 1.9)	<i>M</i> = 4.5 (<i>SD</i> = 1.9)

Regarding suppression's manipulation check, Mauchly's test of the ANOVA indicated that the assumption of sphericity had been violated, $\chi^2(2) = 15.885, p < .001$, which led us to report Greenhouse-Geisser corrected tests ($\epsilon = .956$). As expected, there was also a main effect of regulation condition on suppression manipulation check questions, $F(1.912, 650.234) = 80.731, p < .001$ (see Table 1). Contrast revealed significant differences between all conditions: neutral vs. reappraisal ($p < .001$); neutral vs. suppression ($p < .001$); reappraisal vs. suppression ($p < .001$). No interaction was found between regulation condition on suppression manipulation check questions and country, $F(1.912, 650.234) = .306, p = .727$. A marginal main effect of country showed up, $F(1, 340) = 4.031, p = .045$ (see Table 2).

The manipulation instructions appear to have been successful across conditions. The highest values of reappraisal strategy were found on the reappraisal condition and the highest values of suppression strategy were reported in suppression condition.

Subsequently was analysed the potential carry-over effects from the first to the second emotion regulation instruction. Because condition order was not fully crossed with all three conditions, we tested its influence without the neutral condition and without country in a 2 (regulation condition: reappraisal vs. suppression) x 2 (condition order: first reappraisal vs. first suppression condition) design. The first factor is within and the last factor between participants.

No main effect of condition order emerged, $F(1, 351) = 1.276, p = .259$, (see Table 3) and the results for the manipulation check questions show that the manipulations were successful in influencing what participants actually did, to the extent that they reported correctly. A carry-over effect from the first to the second

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instruction was also apparent in a significant Condition Order x Condition effect ($F(1, 351) = 13.114, p < .001$) indicating that participants tended to keep using the first regulation strategy also in the second regulation condition, in addition to the new strategy.

Table 3. Means and standard deviations of the manipulations check questions as a function of regulation condition and order of the manipulation.

	Reappraisal condition		Suppression condition	
	Reappraisal's Manipulation check	Suppression's Manipulation check	Reappraisal's Manipulation check	Suppression's Manipulation check
Reappraisal first	$M = 3.7$ ($SD = 1.6$)	$M = 3.5$ ($SD = 1.8$)	$M = 3.4$ ($SD = 1.7$)	$M = 4.1$ ($SD = 2.1$)
Suppression first	$M = 3.9$ ($SD = 1.6$)	$M = 4.2$ ($SD = 1.9$)	$M = 2.9$ ($SD = 1.3$)	$M = 4.3$ ($SD = 1.9$)

Influence of emotion regulation strategies on the *kama muta* experiences

In order to test our main hypothesis, the influence of emotion regulation strategies on the *kama muta* experiences was analysed through a 2 (country: Portugal vs. Norway) x 2 (order: first reappraisal vs. first suppression) x 3 (regulation condition: neutral vs. reappraisal vs. suppression) analysis of variance with the first two factors varying between participants and the last factor varying within participants (see Table 4).

Table 4. Means and standard deviations of *kama muta* as a function of regulation condition and participant's country.

	Kama Muta level		
	Neutral condition	Reappraisal condition	Suppression condition
Portuguese sample	$M = 4.6$ ($SD = 1.2$)	$M = 4.2$ ($SD = 1.5$)	$M = 4.4$ ($SD = 1.5$)
Norwegian sample	$M = 3.9$ ($SD = 1.3$)	$M = 3.5$ ($SD = 1.5$)	$M = 3.7$ ($SD = 1.5$)

Mauchly's test indicated that the assumption of sphericity had not been violated, $\chi^2(2) = 1.179$, $p = .555$. The results showed a significant main effect of emotion regulation condition, $F(2, 742) = 18.139$, $p < .001$, but no statistically significant interaction with country, $F(2, 742) = .465$, $p = .629$. Contrasts were significant among all conditions: neutral vs. reappraisal ($p < .001$); neutral vs. suppression ($p = .005$); and reappraisal vs. suppression ($p < .001$).

This result confirms Hypothesis 1, which stated that emotion regulation strategies are associated with different levels of kama muta. It was also hypothesized, and confirmed through present results, that emotion regulation strategies (suppression and reappraisal) downregulate the kama muta experience (comparing with neutral condition) and that reappraisal downregulates more kama muta experience than suppression. Participants report a higher level of kama muta in neutral condition, followed by suppression and reappraisal conditions (Neutral > Suppression > Reappraisal).

Results also showed a main effect of country, $F(1, 371) = 31.032$, $p < .001$. Norwegian participants show a lower level of kama muta in all conditions (see Table 4). The instruction order after the neutral condition was tested and no main effect of order emerged ($F(1, 386) = 1.999$, $p = .158$).

Then, the same analysis was repeated for each of the bodily sensations (see Table 5). In relation to tears, the neutral condition triggered higher reports of these. Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(2) = 6.988$, $p = .030$, which led us to report Greenhouse-Geisser corrected tests ($\epsilon = .981$). Statistics showed a main effect for regulation condition ($F(1.963, 734) = 4.909$, $p = .008$) but no interaction between conditions and country ($F(1.963, 734) = 1.733$, $p = .178$). Participants reported more tears in the neutral condition than in the reappraisal condition, mean difference MD = .32 [.07, .58]¹, $p = .013$, and the suppression condition, MD = .38 [.11, .65], $p = .006$. The suppression and reappraisal conditions did not significantly differ from each other, MD = .06 [-.30, .18], $p = .635$. There was also a main effect of country ($F(1, 367) = 4.552$, $p = .034$), with Norwegian participants showing a lower level of tears in the reappraisal condition.

The feeling of having a warm chest showed higher levels in Norwegian participants (Mauchly's test indicated that the assumption of sphericity is assumed,

¹ The values in brackets are 95% confidence intervals.

Table 5. Means and standard deviations of body sensations as a function of regulation condition and participant's country.

	Tears			Warm chest			"Choked up or a lump in the throat"			Goosebumps		
	Neutral condition	Reappraisal condition	Suppression condition	Neutral condition	Reappraisal condition	Suppression condition	Neutral condition	Reappraisal condition	Suppression condition	Neutral condition	Reappraisal condition	Suppression condition
Portuguese sample	M=3.8 (SD=2.1)	M=3.7 (SD=2.3)	M=3.4 (SD=2.2)	M=3.3 (SD=1.9)	M=3.3 (SD=2)	M=3.5 (SD=2)	M=4.4 (SD=2)	M=3.9 (SD=2.1)	M=4.3 (SD=2)	M=3.9 (SD=2.1)	M=3.7 (SD=2.2)	M=3.8 (SD=2.2)
Norwegian sample	M=3.5 (SD=2.1)	M=3 (SD=2.2)	M=3.2 (SD=2.3)	M=4 (SD=1.9)	M=3.9 (SD=2)	M=3.8 (SD=1.9)	M=3.6 (SD=2.2)	M=3.5 (SD=2.1)	M=3.7 (SD=2.2)	M=3.6 (SD=2.1)	M=3.3 (SD=2.1)	M=3.5 (SD=2.2)

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$\chi^2(2) = .644, p = .725$; ($F(1, 359) = 9.311, p = .002$). No main effect was found for regulation condition ($F(2, 718) = .518, p = .560$) nor for the interaction between regulation condition and nationality ($F(2, 718) = 1.830, p = .161$).

Regarding to the feeling of “choked up or a lump in the throat” Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(2) = 3.694, p = .158$. There is no effect of regulation condition ($F(2, 424) = 2.956, p = .053$) neither an interaction between instructions and country ($F(2, 724) = .567, p = .567$). However, a main effect of country showed up ($F(1, 362) = 10.534, p = .001$), with Norwegian participants reporting a lower level of this body sensation in all conditions.

Finally, about the feeling of “goosebumps or hair standing up”, Mauchly’s test indicated that the assumption of sphericity is assumed, $\chi^2(2) = 1.441, p = .441$. No significant effects were found for this bodily sensation, for either regulation condition ($F(2, 722) = 2.131, p = .119$), the interaction between instructions and country ($F(2, 722) = .134, p = .875$) or the main effect of country ($F(1, 361) = 3.844, p = .051$).

In conclusion, Norwegian participants report less tears and less feelings of being choked up, but a warmer chest. Regarding to the regulation condition, emotion regulation strategies seem to predict and downregulate tears.

Attachment styles and kama muta experiences

The following section examines the relations between *kama muta* experience and attachment styles. The first analysis examined if the means for the two subscales (anxious and avoidant attachment) depended on scale position (in the beginning or at the end of the questionnaire) and country. A 2 (position: first vs. last) x 2 (country: Portugal vs. Norway) ANOVA with factors varying between-participants was conducted. The attachment styles were tested and no effects were found for either order ($F(1, 368) = 1.039, p = .309$) or country ($F(1, 368) = .643, p = .423$) (see Table 6).

Subsequently, we tested our second main hypothesis regarding the influence of attachment styles on the experience of *kama muta* and related bodily sensations in a 2 (attachment style: anxious vs. avoidant) x 3 (regulation strategy: neutral vs. reappraisal vs. suppression) analysis of covariance with all variables varying within participants, attachment styles as covariates and regulation strategy as factor.

Table 6. Means and standard deviations of attachment styles (avoidance and anxiety) as a function of scale position and participant's country.

	Attachment styles			
	Avoidance		Anxiety	
	First	Last	First	Last
Portuguese sample	M= 2.7 (SD= .6)	M= 2.6 (SD= .6)	M= 2.8 (SD= .9)	M= 2.6 (SD= .9)
Norwegian sample	M= 2.6 (SD= .7)	M= 2.6 (SD= .7)	M= 2.5 (SD= .8)	M= 2.7 (SD= 1)

Results show a significant main effect for anxiety ($F(1, 367)= 9.366, p=.002$) and a positive and significant relation with kama muta experiences (kama muta neutral condition: $B= .251, p= .002$; reappraisal condition: $B= .215, p= .026$; suppression condition: $B= .240, p= .012$). No main effect was found for avoidance ($F(1, 367)= 1.945, p= .164$). Even though the result is non-significant, the link between kama muta and avoidance shows a negative relation – kama muta in neutral condition: $B= -.133, p= .245$; reappraisal condition: $B= -.203, p= .140$; suppression condition: $B= -.123, p= .366$. These results partially confirm Hypothesis 2, which stated that attachment styles have different relationships with kama muta. In particular, it was hypothesized that an anxious attachment style would be positively correlated with kama muta (which is confirmed by these results) and that an avoidant attachment style would be negatively correlated with the kama muta experience – which was not confirmed, although there is a pattern in this direction.

The kama muta bodily sensations were also analysed in the neutral condition, in order to understand if they interacted with attachment styles. The relation between attachment and the feelings of choking up or having a lump in the throat, goosebumps, tears and a warm chest were explored.

When it comes to tears, a significant effect of anxiety emerged ($F(1, 365)= 5.948, p=.015$), with a positive relation underlying these two variables ($B=.330, p= .015$). A different pattern was found for the feeling of a warm chest. No significant effects were found for avoidance ($F(1, 358)= .477, p=.490$), or anxiety ($F(1, 358)= 1.385, p=.240$). The feeling of choking up or having a lump in the throat was also tested. An anxiety main effect also emerged ($F(1, 362)= 5.392, p= .021$) and it suggested a

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positive relation with kama muta ($B = .306, p = .021$). No effect was found for avoidance ($F(1, 362) = .315, p = .575$). At last, goosebumps were also analysed and no effects were found for either anxiety ($F(1, 358) = 2.221, p = .137$) or avoidance ($F(1, 358) = .675, p = .412$). As a conclusion, results suggest that anxiety is positively correlated with the feeling of choking up and tears. No effects were found for avoidance.

DISCUSSION

Kama muta is a common emotional experience, widely known and easily recognizable, even though research has devoted little attention to this field. This work aims to reduce this lack of empirical knowledge and contribute to increase the comprehension about the experience and expression of emotions in general, and about kama muta specifically. Furthermore, this paper explores some relations between this emotional experience and other variables – attachment and emotion regulation strategies – in order to build a more holistic understanding of kama muta.

To meet the planned goals, we have developed a study with a mix design (within and between subjects) and collected two samples – a Portuguese and a Norwegian one. The research team has collected 490 answers (aged 18 to 66 years old) from general Portuguese and Norwegian populations. The Portuguese sample was collected through a snow ball procedure using Facebook and 233 answers (64.4% female) were considered for analyses. The Norwegian sample was collected through an Intranet system from the University of Oslo and 144 psychology students (65.3% female) answered the questionnaire.

The kama muta experience was elicited by three different videos, previously found to evoke kama muta (Seibt, et al., 2015a; Seibt, Schubert, Zickfeld, & Fiske, 2015b; Zickfeld, 2015). The decision about the material to elicit emotional responses in empirical research is frequently a matter of concern by researchers. However, Gross and Levenson (1995) consider that videos are a suitable material to do so, because they are standardised material, they involve no deception and they are dynamic, rather than static. As such, results showed that the videos displayed evoked varying degrees of kama muta, which was experienced in a 3rd person perspective.

The emotional experience was manipulated by giving participants instructions that asked them to adopt different emotional regulatory strategies. This resulted in three scenarios: one where they would watch the video without any instruction on how to regulate their emotions, another where they were given reappraisal instructions and a last one where they were instructed to suppress their emotions. Reappraisal and suppression strategies were chosen because, according to Gross and John (2003), they are the most widely used in research and everyday life, but also because they reflect individual differences and can be experimentally manipulated. Reappraisal was assessed via perspective taking (participants were asked to adopt a more objective and detached

perspective while watching the video) and the suppression of emotion expression was assessed by asking participants to hide what they were feeling.

The impact of our two emotion regulation instructions was measured with manipulation check questions in order to understand if participants had processed the emotion elicitor (the videos) as asked. Manipulations check questions were analysed separately and it was confirmed that participants reported more reappraisal in the reappraisal condition, as well as more suppression in the suppression condition. Even though these results suggest that the instructions were successful on inducing different levels of kama muta, a carry-over effect emerged. The instruction order – regarding which condition (reappraisal or suppression) comes after the neutral condition – was also analysed for kama muta level and manipulation check. Results show no order effect on any analysis, but an interaction effect between manipulations check and order.

Results also show that emotion regulation strategies have an important impact on the kama muta experience. As predicted, emotional regulatory activity is associated with different experiences of kama muta and both strategies (reappraisal and suppression) downregulate a kama muta experience (comparing to the neutral condition, where there were no instructions). Also according with our hypotheses, reappraisal is the emotion regulatory strategy that leads to the lowest level of kama muta (neutral > reappraisal > suppression).

As mentioned above, positive emotions can also be downregulated (Gross, Richards, & John, 2006) although it is more intuitive to think that people would only dampen their negative emotions and savour the positive ones. This result goes in accordance with previous empirical data that stated that reappraisal (Gruber, Hay, & Gross, 2014; Kalokerinos et al., 2015; Korb et al., 2012; Lalot, Delplanque, & Sander, 2014; Webb et al., 2012) and suppression (Gross & Levenson, 1993; Quartana & Burns, 2007) could decrease positive emotions. However, different levels of kama muta emerged from the two emotion regulation strategies assessed. This may be due to the fact that reappraisal and suppression take place in distinct moments of an emotion and therefore have a different impact on kama muta experiences. Reappraisal is a cognitive change strategy characterized by reframing how events are judged (Gross & Thompson, 2007), therefore reducing the experience of positive emotions (Kalokerinos et al., 2015). On the other hand, suppression is a response modulation strategy characterized by the inhibition of behavioural elements of an ongoing emotion (Butler et al., 2003; Gross &

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Levenson, 1993; Gross & Thompson, 2007), therefore having a bigger impact on emotion expression (Gross & Levenson, 1993; Quartana & Burns, 2007).

Results also suggest an effect of country, with Portuguese participants appearing to feel more moved, when compared to the Norwegian sample. This pattern is present across all conditions (neutral, reappraisal and suppression condition).

Emotion regulation strategies also influence physiological responses (Reynaud, El-Khoury-Malhame, Blin, & Khalfa, 2012). Bodily sensations – tears, a feeling of a warm chest, the sensation of choking up or having a lump in the throat, and goosebumps – were also analysed. Participants reported these bodily sensations in association with their kama muta experience, as it had been reported in previous studies (Cova & Deonna 2014; Panksepp, 1995; Seibt, et al., 2015; Strick, de Bruin, de Rooter, & Jonkers, 2015; Zickfeld, 2015). Results showed that tears were the only bodily sensation influenced by emotion regulation strategies. Both reappraisal and suppression downregulated their self-reported occurrence, when compared to the neutral condition.

A country effect is also associated with bodily sensations. The results found a main effect of nationality for tears, the sensation of choking up/having a lump in the throat and the feeling of a warm chest. Among these bodily sensations, Norwegian participants reported more intense sensations of a warm chest, while Portuguese participants scored higher on choking up and tears.

The influence of culture in emotions is an important and old question for psychology. Ethnographic studies report significant differences in emotional experience in the Mediterranean (Gaines & Farmer, 1986), Poland (Wierzbicka, 1994) and the United States (Wierzbicka, 1994). These studies lead to consider that emotional experience is largely culturally determined. However, different findings suggest more similarities than differences in emotional responses to prototypical emotion-eliciting events among participants from 37 countries (Scherer, 1997; Scherer & Wallbott, 1994). Furthermore, other authors state that it is still unclear which factors trigger differences in emotional responses (Mesquita & Karasawa, 2002; Scollon, Diener, Oishi, & Biswas-Diener, 2004). Empirical data has shown moderate to high correlations ($r = .50$ to $.80$) between the emotion self-reports of people from many countries and personality traits and traits related to temperament (e.g. extraversion and neuroticism, also designated affective traits) (Gomez, Cooper, & Gomez, 2000; Gross, Sutton, & Ketelaar, 1998). Some authors also emphasize genetic factors predicting the emotional experience because these traits also show a moderate heritability (Goldsmith & Lemery, 2000;

Hettema, Neale, & Kendler, 2001; Lemery & Goldsmith, 2002). However, more cross-cultural studies of emotions are necessary to clarify the influence of cultural variables versus affective traits in order to clarify if traits, genes or other variables correlate with emotions independent of country.

The study of relations between kama muta and attachment was also an aim of this work. The attachment system plays an important role in emotional experiences (Gentzler, Kern, & Keener, 2010) and not just during childhood. Empirical data has shown a moderate stability in attachment styles (Fraley, 2002) and its importance during adulthood (Fraley, 2002).

In order to better understand how participants answered the attachment measure, we looked at a possible effect of position (whether the attachment scale is the first or the last measure to be answered by participants). Results show no effects. It should be noted that the attachment scale was answered on a 5-points Likert scale and that the values reported were close to 2.5 (the medium value of the scale). The fact that extreme cases are scarce can be seen as reflective of participants being from non-clinical populations.

The attachment styles were analysed in a continuum between anxiety and avoidance, since empirical data considers individual differences to be better understood through a dimensional rather than a categorical approach (Fraley, et al., 2015). Even though literature has given more attention to negative emotions, attachment-related differences also exist for positive emotions. Results showed that anxiety had a significant positive effect on kama muta but no effect was found for avoidance. These results partially support our Hypothesis 2, which stated that attachment styles (anxiety and avoidance) have different relations with kama muta experience. Despite the relation between avoidance and kama muta not being significant, descriptively it was a negative relationship, in line with what was predicted. This may mean that there is no effect of avoidant attachment on kama muta, or it may mean that the true effect size is small, and we therefore did not have enough statistical power to detect it.

Finally, when examining the relation between kama muta's bodily sensations (tears, warm chest, feelings of choking up or having a lump in the throat, and goosebumps) and attachment styles, an anxiety effect emerged for two of the symptoms. These results suggest a positive relation between anxiety and tears and the sensation of choking up. Again, there was no effect for avoidance.

Despite empirical data presenting mixed results concerning the link between positive emotions and an anxious attachment style (Shiota, et al., 2006; Gentzler &

Kerns, 2006), some authors have shown that anxious attachment in adulthood was associated with emotional hyperarousal (Laan, et al., 2012; Mallinckrodt, 2000). In contrast to some studies that showed a significant and negative relation between avoidance and positive emotions (Vingerhoets, Laan, Wildschut, Kalle, & Huis in't Veld, 2009), the present results did not show such a relationship. This may be due to some kama muta emotional specificities or additional moderators not yet identified.

Limitations and future directions. According to the results obtained through the manipulations check, it may be relevant to repeat this study with a laboratory procedure and give the emotion regulation instructions personally to ensure that participants fully understood them. It can also be important to give participants some training on emotion regulation strategies. With this, the researcher can be more confident not only that participants understand what is being requested in each instruction but also that they know how to implement it.

Furthermore, emotion regulation traits can interact with emotion regulation as a state. If the researcher asks a suppressor to reappraise, he or she might not perform it properly. Even though bigger samples might mitigate this effect, it would be interesting for future studies to further evaluate emotion regulation as a trait and its moderating effect on the ability of participants to follow the instructions.

Moreover, the fact that participants have only answered self-report measures can be considered a limitation. Despite self-report measures and physiological ones not being interchangeable, using the autonomic nervous system responses in future researches would increase the understanding about kama muta experience. Additionally, having access to different perspectives in kama muta (e.g. second person's perspectives) would also be an interesting aspect to evaluate, through personal stories from participants.

The attachment style scale used was the North American version, translated into Portuguese and Norwegian, as this specific version does not exist in Portugal and Norway. Further studies should validate the American version first, for Portuguese and Norwegian populations, in order to evaluate their psychometric properties.

Since this study was developed with a non-clinical population, results for the attachment scale are predominantly on average. For this reason, significant relations between attachment and kama muta, particularly with the avoidant attachment style, are perhaps being hidden. Therefore, future studies with clinical populations might clarify some of these questions. Additionally, the Portuguese and Norwegian samples are not

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representative and they are different from each other (general populations vs. psychology students) what makes the comparisons difficult. Finally, a carry-over effect of instructions suggest that, in future studies, a between design may be better.

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Being Moved: the relations with attachment and emotion regulation strategies.

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APPENDIX A.

Soldiers homecoming

The video depicts the reunion of American soldiers with their children.

<https://www.youtube.com/watch?v=uSMIIM9zLio>

Talent

Depicts a nine year-old boy winning the hearts of the audience at a talent contest.

https://www.youtube.com/watch?v=txPQC8NB_-M

Thai Medicine

A young boy gets bailed out by a cook after stealing medicine, years later the boy now a doctor reciprocates the favour by performing an expensive surgery on the cook for free.

https://www.youtube.com/watch?v=2x_Fl3NQVd4