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Coping with distress among adolescents: Effectiveness of personal narratives on support websites

Afrontar la diversidad entre adolescentes: Eficacia de las narrativas personales en webs de apoyo

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Abstract
Sharing, reading and responding to personal narratives on peer-to-peer support websites may provide adolescents with informational and emotional support to feel more confident in coping with stressful events. However, their use may also pose a threat to adolescents' coping self-efficacy. Principles of expressive writing, social sharing of emotions, narrative persuasion and self-effects may provide insight in how these actions may both positively and negatively relate to coping self-efficacy. By using a cross-sectional online survey with 311 Dutch-speaking adolescents between the ages of 14 and 18, this article explores how these actions and social support motives (i.e. information-seeking and emotional support-seeking) are related to adolescents' perceptions about the usefulness of these websites to their coping self-efficacy. The results showed a positive relation between adolescents' social support motives and their belief in the usefulness of these websites to their coping self-efficacy. Therefore, we conclude that it may be an effective coping strategy for many adolescents. There was a negative relation between experience with sharing a personal narrative and coping self-efficacy, meaning that these users did not perceive the website to be helpful to their overall confidence in coping with stressful events. However, this negative relation was reversed when they were motivated to find emotional support with similar others.

Resumen
Compartir, leer y responder a narraciones personales en webs de apoyo entre iguales puede tanto fortalecer como amenazar la confianza de los adolescentes para hacer frente a los acontecimientos estresantes (es decir, la autoeficacia como estrategia de afrontamiento). Los principios de la escritura expresiva, el intercambio social de emociones, la persuasión narrativa y los efectos en uno mismo pueden proporcionar información sobre la forma en que esas acciones pueden relacionarse con la autoeficacia como estrategia de afrontamiento. Mediante una encuesta transversal en línea con 311 adolescentes de habla holandesa de entre 14 y 18 años, este artículo explora cómo estas acciones y los motivos del apoyo social (es decir, la búsqueda de información y la búsqueda de apoyo emocional) se relacionan con la autoeficacia de los adolescentes como estrategia de afrontamiento tras usar la web de apoyo entre iguales. Los resultados muestran que la experiencia de los usuarios al leer y responder a narraciones personales no estaba relacionada con su autoeficacia de afrontamiento. Sin embargo, se encontró una relación negativa entre la experiencia de compartir una narración personal y la autoeficacia, por lo que los usuarios no percibieron que el sitio web fuera útil para su confianza general a la hora de hacer frente a acontecimientos estresantes. No obstante, esta relación negativa se invirtió cuando también tenían el objetivo de encontrar apoyo emocional con sus iguales.

Keywords / Palabras clave
Adolescence, coping strategies, narrative, quantitative analysis, social support, virtual environments.
Adolescencia, estrategias de afrontamiento, narrativa, análisis cuantitativo, apoyo social, ambientes virtuales.

1. Introduction

The World Health Organization (2018) states that 1 out of 5 adolescents between the ages of 15 and 19 in the European Region have some form of psychological difficulty. It is therefore important to improve adolescents' coping beliefs and skills, as these may moderate the impact of stressful life events on mental and physical health and functioning (Skinner & Zimmer-Gembeck, 2016).

One important coping strategy is social support seeking, which is defined as "the strategy of turning to other people in the face of stressful events" (Skinner & Zimmer-Gembeck, 2016: 38). However, adolescents might feel uncertain to ask for help from peers in their personal, offline environment. There are two main reasons for this. First, adolescents often believe their personal experiences are unique from those of others and that others cannot possibly help them (Neff & McGehee, 2010). Second, their heightened awareness of others' judgement, makes it harder to look for support in their direct environment.

The specific characteristics of anonymous peer-to-peer support websites (e.g. safety, mutual social norms) make social support with peers more accessible for those who feel reluctant to seek support in an offline context (Prescott et al., 2017; Sun et al., 2014; Vermeulen et al., 2018).

The use of personal narratives on peer-to-peer support websites may provide adolescents with informational and emotional support to feel more confident in coping (i.e. increase their coping self-efficacy). Based on de Graaf et al. (2016) we define an online personal narrative as an online presentation of (a) concrete event(s) experienced by (a) certain person (people) in a specific setting.

While several studies found that their use has positive effects on well-being and self-efficacy with adults (Frattaroli, 2006; Rains & Wright, 2016; Rains & Young, 2009), their effects on adolescents are not often studied (Ali et al., 2015; Barak & Dolev-Cohen, 2006; Yang, 2018). Moreover, recent research has warned about the possible negative effects of online co-rumination on adolescents' mental health (Frison et al., 2019). By using a cross-sectional online survey with Dutch speaking adolescents between the ages of 14 and 18 who use peer-to-peer support websites, we examined the relationship between specific actions (i.e. experience with reading, responding and sharing) and social support motives (i.e. information-seeking on a question or problem and emotional support-seeking with similar others) are related to adolescents' perceptions about the usefulness of these websites to their coping self-efficacy. We integrate different insights, such as expressive writing theory, self-persuasion and narrative persuasion to explain how the use of anonymous peer-to-peer support websites may have both positive and negative effects on adolescents' coping self-efficacy.

1.1. Online personal narratives and coping self-efficacy

1.1.1. Sharing: expressive writing and social sharing of emotions

To explain the relationship between sharing one's own personal narrative and coping self-efficacy, we rely upon the literature on expressive writing theory and social sharing of emotions. The first implies that someone writes about his/her deepest thoughts and emotions, which allows to reorganize thoughts, gain new insight and reflect upon his/her coping strategies (e.g. How did I cope before? How can I cope better?) (Pennebaker & Seagal, 1999). It was found to come with multiple positive outcomes on well-being, such as lowered depressive symptoms and anxiety and higher coping self-efficacy, and these benefits are likely to be higher if this task is repeated over multiple sessions (Frattaroli, 2006). For example, a study on expressive writing with adolescent girls showed that the respondents had more adaptive coping strategies after 3 sessions of writing about a personal problem (Vashchenko et al., 2007).

However, research on the social sharing of emotions shows that adolescents often have the tendency to dwell on the negative aspects of their experiences when sharing a personal narrative with others (Duprez et al., 2015; Vermeulen et al., 2018). This is likely to make emotions worse in the short term (Choi & Toma, 2014; Pennebaker & Seagal, 1999; Wright & Chung, 2001). Longitudinal research also found rumination and worry may eventually result in more symptoms of depression and anxiety with adolescents (Young & Dietrich, 2015).

1.1.2. Reading: Social cognitive theory and narrative persuasion

The effects of personal narratives on readers may be explained by social cognitive theory and literature on narrative persuasion. Social Cognitive theory assumes that people can learn from exemplary figures in their environment (Bandura, 2001). Based on this theory, research on narrative persuasion found that narratives have significant effects on beliefs, attitudes, intention for action, actual behaviour and self-efficacy (Braddock & Dillard, 2016; Perrier & Martin-Ginis, 2018). Because readers may take others' personal narratives as

examples, they may learn how to cope with their own distressing experiences. The premise is that the more frequent adolescents read personal narratives of others, the higher the beneficial effects may be (Braddock & Dillard, 2016).

However, it is possible that readers may also adopt sharers' negative coping approaches and self-efficacy beliefs. Recent research found that stories portraying a protagonist with high self-efficacy beliefs influenced readers own self-related control beliefs in a positive way. But the researchers warned that the opposite might be true as well; that low self-efficacy beliefs by the protagonist may also influence readers' self-related control beliefs in a negative way (Isberner et al., 2019).

1.1.3. Responding: Self-effects and self-persuasion

Based on literature on self-effects on social media, we may expect that giving others the right advice on coping strategies may be a form of self-presentation leading to self-persuasion (Stavrositu & Kim, 2018; Valkenburg, 2017). After providing useful advice to others, responders might regard themselves as experts in coping with stressful events, therefore feeling more confident in setting the right coping behaviours themselves.

However, research also found responders often respond with their own similar negative experience (Bastiaensens et al., 2019; Prescott et al., 2017), therefore risking to start a thread of co-rumination. This concept refers to the repeated exchange of a certain problem between two or more people while focusing on the negative aspects, emotions and thoughts (Rose et al., 2017). Recent research on private conversations on social media found that co-rumination predicted depressive symptoms amongst adolescents between 12 and 19 years old (Frison et al., 2019).

In sum, there may be positive and negative aspects to adolescents' use of personal narrative on peer-to-peer support websites. The main goal of this research is to explore how adolescents' use of personal narratives on peer-to-peer support websites (i.e. sharing, reading and responding to personal narratives) is related to their coping self-efficacy after using these websites. This reflects whether or not adolescents perceive the use of these websites to be helpful to their confidence in coping with stressful events.

RQ1: How do specific actions (i.e. experience with sharing, reading, responding to personal narratives) relate to adolescents' coping self-efficacy after using peer-to-peer support websites?

1.2. Social support motives and coping self-efficacy

1.2.1. Informational and emotional support as a coping strategy

In order to overcome the possible negative effects of personal narratives on peer-to-peer support websites, it may be important for adolescents to find the social support they need. For example, research on expressive writing (Milbury & López, 2017; Pennebaker & Seagal, 1999; Travagin et al., 2015) and the social sharing of emotions (Rimé et al., 2019) assumes social support of others may strengthen the positive effect of writing about distressing events. Previous research on online social support use also found that the level of perceived social support mediates the positive outcomes of online social support use on well-being, both in adult and adolescent populations (Welbourne et al., 2013). Users of peer-to-peer support websites in general look for informational support, i.e. advice and information on ways to cope with a distressing event, and emotional support, i.e. the exchange of affective and cognitive empathy to enhance mood and find recognition (Rimé, 2009).

Social support may be closely related to adolescents' coping self-efficacy. Informational support may help to "find out more about a stressful situation or condition, including its course, causes, consequences, and meanings, as well as learning about strategies for intervention and remediation" (Skinner & Zimmer-Gembeck, 2016: 37). Emotional support, in turn, resembles "the urge or desire to come into contact with an attachment figure" (Skinner & Zimmer-Gembeck, 2016: 38). It encourages frequent active use and accounts for the positive relation of online support use with perceived stress (Welbourne et al., 2013) and perceived coping resources (Nabi et al., 2013).

Thus, we expect that the informational support on a question or problem and the emotional support of similar others which adolescents find through sharing, reading and responding to personal narratives may help adolescents to feel more confident in coping with stressful events.

RQ2: How do social support motives (i.e. informational support on a question or problem and emotional support with similar others) relate to adolescents' coping self-efficacy after using peer-to-peer support websites?

1.2.2. Interactions between social support motives and actions

One action may fulfill one social support motive better than the other. For example, research found that passive users mainly have an information need, whereas active users more often have an emotional support need (Sun et al., 2014; Welbourne et al., 2013). Other research found that active use of peer-to-peer support websites was found to improve psychological well-being through the emotional support from similar others (Sun et al., 2014; van-Uden-Kraan et al., 2008; Welbourne et al., 2013), whereas informational support accounted for readers' improvement in psychological well-being (van-Uden-Kraan et al., 2008).
Therefore, it is interesting to explore the relation between the two social support motives and users' experience with actions, and the possibility of an interaction-effect between the two on coping self-efficacy.
RQ3: How do social support motives (i.e. informational support on a question or problem and emotional support with similar others) relate to specific actions (i.e. experience with sharing, reading, responding to personal narratives)?
RQ4: How do interactions between social support motives and actions relate to adolescents' coping self-efficacy after using peer-to-peer support websites?

2. Material and methods

2.1. Procedure

We conducted a cross-sectional survey study with users of peer-to-peer support websites, in this case, adolescents between 14 and 18 years of age. The online survey was distributed with the help of 10 Dutch and Flemish peer-to-peer support websites. All participating websites allowed users to exchange narratives about personal experiences anonymously. Only some of them allowed readers to give a social support response. These included social support fora, which allow users to directly exchange personal narratives and social support responses with each other, and youth (health) information websites, which inform their users about common problems and questions by using personal narratives that are submitted by their users. These websites covered various problems and questions that are important to the adolescence life phase. Some focused on specific themes, such as sexuality, sexual identity or school-related problems.
The participating websites distributed the link to the online survey through their social media platforms or via their webpages meant for the exchange and reading of personal narratives. The participants were asked to clarify which of the participating websites they had visited during the past 12 months to make sure to include only those adolescents who were then making use of these websites or had used these websites in the past. The survey remained online for 20 days, including 2 weekends. A total of 311 adolescent peer-to-peer support website users completed the survey. About 80% were girls, and the mean age was 15.87 years (SD=1,33 years).

2.2. Measures

2.2.1. Social support motives

Social support motives were measured with two items on a scale from 1 (not applicable at all) to 5 (definitely applicable). Items were respectively "I use websites with personal narratives... to search for information about a problem/question I am facing" and "… to connect with people like me for emotional support".

2.2.2. Experience with actions

Previous research only made a distinction in passive (i.e. only reading) and active use (i.e. also responding and sharing) by asking respondents whether they contributed to the website or not (e.g. van-Uden-Kraan et al., 2008). In this study, we wanted to make a distinction between sharing and responding to personal narratives. Experience with reading and responding to others' personal narratives were both measured with a scale from 1 to 4 (1=never, 2=once, 3=less than 5 times, 4=five times or more), measuring users' general experience with these actions in the past 12 months. Sharing personal narratives was measured with a scale from 2 to 8, reflecting sum scores of sharing personal narratives on support fora and (health) information websites (both measured on a scale from 1 to 4; see above). These measures were chosen in agreement with the participating websites, who stated that frequent passive users visit their websites 5 times or more in the course of a year and frequent active users post 5 times or more during the course of a year.

2.2.3. Coping self-efficacy

We used the Coping Self-efficacy scale (CSE) by Chesney et al. (2006). This scale contains three factors that relate to self-confidence in using effective coping styles, i.e. using problem-focused coping strategies to solve a problem (CSE problem, 6 items), overcoming unpleasant emotions and thoughts (CSE emotion, 4 items), and getting support from friends and family in an offline context (CSE support, 2 items). We will use the abbreviated form of these factors when describing the results of this study. One item was left out from the original scale, because it had a low factor loading (i.e. making new friends). The scale was introduced using the following sentence: "After using personal narratives on these websites (either reading others' personal narratives, reacting to others' personal narratives and/or sharing my own personal narratives) I have more confidence in myself to...". This measure reflects how useful they find these websites to their confidence in coping with stressful events. Items were measured on a scale from 1 (not at all) to 7 (totally).

2.3. Data analyses

Univariate and bivariate statistics were calculated in order to explore the correlations between the variables. A measurement model was tested in Mplus 8.3 using confirmatory factor analysis (as suggested by Anderson & Gerbing, 1988). We used the three factors of coping self-efficacy as three separate dependent variables in the model. The goodness-of-fit criteria indicated that the measurement model fitted well (CFI=.984; RMSEA=.034, 90% C.I. [.000-.055]; $\chi^2(41)=55.77$, p=.06). The standardized factor loadings of the six items of the latent construct CSE problem ranged from .63 to .73, the factor loadings of the four items of the latent construct CSE emotion ranged from .69 to .74, and the factor loadings of the two items measuring CSE support were .80 and .95. In a next step, structural equation modeling was applied in order to investigate the associations between the main variables using Mplus with MLR estimation.

3. Results

3.1. Descriptives

Table 1 shows the correlations between the variables. The mean score of information-seeking and emotional support-seeking was respectively 3.63 (SD=1.39) and 2.30 (SD=1.81). These social support motives were uncorrelated, reflecting that these are distinctive motives. About 60% of all respondents read 5 or more personal narratives during the past 12 months. 60% had never responded on a personal narrative, whereas 15% had responded more than 5 times. 40% had shared their own personal narrative at least once during the past 12 months. All actions were correlated, especially responding and sharing. This means that those who share personal narratives are also more likely to respond to others' personal narrative and vice versa. In this sample CSE problem, CSE emotion and CSE support had mean scores of 4.18 (SD=1.22), 4.11 (SD=1.36) and 3.96 (SD=1.68). Especially CSE problem and CSE emotion were highly correlated. Thus, the more a participant believes that the use of these websites helps them to solve problems, the more s/he believes that they also help to cope with difficult emotions and thoughts, and vice versa.

Table 1. Descriptives

Correlations between the main variables

		1	2	3	4	5	6	7	8	9	10
1	Gender	1	-								
2	Age	.075	1	-							
3	Information seeking	.102	-.096	1	-						
4	Emotional Support seeking	.037	-.081	.072	1	-					
5	Read	.015	-.008	.180**	.240***	1	-				
6	Respond	-.166**	-.174**	.037	.276***	.341***	1	-			
7	Share	-.051	-.078	.083	.244***	.229***	.590***	1	-		
8	CSE problem	.124*	-.079	.160**	.176**	.055	.009	-.024	1	-	

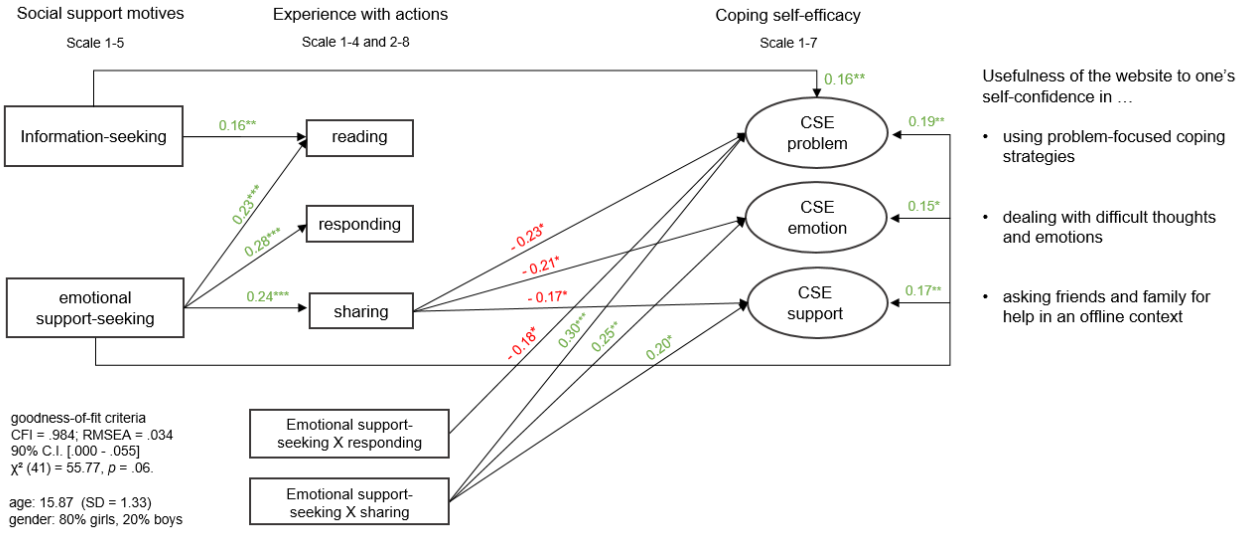
9	CSE emotion	.052	-.090	.085	.142*	.060	.025	-.036	.689***	1	-
10	CSE support	.049	.001	-.013	.174**	.057	.058	-.002	.412**	.386***	1
M			15,87	3,63	2,30	3,38	1,89	2,85	4,18	4,11	3,96
SD			1,33	1,39	1,81	0,867	1,16	1,35	1,22	1,36	1,68
Range			14-18	1-5	1-5	1-4	1-4	2-8	1-7	1-7	1-7

Note. CSE problem=self-efficacy in coping with a problem; CSE emotion = self-efficacy in coping with negative emotions and thoughts; CSE support = self-efficacy in asking friends and family for help.
*p < .05. **p < .01. ***p<.001.

3.2. Structural equation model

Figure 1 presents the standardized results of the Structural Equation Model. The measurement details correlations are, for clarity, not shown. The fit indices showed a good fit for the model: CFI=.918; RMSEA=.049, 90% C.I. [.039 - .058]; $\chi^2(159)=275.96$, p<.001. The explained variances of the three different forms of coping self-efficacy ranged from .085 to .163 (CSE problem: .163; CSE emotion: .117; CSE support: .085).
First, the structured model revealed associations between social support motives and experiences with actions. Both motives, information seeking (β=.16, p<.01) and emotional support seeking (β=.23, p<.001), predicted experience with reading online personal narratives. Emotional support seeking predicted experience with responding to others' (β=.28, p<.001) and sharing one's own personal narrative (β=.24, p<.001), but information seeking did not predict these actions. Secondly, the model also showed the associations between motives and coping self-efficacy. Information seeking (β=.16, p<.01) and emotional support seeking (β=.19, p<.01) significantly predicted an increase in CSE problem. Furthermore, emotional support seeking also predicted an increase in CSE emotion (β=.15, p<.05) and CSE support (β=.17, p<.01). Third, the structural model consisted of associations between experiences with actions and different forms of CSE. Only one of the actions, experience with sharing one's own online personal narratives, significantly predicted changes in CSE. More experience with sharing one's own personal narratives online was associated with lower CSE problem (β=-.23, p<.05), lower CSE emotion (β=-.21, p<.05), and lower CSE support (β=-.17, p=.05). The latter association was borderline non-significant. Finally, the model indicated the importance of two specific interaction terms in predicting CSE. More precisely, the interaction between emotional support seeking and having experience with responding to online personal narratives was a significant negative predictor of CSE problem (β=-.18, p<.05). Furthermore, the interaction term between emotional support seeking and experience with sharing one's own narratives on peer-to-peer support websites significantly predicted an increase in CSE problem (β=.30, p<.001), CSE emotion (β=.25, p<.01) and CSE support (β=.20, p<.05).

Figure 1. Illustration of the Structural Equation Model



Note. CSE problem=self-efficacy in applying problem-focused coping strategies; CSE emotion=self-efficacy in overcoming negative emotions and thoughts; CSE support=self-efficacy in asking friends and family for help. *p<.05. **p<.01. ***p<.001.

4. Discussion and conclusion

4.1. Discussion

This study aimed to explore the relationship between social support motives to use personal narratives on peer-to-peer support websites (i.e. information seeking about a question or problem and emotional support seeking with similar others), actions (i.e. experience with sharing, reading, responding to personal narratives) and adolescents' belief in the usefulness of these websites for their confidence in coping with stressful events (i.e. increase in coping self-efficacy). Coping self-efficacy was further divided in self-confidence in applying problem-focused coping strategies to solve problems, dealing with difficult emotions and thoughts, and finding support with friends and family in an offline context.

The positive relations between social support motives and actions show that information seeking is mainly a social support motive for frequent readers. In addition, emotional support seeking from similar others is a strong social support motive for users who have more experience with all actions (i.e. sharing, reading and responding). Where other research suggests that readers mainly look for information in others' personal narratives (Sun et al., 2014; Welbourne et al., 2013), this finding reflects that readers may also look for emotional support.

The positive relations between social support motives and coping self-efficacy reflect that information-seeking may help users feel more confident in using problem-focused coping strategies to solve a problem (CSE problem). As explained before, Skinner & Zimmer-Gembeck also suggest that informational support is helpful to learn "about strategies for intervention and remediation" (Skinner & Zimmer-Gembeck, 2016: 37). Using these personal narratives for emotional support-seeking with similar others may help users to feel more confident in overcoming unpleasant emotions and thoughts (CSE emotion) and asking friends and family for help (CSE support). This is (missing verb) in line with previous research, which suggests that it lowers perceived stress (Welbourne et al., 2013) and strengthens perceived coping resources (Nabi et al., 2013). Emotional support-seeking was also related to higher confidence in using problem-focused coping strategies (CSE problem). It is likely that users believe similar others cannot only provide the best emotional support, but also the most specific and valuable information on how to solve familiar problems.

The results show that experiences with reading and responding are not related to any form of coping self-efficacy. This is not in line with the expectations based on literature on narrative persuasion and self-persuasion. A possible explanation is that the (positive and negative) effects of reading and responding to personal narratives on peer-to-peer support websites are small and subconscious. Moreover, this effect may be very dependent upon the specific narrative in question. Certain narrative characteristics, especially a sense of similarity between characters, settings and events (Green, 2004; Hoeken et al., 2016) and emotionality (Nabi & Green, 2015), are found to strengthen the persuasive effect.

A negative relation is found between experience in sharing personal narratives on peer-to-peer support websites and all forms of coping self-efficacy. Thus, adolescent users who have more experience with sharing personal narratives reported feeling less confident in using problem-focused coping strategies to solve a problem (CSE problem), overcoming unpleasant emotions and thoughts (CSE emotion) and asking for help with friends and family (CSE support) after using peer-to-peer support websites. This means that these users did not perceive the use of these websites to be helpful to their confidence in coping with stressful events. As explained in the literature review, a possible explanation is that users who often write about distressing events reinforce their negative emotions (Choi & Toma, 2014; Wright & Chung, 2001). It may also reflect that adolescents who submitted a personal narrative did not get the support they had hoped for or did not get a social support response at all. For example, readers may respond with their own similar negative experiences, therefore starting a thread of co-rumination. Although sharers have the motive to connect with similar others and hear about their experiences, they may mostly look for a positive affirmation and validation of their own feelings and thoughts, rather than hearing about similar others' negative experiences, thoughts and emotions. Some of the youth (health) information websites participating in this study did not allow readers to provide social support responses to sharers' personal narratives. This may affect how sharers perceived the usefulness of these websites to their confidence in coping.

The interaction effects between social support motives and experience with actions show that the benefits and threats to the use of these narratives may depend on the underlying motives for use. Firstly, the negative relation between sharing and all forms of coping self-efficacy is reversed when frequent sharers also have the motive to seek emotional support through the connection with similar others. The possibility to get social support and find social connection with similar others may maximize the benefits and minimize the costs of sharing a personal narrative (Milbury et al., 2017; Pennebaker & Seagal, 1999; Travagin et al., 2015).

Moreover, younger adolescents (approximately 12 to 15 years old) may not have required all needed competences for effective reflection on stressful experiences (Berk, 2014; Skinner & Zimmer-Gembeck, 2016). Some adolescents may therefore benefit from the support of others, preferably from peers with similar experiences, to make sense of their experiences (Pennebaker & Seagal, 1999; Skinner & Zimmer-Gembeck, 2016). Secondly, adolescents who are more experienced with responding to personal narratives of others and have the motive to seek support through the connection with similar others report feeling less confident in using problem-solving strategies (CSE problem) after using peer-to-peer support websites. A possible explanation is that responders are affected by negative emotions of sharers and therefore respond with their own negative experiences (co-rumination), which may reinforce their negative emotions (Frison et al., 2019). Another explanation may be a lack of credit for users' feedback (Bastiaensens et al., 2019). This may lead responders to believe their response was not useful, which may lower responders' confidence in dealing with difficulties themselves. This might be harder if adolescents respond to personal narratives to get into contact with similar others.

4.2. Practical recommendations

From this study, practical recommendations for peer-to-peer support websites may be derived. Previous research on online support websites has pointed out the need to adjust the interface design to users' expectations for maximal benefit (Li et al., 2015; Moses et al., 2018; Sun et al., 2014). This study shows that frequent users (sharers, readers, and responders) have the need to connect with similar others for emotional support. We suggest these websites to provide more possibilities for users to connect with each other and to make sure that responders are credited for their contributions. Nevertheless, it is not clear how respondents interpret this need for connection with similar others. For example, adolescents may look for users with similar experiences, but may also feel more comfortable disclosing to other users who are similar in terms of gender, age, hobbies, interests, etc. More qualitative research is needed to understand how the websites' characteristics and interface design may better respond to this need.

We expect that the interface design may help users to reflect more effectively on others' and their own experiences in order to strengthen their coping self-efficacy. The need to steer users' reflection processes through specific instructions or interfaces may be higher for adolescents who have not yet developed all cognitive and emotional skills to reflect effectively about distressing events compared to adults (Travagin et al., 2015; Wright & Chung, 2001).

Based on expressive writing theory, self-persuasion and expressive writing, we suggest that an adapted interface design may help users to focus on the positive aspects of their experiences and their effective coping strategies instead of negative thoughts and emotions to improve their confidence in coping. Research on expressive writing claimed that writers may need to be steered in their reflection process in order to experience maximal benefits (Wright & Chung, 2001). This need may be higher for adolescents who have not yet developed all cognitive and emotional skills to reflect in an effective way about distressing events (Travagin et al., 2015). For example, a study on an expressive writing intervention with adolescents found that providing adolescents with the instruction to write about the benefits of a distressing experience showed more positive results than a standard expressive writing intervention (Facchin et al., 2014). At last, these interface adaptations may also lead to more helpful narratives and feedback that better respond to readers' need for information.

We can also formulate recommendations for educational purposes. First, educators could give more attention to online peer-to-peer support use when addressing adolescents' internet literacy. Teachers should not only inform adolescents about the platforms that are available to them and the positive effects resulting from their use, but they should also address the possible negative effects, such as co-rumination, heightened negative emotions and risk for adopting negative coping strategies. Secondly, schools could play an important role in adolescents' coping self-efficacy by offering coping competency trainings to help them distinguish between effective and ineffective coping strategies dependent upon specific situations.

4.3. Limitations and future research

Due to the small sample size and small percentage of male participants, we were not able to check for age and gender differences. However, social support needs and coping strategies may be linked to age and gender. Especially younger adolescents (approximately 12 to 15 years old) may not have required all needed competences for effective reflection on stressful experiences (Berk, 2014; Skinner & Zimmer-Gembeck, 2016)

and due to gender socialization differences, writing about a stressful experience and co-rumination may have different effects on girls and boys (Yang, 2018). Since our sample mostly consisted of adolescent girls, the findings of this study may mostly apply to adolescent girls. Further research should strive for a more balanced sample in terms of age and gender. Moreover, this study did not take adolescents' general emotional state into account, which may have influenced how they perceive the use of peer-to-peer support websites. Therefore, further research should address emotional state.

This study used self-developed and self-report measures for social support motives and experiences with actions based on the coping literature and previous studies on peer-to-peer support use. Consequently, these measures were not validated by previous research and further research would benefit from objective data.

Many questions remain on the relationship between actions in relation to personal narratives (i.e. sharing, reading and responding) and coping self-efficacy. It is possible that the relations we propose are mostly subconscious. Therefore, experimental research is needed to study these relations in more detail.

Finally, there are different ways to explain why some active users did not perceive the use of these websites to be helpful to their coping self-efficacy. We propose that the characteristics of the websites may contribute to this effect. Due to the quantitative method we used, we could not take into consideration the characteristics and design differences between the peer-to-peer support websites that were part of our study. Further qualitative research methods, such as interviews and focus groups with adolescent users of peer-to-peer support websites are required to further explore adolescents' opinions and expectations regarding peer-to-peer support websites.

4.4. Final conclusion

By applying expressive writing theory, self-persuasion and narrative persuasion theory to the context of peer-to-peer support websites, the present study suggests that adolescents' use of personal narratives may both strengthen as well as pose a threat to adolescents coping self-efficacy depending on their specific actions and motives for use. Adolescents' informational and emotional support-seeking behavior on these websites may positively contribute to adolescents' confidence in coping with distressing events. However, those who frequently shared a personal narrative did not perceive the use of these websites to be helpful to their confidence in coping with stressful events. This may be due to heightened negative emotions and the risk for (co-)rumination. Nevertheless, those frequent sharers who also have the motive to connect with similar others for emotional support were more positive about the use of these websites. We therefore suggest that the possibility to connect with similar others on peer-to-peer support websites is an important factor. The current way in which adolescents exchange personal narratives on peer-to-peer support websites may not sufficiently serve the purpose of reflection on, and exchanging of, effective coping strategies. Further research should explore what expectations adolescents hold for peer-to-peer support websites and whether the interface design can help adolescent users to reflect more effectively on their stressful experiences and feel more self-confident in coping.

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