Patient Education and Counseling xxx (2018) xxx–xxx

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Respecting the 'stages' of depression: Considering depression severity and readiness to seek help

Jennifer A. Lueck*

Texas A&M University, United States

ARTICLE INFO

Article history:
Received 24 October 2017
Received in revised form 12 February 2018
Accepted 14 February 2018

Keywords:
Health promotion
Depression
Stages of change
Gain-loss framing

ABSTRACT

Objective: Despite knowing the value of message customization, empirical results have failed to provide clear indicators of what make a depression help-seeking message effective. The present research examines stages of depression in response to a prominent communication strategy, gain versus loss framing, to inform possibilities for effective message customization.
Methods: Two experimental studies were conducted with a student ($N = 126$) and U.S. adult ($N = 738$) sample that tested the effects of gain versus loss framing at different stages of depression.
Results: A persuasive gain-frame advantage was found for those with mild and severe depression, whereas a boomerang effect was found for both gain and loss framing among those with moderately severe depression. With regards to intention to seek help, neither gain nor loss framing was found to influence intentions. Stages of depression was a strong predictor, with strongest intentions to seek help observed among those with either minor or severe symptoms of depression.
Conclusion: Effective health messaging must be matched with unique characteristics and needs of individuals at each 'stage' of depression in order to produce favorable outcomes.
Practice implications: 'Stages' of depression should be known and carefully assessed before the creation and launch of communication interventions.

1. Introduction

With its detrimental impact on the global disease burden, clinical depression has recently gained momentum in health promotion research [1]. As the main cause of disability worldwide, the lack of timely treatment has been at the center of these investigations [2,31]. In order to effectively promote help-seeking, researchers have focused on finding the sweet spot where persuasive health communication principles and depressed cognition meet – with limited success (see Siegel et al. [3]). For example, emerging evidence suggests that prominent communication strategies can backfire in this vulnerable population due to the activation of negative self-beliefs [4].

Such findings highlight the urgent need for us to better understand the nature of depression, such that the likelihood of effective health promotion is increased [5]. One promising opportunity for translational science is the matching of health messages with the unique characteristics of depression [6,7]. The current research thus takes a closer look at how 'stages' of depression could impact the effectiveness of prominent communication strategies. A prominent framework often applied to normative populations, gain-and loss framing [8], focuses on positive (gain) and negative (loss) valence when promoting health behaviors. Given the negativity bias of depression [36,37], it remains unclear which type of valenced framing strategy would work best in this population. Two studies sought to test whether depressed individuals respond differently depending on depression severity. Moving away from generic health promotion messages, this research thus seeks to provide a starting point to effective health message customization based on 'stages' of depression.

2. The effectiveness of health message customization

2.1. Knowing the audience

Effective health messaging has long operated under the 'know your audience' principle [9,10], that is, we must know and integrate the unique characteristics of the individuals we are trying to reach in our health promotion messages [10,11]. Focused on such key characteristics, a first wave of health message strategies has largely focused on creating messages for *groups* of individuals (i.e.,

* Corresponding author at: Department of Communication, Texas A&M University, 4234 TAMU, College Station, TX, 77843-4234, United States.
E-mail address: jlueck@tamu.edu (J.A. Lueck).

https://doi.org/10.1016/j.pec.2018.02.007
0738-3991/

depressed individuals). Message tailoring, on the other hand, describes "a combination of strategies and information intended to reach one specific person, based on characteristics that are unique to that person, related to the outcome of interest, and derived from an individual assessment" [12, p. 277]. Health messages tailored to those individual-level differences are perceived as more relevant and are more likely to be attended to and remembered compared to generic group-based messages [10,13,14].

Yet, beyond consensus on its effectiveness, message tailoring is nuanced and complicated [15,16]. An important contribution in this context would be a more thorough understanding of individuals' unique characteristics that makes health message tailoring possible in the first place [17]. Furthermore, message tailoring requires a wealth of resources and empirical indicators of message effectiveness in order to be successful. Researchers have thus pointed out that, "if little variability exists on a factor within the target audience, then targeting may be just as effective as tailoring" [10, p. 415]. Thus, the primary aims of the present research are to test whether depressed populations could usefully be segmented into groups, or 'stages' of depression, for purposes of message customization to provide maximum benefit to groups of depressed individuals. This strategy is applied to the context of a prominent communication strategy, gain-and loss framing [8], to promote help-seeking for depression and investigate persuasive effects.

2.2. Customizing depression help-seeking messages

Such knowledge is urgently needed for depression help-seeking messages that could save lives by promoting timely help-seeking. Although empirically tested indicators of message effectiveness are currently not available for help-seeking messages [1,18], emerging research has begun to test the influence of depression on persuasive outcomes of health messages – with mixed results. For example, Klimes-Dougan et al. [1], as well as others [19,20], found in their research that depression help-seeking messages had no measurable persuasive effects. Even worse, some depression help-seeking messages have backfired. Lower attitudes toward help-seeking [32] and help-seeking intentions were reported in certain instances, particularly due to the activation of negative self-beliefs among those who were depressed [4]. The reasons remain poorly understood, primarily because such investigations have not closely examined unique differences within depressed populations. This is important, because health messages can only be customized if such characteristics are known. For example, severely depressed individuals might respond differently to depression help-seeking messages compared to those who are affected by mild symptoms of depression – important group differences that might require different health message customization strategies.

Conceivably, the stages of change model [21] might be particularly useful in this context. This model depicts the processes of health behavior change, indicating that different communication strategies should be used in order to help individuals move from one stage of readiness (e.g., pre-contemplation) to the next (e.g., contemplation) [21]. Whereas it has been established that those who are more strongly affected by depression are less likely to seek help [2] and more likely to respond negatively to health promotion efforts [4], it remains unclear if there are 'stages' of depression that determine such effects. If so, the 'stages' of depression could indicate different needs for communication strategies, such as raising awareness, providing education, or engaging in health promotion [29] – needs that should be addressed vis-à-vis depression help-seeking messages [22].

The present research examines stages of depression in response to a prominent communication strategy, gain-and loss message framing [8]. Due to its focus on positive (gain) versus negative (loss) framing, this framework was applied to the context of depression's negativity bias. Methods were triangulated vis-à-vis two studies using a student and U.S. adult sample and diversity of measures capturing persuasive outcomes. The need for such an effort is clear – empirical findings in health promotion research are most useful when they respect the nature of the real-world challenges they seek to address.

3. Study 1: investigating the 'stages' of depression among college students in response to gain-and loss-framed depression help-seeking messages

3.1. Study objective

The objective of the first study was to examine whether college students at different 'stages' of depression respond differently to gain- versus loss-framed depression help-seeking messages.

3.2. Method

3.2.1. Participants and procedure

A laboratory experiment was conducted with 154 college students at a large Midwestern university. The university's institutional review board granted approval for this study. After excluding one participant outside the age parameters (67 years) for the study, the final sample included 153 undergraduate students aged 18 to 30 years ($M = 19.85$, $SD = 1.82$). Of the 153 participants, 115 were females (75.2%) and 38 were males (24.8%). The gain-framed depression help-seeking message condition had 75 participants (49%) and the loss-framed depression help-seeking message condition had 78 participants (51%).

3.2.2. Stimulus materials

The experimental stimuli were two messages created based on the theoretical underpinnings of gain-and loss framing. According to theory recommendations [8], the gain message headline read: "Depression. Seeking Help Helps. There are many benefits to seeking help for depression," whereas in the loss condition, the headline read: "Depression. Not Seeking Help Hurts. There are many problems to not seeking help for depression". The visuals in both messages reflected the principles of gain-and loss framing by matching the two main students' facial expressions and body language with positive (gain condition) and negative (loss condition) affective cues (see Figs. 1 and 2).

Fig. 1. Gain-Framed Depression Help-Seeking Message for Study 1.

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007

Fig. 2. Loss-Framed Depression Help-Seeking Message for Study 1.

3.2.3. Measures

3.2.3.1. Depression. The Patient Health Questionnaire-9 (PhQ-9) was used to measure depressive symptomatology. The PhQ-9 consists of nine items. Participants indicated how often (0 = not at all; 3 = nearly every day) they had been bothered by specific depressive symptoms over the last two weeks. The sum of all PhQ-9 items indicates the severity of depression (scores range from 0 to 27). A score of 1–4 indicates minimal depressive symptoms, 5–9 indicates mild depressive symptoms, 10–14 indicates moderate depressive symptoms, 15–19 indicates moderately severe depressive symptoms, and 20–27 indicates severe depressive symptoms [23].

3.2.3.2. Perceived gain-and loss framing. Participants indicated their perceptions of whether the framing of the depression help-seeking message focused on the gains or the costs (losses) of not seeking help. This perception was assessed with a 7-point semantic differential measure, "Please rate your response to the following statements. The arguments and visuals in the message were: focused on the costs of not seeking help – focused on the benefits of seeking help."

3.2.3.3. Attitude toward help-seeking. Four 7-point semantic differential items measured attitude toward help-seeking in order to test the effectiveness of gain-and loss framing at different stages of depression. The stem, "My making an appointment with a health professional on campus to discuss depressive symptoms if I were to experience depressive symptoms anytime in the next two months," was followed by the items *bad – good, foolish-wise, harmful-beneficial, unnecessary-necessary.* Scores were averaged to yield an indicator of attitude, $\alpha = 0.81$.

3.2.3.4. Intentions to seek help. As the key variable of interest, intentions to seek help were assessed in order to test whether gain-and loss framing could increase intentions to seek help at certain stages of depression. Intention was measured by asking participants, "How likely is it that you will make an appointment with a health professional on campus to discuss depressive symptoms if you were to experience depressive symptoms anytime in the next two months?" and, "I expect to make an appointment with a health professional on campus to discuss depressive symptoms if I were to experience depressive symptoms anytime in the next two months" (1 = very unlikely, 7 = very likely). The intention items correlated strongly, $r = 0.89$, and were thus averaged to form a behavioral intention scale.

4. Results

4.1. Perceptions of message framing

Independent *t*-tests revealed that message framing was perceived differently in the gain message ($M = 5.97$, $SD = 1.34$) and the loss message ($M = 4.58$, $SD = 2.07$) conditions; $t(151) = 4.94$, $p < .001$, with higher means indicating a focus on 'benefits of help-seeking' and lower means indicating a focus on 'costs of not seeking help.'

4.2. Main analyses

For main analyses, data were excluded if the participant responded with zero to all depression questions ($n = 9$), if s/he was currently in treatment for mental illness ($n = 12$), and if depression data were missing ($n = 6$) leading to a total sample size of 126 participants for main analyses. Because the sample was under-powered for analyses based on all clinical stages of depression, the higher stages were combined. The sample thus consistent of participants with minimal depression ($n = 67$), mild depression ($n = 37$), and moderate to moderately severe ($n = 22$) depression.

Attitude toward help-seeking was not significantly impacted by message framing based on stages of depression as evidenced by a lack of an interaction effect, $F(2, 120) = .09$; $p = .915$, $d = .00$, main effects for message condition, $F(1, 120) = .34$; $p = .562$, partial $d = .00$, and stages of depression, $F(2, 120) = 2.39$; $p = .096$, $d = .40$. The effects of message framing on intentions to seek help were tested next. An interaction effect of stages of depression and message condition on intentions to seek help was not found, $F(2, 120) = 1.71$; $p = .186$, $d = .04$. No main effects were found for message condition, $F(1, 120) = 1.47$; $p = .228$, $d = .02$, but for stages of depression, $F(2, 120) = 3.31$; $p = .040$, $d = .50$. Due to the lack of effects of gain-and loss-framing, the effects of stages of depression on intentions to seek help were examined across message conditions, $F(2, 120) = 3.56$; $p = .031$, $d = .48$. Indicating a stronger 'readiness,' intentions to seek help were highest among those with minimal depression ($M = 4.55$, $SD = 1.49$). Intentions to seek help were lowest among those who suffered from moderate to severe depression ($M = 3.55$, $SD = 1.72$) (see Table 1).

Table 1
Means and Standard Deviations for Framing Perceptions, Attitude toward Help-Seeking, and Intentions to Seek Help by Condition (Gain versus Loss) and 'Stages' of Depression in College Student Sample.

Variable	Gain		Loss	
	M	*SD*	*M*	*SD*
Perceived Framing				
Minimal D	5.64	1.41	4.85	2.16
Mild D	6.24	0.90	4.45	2.09
Mod-Sev D	6.13	1.73	3.79	1.85
Attitude				
Minimal D	5.61	0.87	5.59	1.08
Mild D	5.40	1.10	5.21	1.26
Mod-Sev D	5.13	0.82	4.95	1.37
Intention				
Minimal D	4.55	1.46	4.56	1.54
Mild D	4.62	1.75	3.43	1.91
Mod-Sev D	3.56	1.74	3.55	1.77

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007

5. Study 2: investigating the 'stages' of depression among U.S. adults in response to gain-and loss-framed depression help-seeking messages

5.1. Study objective

A second study was conducted in order to triangulate data from more than one population and to improve previous limitations. Findings should be replicated in non-student samples in order to improve generalizability [24,25]. A rigorous effort was undertaken to recruit a large sample of U.S. adults that have not yet sought help. In order to enable valid conclusions in regard to the mixed findings on the effects of depression help-seeking messages, this study also included a third no-message control condition.

5.2. Method

5.2.1. Participants and procedure

Qualtrics Panels, a survey management service offered by the private research software company Qualtrics, was used to recruit U.S. adults from established pools of U.S. adults that met eligibility criteria. The university's institutional review board granted approval for this online experiment. The sample included 882 U.S. adults aged 18 to 60 years ($M = 37.62$, $SD = 11.43$). Of the $n = 882$ participants, 652 were females (73.9%) and 230 were males (26.1%). The gain-framed depression help-seeking message condition had 266 participants (30%), the loss-framed depression help-seeking message condition had 265 participants (30%), and the no-message control condition had 351 (40%) participants. The no-message control condition was oversampled, providing a more reliable baseline for multiple comparisons.

5.2.2. Stimulus materials

The creation of stimulus materials took a similar approach as in the previous study, but key elements (e.g., individuals portrayed in the message) were adjusted to match key characteristics of a non-student sample (see Figs. 3 and 4).

5.2.3. Measures

5.2.3.1. Depression. Using the same PhQ9 measure, participants indicated how often (0 = not at all; 3 = nearly every day) they had been bothered by specific depressive symptoms over the last two weeks (e.g., "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless").

5.2.3.2. Perceived gain-and loss framing. Participants indicated their perceptions of whether the framing of the depression help-seeking message focused on the gains or the costs (losses) of not seeking help.

5.2.3.3. Attitude toward help-seeking. Six 7-point semantic differential items measured attitude before and after message exposure. The stem, "My making an appointment with a health professional to discuss depressive symptoms if I were to experience depressive symptoms anytime in the next two months is . . . " was followed by the items *bad – good, foolish-wise, unacceptable-acceptable, unfavorable-favorable, wrong-right,* and *negative-positive.* Scores were averaged to yield an indicator of attitude, $\alpha = 0.97$.

5.2.3.4. Intentions to seek help. Intention was measured with one item, "How likely is it that you will make an appointment with a health professional to discuss depressive symptoms if you were to experience depressive symptoms anytime in the next two months?" (1 = very unlikely, 7 = very likely).

6. Results

6.1. Perceptions of message framing

Independent *t*-tests revealed that message framing was perceived differently in the gain message ($M = 6.23$, $SD = 1.42$) and the loss message ($M = 3.84$, $SD = 2.30$) conditions; $t(529) = 14.37$, $p < .001$, with higher means indicating a focus on

Fig. 3. Gain-Framed Depression Help-Seeking Message for Study 2.

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007

Fig. 4. Loss-Framed Depression Help-Seeking Message for Study 2.

'benefits of help-seeking' and lower means indicating a focus on 'costs of not seeking help.'

6.2. Main analyses

Confirming successful recruitment, none of the participants indicated they were currently in treatment for mental illness. Similar to the previous study, data were excluded if the participant responded with zero to all depression questions ($n = 144$), reducing the sample size to a total of 738 participants. Accordingly, the sample consistent of participants with minimal depression ($n = 273$), mild depression ($n = 196$), moderate depression ($n = 108$), moderately severe depression ($n = 96$), and severe depression ($n = 65$) who were not in treatment for mental illness at the time of the study.

Due to the large variance in age, age was entered as covariate in all subsequent analyses. Results of a univariate GLM analysis on attitude toward help-seeking prior to message exposure did not yield an interaction effect, $F(8, 722) = 1.07$; $p = .379$, $d = 0.22$. The main effects for message condition, $F(2, 722) = 2.50$; $p = .083$, $d = .17$, as well as stages of depression, $F(4, 722) = 0.35$; $p = .847$, $d = 0.09$, were not statistically significant. A repeated measures ANOVA indicated, however, that attitudes improved after message exposure, $F(1, 737) = 15.83$; $p = .001$, $d = 0.29$. An interaction effect of message condition and stages of depression was found for attitudes after message exposure, $F(8, 722) = 2.04$; $p = .039$, $d = 0.30$. Main effects were significant for message condition, $F(2, 722) = 7.62$; $p = .001$, $d = 0.29$, as well as stages of depression, $F(4, 722) = 3.41$; $p = .009$, $d = .28$ (see Fig. 5). Examining the results for potential boomerang effects yielded an interesting observation – those who suffered from moderately severe depression indicated more favorable attitudes toward help-seeking if they did not see a message at all ($M = 5.63$, $SD = 1.48$) compared to viewing the gain- ($M = 5.49$, $SD = 1.41$) or loss-framed message ($M = 5.50$, $SD = 1.70$) (see Table 2).

Finally, intentions to seek help were tested based on message condition (gain, loss, or no message) and stages of depression. An interaction effect was not found, $F(8, 722) = 0.90$; $p = .517$, $d = 0.20$. Main effects were not found for message condition, $F(2, 722) = 1.64$; $p = .194$, $d = 0.14$, but for stages of depression, $F(4, 722) = 2.57$; $p = .037$, partial $d = .24$. Due to the lack of effects of message framing, the effects of stages of depression on intentions to seek help were examined across message conditions, $F(4, 732) = 2.83$; $p = .024$, $d = 0.25$. Intentions were highest among those with minimal depression ($M = 4.26$, $SD = 1.96$) *and* those with severe depression ($M = 4.05$, $SD = 1.98$). Intentions to seek help were lowest among those with moderately severe depression ($M = 3.57$, $SD = 1.90$) (Table 2).

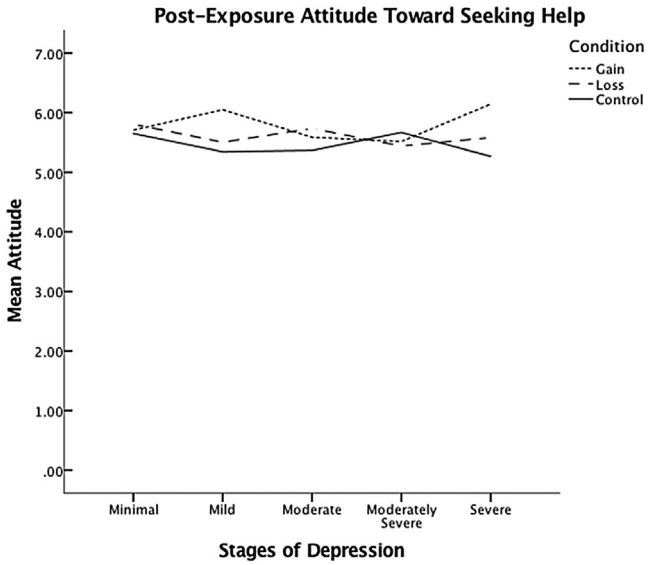

Fig. 5. Attitudes toward help-seeking after message exposure (gain- or loss-framed depression help-seeking message) compared to a no-message control.

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007

Table 2
Means and Standard Deviations for Framing Perceptions, Attitude toward Help-Seeking, and Intentions to Seek Help by Condition (Gain versus Loss) and 'Stages' of Depression in U.S. Adult Sample.

Variable	Gain		Loss		Control	
	M	*SD*	*M*	*SD*	*M*	SD
Perceived Framing						
Minimal D	6.32	1.23	4.05	2.31		
Mild D	6.60	1.07	3.19	2.08		
Moderate D	5.33	1.84	3.85	2.14		
Mod-Sev D	5.73	1.96	4.00	2.51		
Sev D	6.50	1.40	4.75	2.44		
Attitude						
Minimal D	6.23	1.26	6.23	1.22	5.68	1.37
Mild D	6.34	1.03	5.63	1.56	5.36	1.80
Moderate D	5.39	1.41	5.55	1.29	5.33	1.70
Mod-Sev D	5.49	1.41	5.50	1.70	5.63	1.48
Sev D	6.53	0.80	5.55	1.66	5.22	1.95
Intention						
Minimal D	4.60	1.95	4.18	2.05	4.08	1.88
Mild D	4.27	1.89	3.60	1.76	3.85	1.82
Moderate D	4.03	1.58	3.48	1.81	3.98	1.56
Mod-Sev D	3.95	1.76	3.91	1.73	3.12	2.04
Sev D	3.90	2.17	4.19	1.83	4.07	1.98

7. Discussion

In order to enable effective message customization, two studies were conducted with college students (study 1) and U.S. adults (study 2) to test the effectiveness of gain-and loss framing according to 'stages' of depression [21]. Finding empirical indicators for message effectiveness for help-seeking messages is important in order to explain recent empirical investigations that usefully tested the effects of depression help-seeking messages. Whereas this research has led to warnings that such messages can backfire [4,26], it did not assess for whom exactly this is the case – an important consideration for message customization strategies.

In order to influence decision-making, the original framework on message framing suggests that gain and loss frames should be used according to how certain or uncertain an outcome is perceived to be [34]. Interestingly, the prominent message strategy of gain-and loss-framing had no impact on intentions to seek help, which is largely consistent with previous research on gain-and loss framing [27,33]. Thus, it did not make a difference whether positive (gain) or negative (loss) framing strategies were used in order to promote help-seeking among those who are biased to focus on negative information [36,37]. This finding might also point to an important theoretical conclusion – "recommendations that practitioners use gain-framed messages for save behaviours and loss-framed messages for risky behaviours does not amount to solid scientific evidence" [35, p. 946].

Unlike intentions, framing did impact attitude toward help-seeking based on stages of depression. The gain-frame performed particularly well among those with mild and severe depression, yet both gain-and loss-framing led to a boomerang effect among those with moderately severe depression. For this group, not seeing a message at all had a more positive effect on attitude than viewing either of the depression help-seeking messages. Boomerang effects have been found to occur if help-seeking messages activate negative self-beliefs [4] or negative perceptions of social norms [26]. Interestingly, previous research has not examined the differences between stages of depression severity that might lead to these effects. Given that the loss-framed message performed no better than no message at all, it could be the case that making losses even more salient among those who are already risk-aversive in this group should be avoided. This is important as unintended negative effects in this vulnerable population can lead not only to the ineffective use of resources, but also a decreased likelihood of the individual ever seeking help – which could increase risk for suicide [4,26].

Regardless of message framing, stages of depression strongly influenced intentions to seek help, indicating that different communication strategies are needed at different stages of depression in order to move individuals toward readiness to seek help [21]. Both studies indicated intentions to seek help were higher in lower stages of depression (minimal depression) and lowest in higher stages of depression (moderate to severe), suggesting a dire need to promote help-seeking as early as possible. Interestingly, study 2 revealed intentions to seek help were also highest in the severe stage of depression. This finding challenges that intentions to seek help steadily decrease as depression symptoms become more severe [2]. In line with the stages of change model [21], some depressed individuals might be less likely to seek help as a result of viewing help-seeking messages not because of low intentions, but because of specific barriers that might make taking action particularly difficult. For example, a systematic review on perceived barriers of help-seeking has revealed that depressed individuals would indeed consider seeking help if they knew their current symptoms are indicative of a clinical disorder and if such opportunities would be provided without perceived stigma [28]. Other researchers have usefully pointed to the cost- and access-barriers of seeking help – reasons for not seeking help often include concerns about costs, transportation, and convenience [29].

Thus, depression help-seeking messages may not be relevant for those individuals unless they educate about specific means of overcoming such barriers [30] – an important finding for message customization strategies based on stages of depression.

7.1. Limitations

In order to improve statistical power and external validity, a rigorous effort was undertaken to improve the validity of findings using two samples, one college student and one U.S. adult sample. Despite these efforts, caution must be expressed in regard to the representativeness of findings. Study 1 in particular utilized a convenience sample of college students at only one institution. Furthermore, the two studies were not designed with the intention to perfectly replicate one another, making it difficult to fully compare findings.

7.2. Future research

Future explorations of the effects of specific wording and negations of gain-and loss-framed message components are encouraged, as these might be perceived differently among people who suffer from depression [38]. Empirical research should prioritize the evaluation of customized help-seeking messages in the severe stages of depression with an emphasis on targeting barriers of help-seeking.

Conclusions

The present study confirms that persuading depressed individuals to seek help requires thorough understanding of the stages of depression. Gain-and loss-framing can lead to boomerang effects among those with moderately severe depression, which could be due to the activation of negative depressed cognition and affective risk perceptions. Matching message strategies with the stages of

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007

depression should be an important goal in both research and practice.

Conflict of interest

None. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

[1] B. Klimes-Dougan, D.A. Klingbeil, S.J. Meller, The Impact of Universal Suicide-Prevention Programs on the Help-Seeking Attitudes and Behaviors of Youths, (2013), doi:http://dx.doi.org/10.1027/0227-5910/a000178.
[2] A.R. Keeler, J.T. Siegel, E.M. Alvaro, Depression and help seeking among Mexican–Americans: the mediating role of familism, J. Immigr. Minor. Health 16 (6) (2014) 1225–1231, doi:http://dx.doi.org/10.1007/s10903-013-9824-6.
[3] J.T. Siegel, B. a. Lienemann, C.N. Tan, Influencing help-seeking among people with elevated depressive symptomatology: mistargeting as a persuasive technique, Clin. Psychol. Sci. 3 (2) (2015) 242–255, doi:http://dx.doi.org/10.1177/2167702614542846.
[4] B.A. Lienemann, J.T. Siegel, W.D. Crano, Persuading people with depression to seek help: respect the boomerang, Health Commun. 28 (7) (2013) 718–728, doi:http://dx.doi.org/10.1080/10410236.2012.712091.
[5] B.K. Rimer, M.W. Kreuter, Advancing tailored health communication: a persuasion and message effects perspective, J. Commun. 56 (2006) S184–S201, doi:http://dx.doi.org/10.1111/j.1460-2466.2006.00289.x.
[6] G.L. Kreps, E.W. Maibach, Transdisciplinary science: the nexus between communication and public health, J. Commun. 58 (4) (2008) 732–748, doi:http://dx.doi.org/10.1111/j.1460-2466.2008.00411.x.
[7] D. Ogilvie, P. Craig, S. Griffin, S. Macintyre, N.J. Wareham, A translational framework for public health research, BMC Public Health 9 (1) (2009) 116, doi:http://dx.doi.org/10.1186/1471-2458-9-116.
[8] A.J. Rothman, R.D. Bartels, J. Wlaschin, P. Salovey, The strategic use of gain- and loss-framed messages to promote healthy behavior: how theory can inform practice, J. Commun. 56 (2006) S202–S220, doi:http://dx.doi.org/10.1111/j.1460-2466.2006.00290.x.
[9] J. Hornikx, D.J. O'Keefe, Adapting consumer advertising appeals to cultural values. A meta-analytic review of effects on persuasiveness and ad liking, Ann. Int. Commun. Assoc. 33 (1) (2009) 39–71, doi:http://dx.doi.org/10.1080/23808985.2009.11679084.
[10] S.M. Noar, N.G. Harrington, R.S. Aldrich, The role of message tailoring in the development of persuasive health communication messages, Commun. Yearb. 33 (1947) (2009) 73–133, doi:http://dx.doi.org/10.1080/23808985.2009.11679085.
[11] B. Fischhoff, The sciences of science communication, Proc. Natl. Acad. Sci. 110 (Suppl. 3) (2013) 14033–14039, doi:http://dx.doi.org/10.1073/pnas.1213273110.
[12] M.W. Kreuter, V.J. Stretcher, B. Glassman, One size does not fit all: the case for tailoring print materials, Ann. Behav. Med.: Publ. Soc. Behav. Med. 21 (4) (1999) 276–283, doi:http://dx.doi.org/10.1007/BF02895958.
[13] S.M. Noar, C.N. Benac, M.S. Harris, Does tailoring matter? Meta-analytic review of tailored print health behavior change interventions, Psychol. Bull. 133 (4) (2007) 673–693, doi:http://dx.doi.org/10.1037/0033-2909.133.4.673.
[14] S.J. Sohl, A. Moyer, Tailored interventions to promote mammography screening: a meta-analytic review, Prev. Med. 45 (4) (2007) 252–261, doi:http://dx.doi.org/10.1016/j.ypmed.2007.06.009.
[15] J. Brug, A. Oenema, M. Campbell, Past, present, and future of computer-tailored nutrition education, Am. J. Clin. Nutr. 77 (4) (2003) 1028S–1034S. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12663313.
[16] Y. Huang, F. Shen, Effects of cultural tailoring on persuasion in cancer communication: a meta-analysis, J. Commun. 66 (4) (2016) 694–715, doi:http://dx.doi.org/10.1111/jcom.12243.
[17] M. Lustria, J. Cortese, M. Gerend, K. Schmitt, Y. Kung, C. McLaughlin, A model of tailoring effects: a randomized controlled trial examining the mechanisms of tailoring in a web-based STD screening intervention, Health Psychol. 35 (11) (2016) 1214–1224, doi:http://dx.doi.org/10.1037/hea0000399.
[18] M. Isaac, B. Elias, L.Y. Katz, S.L. Belik, F.P. Deane, M.W. Enns, J. O'Neil, et al., Gatekeeper training as a preventative intervention for suicide: a systematic review, Can. J. Psychiatry 54 (4) (2009) 260–268, doi:http://dx.doi.org/10.1177/070674370905400407.
[19] H. Dumesnil, P. Verger, Public awareness campaigns about depression and suicide: a review, Psychiatr. Serv. 60 (9) (2009) 1203–1213, doi:http://dx.doi.org/10.1176/appi.ps.60.9.1203.
[20] J. Lueck, M. Yzer, Explaining intentions to seek help for depressive symptoms in the context of responsibility message framing, Health Commun. (2017) 1–8, doi:http://dx.doi.org/10.1080/10410236.2017.1322857.
[21] J.O. Prochaska, C.A. Reddings, K.E. Evers, The transtheoretical model and stages of change, in: K. Glanz, B.K. Rimer, K. Viswanath (Eds.), Health Behavior and Health Education, 4th ed., Jossey-Bass, San Francisco, CA, 2008, pp. 407–434.
[22] M.W. Kreuter, R.J. Wray, Tailored and targeted health communication: strategies for enhancing information relevance, Am. J. Health Behav. 27 (Suppl. 3) (2003) S227–232.
[23] American Psychiatric Association, Severity Measure for Depression-Age 11–17, (2018) . Retrieved from http//www.psychiatry.org/File%20Library/Practice/DSM/DSM-5/SeverityMeasureForDepressionAdult.pdf.
[24] W.L. Jones, B.S. Sonner, Just say no to traditional student samples, J. Advert. Res. 41 (5) (2001) 63–71. Retrieved from http://www.journalofadvertisingresearch.com/content/jadvertres/41/5/63.full.pdf.
[25] R. Peterson, On the use of college students in social science research: insights from a second-order meta-analysis, J. Consum. Res. 28 (3) (2001) 450–461, doi:http://dx.doi.org/10.1086/323732.
[26] B. Klimes-Dougan, C.Y.S. Lee, Suicide prevention public service announcements: perceptions of young adults, Crisis 31 (5) (2010) 247–254, doi:http://dx.doi.org/10.1027/0227-5910/a000032.
[27] D.J. O'Keefe, J.D. Jensen, The relative persuasiveness of gain-framed loss-framed messages for encouraging disease prevention behaviors: a meta-analytic review, J. Health Commun. 12 (7) (2007) 623–644, doi:http://dx.doi.org/10.1080/10810730701615198.
[28] A. Gulliver, K.M. Griffiths, H. Christensen, Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review, BMC Psychiatry 10 (1) (2010) 113, doi:http://dx.doi.org/10.1186/1471-244X-10-113.
[29] R. Mojtabai, Unmet need for treatment of major depression in the United States, Psychiatr. Serv. 60 (3) (2009) 297–305, doi:http://dx.doi.org/10.1176/ps.2009.60.3.297.
[30] D.J. Chinn, M. White, J. Harland, C. Drinkwater, S. Raybould, Barriers to physical activity and socioeconomic position: implications for health promotion, J. Epidemiol. Community Health 53 (3) (1999) 191–192 (PMC1756843).
[31] http://www.who.int/mediacentre/factsheets/fs369/en/ (WHO, 2017).
[32] B. Klimes-Dougan, Chih-Yuan, S. Lee, A.K. Houri, Suicide preventionwith adolescents suicide prevention with adolescents. Considering potential benefits and untoward effects of public service announcements, Crisis 30 (3) (2009) 128–135, doi:http://dx.doi.org/10.1027/0227-5910.30.3.128.
[33] K. Gallagher, J. Updegraff, Health message framing effects on attitudes, intentions, and behavior: a meta-analytic review, Ann. Behav. Med. 43 (1) (2012) 101–116, doi:http://dx.doi.org/10.1007/s12160-011-9308-7.
[34] A. Tversky, D. Kahneman, Advances in prospect theory: cumulative representation of uncertainty, J. Risk Uncertainty 5 (4) (1992) 297–323, doi:http://dx.doi.org/10.1007/BF00122574.
[35] Riet van't, J. Van, A.D. Cox, D. Cox, G.D. Zimet, D. Bruijn, B. Putte, B. Van Den, R.A. C. Ruiter, Does perceived risk influence the effects of message framing? Revisiting the link between prospect theory and message framing, 7199 (December) (2016), doi:http://dx.doi.org/10.1080/17437199.2016.1176865.
[36] A.T. Beck, Cognitive therapy and the emotional disorders, Meridian, New York, 1976.
[37] B.E. Wisco, Depressive cognition: self-reference and depth of processing, Clin. Psychol. Rev. 29 (4) (2009) 382–392, doi:http://dx.doi.org/10.1016/j.cpr.2009.03.003.
[38] C. Burgers, C.J. Beukeboom, L. Sparks, How the doc should (not) talk: when breaking bad news with negations influences patients' immediate responses and medical adherence intentions, Patient Educ. Couns. 89 (2) (2012) 267–273, doi:http://dx.doi.org/10.1016/j.pec.2012.08.008.

Please cite this article in press as: J.A. Lueck, Respecting the 'stages' of depression: Considering depression severity and readiness to seek help, Patient Educ Couns (2018), https://doi.org/10.1016/j.pec.2018.02.007