Optimism and attributional style impact on the relationship between general insecurity and mental health☆

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ABSTRACT

The current research examined the impact of general insecurity beyond specific domains on mental health, and optimism as the proposed mechanism explaining the aforementioned relationship. We also tested external attribution as a possible moderator. We collected data ($N = 219$) in two waves. Results showed that general insecu-

Näswall, 2002), but also bring about impairment to task performance (De Cuyper et al., 2014), psychological strain and poor mental health (and even a non-significant effect on physical health, see Hellgren & Sverke, 2003; Roskies & Louis-Guerin, 1990). As a classic work stressor (Ashford et al., 1989; Mauno, Leskinen, & Kinnunen, 2001), job insecurity is inherently bonded with uncertainty, and uncertainty will further generate the experience of strain, which will consume the resource needed to maintain mental health.

Additionally, food insecurity has been found to be associated with mental health. The concern of food insecurity emerges when future food availability is uncertain and threatened (Compton, 2014), which is related to anxiety, depression, and even mental disorder and suicidal ideation (Davison, Marshall-Fabien, & Tecson, 2015). Weaver and Hadley (2009) proposed three reasons to comprehend this relationship: micronutrients, future uncertainty, and difference sensitivity. Among the three reasons, uncertainty is a stress generator and may lead to anxiety and depression.

Economic insecurity is another source which may have damaging effects on mental health. Economic insecurity refers to a state of uncertainty and unpredictability regarding one's financial well-being, which can be caused by concrete factors as unemployment or abstract factors as future possible layoffs. Except for financial effects, research has investigated the relationship between economic insecurity and psychological distress and even physical pain (Chou, Parmar, & Galinsky, 2016).

Another source of insecurity influencing mental health comes from public incidents, disaster, and war (e.g., Raphael & Maguire, 2009). Disasters can be tremendous stressors, as lives are threatened (Neria, Nandi, & Galea, 2008) and societies are disrupted (Norris et al., 2002). It has been documented that disasters triggered lots of mental disorders such as posttraumatic stress disorder (Galea, Nandi, & Vlahov, 2005) and substance use disorder (van der Velden & Kleber, 2009). These traumatic events have impact on mental health as they also trigger uncertainty, which is concealed in these stressors.

In sum, sufficient evidence suggests the strong link between insecurity and uncertainty and unpredictability across domains. In line with the stress theories, especially with the Conservation of Resources (COR) theory (Hobfoll, 1989), uncertainty is a common stressor (Greco & Roger, 2003; Monat, Averill, & Lazarus, 1972) that can cause damage to mental health. Insecurity makes it hard to maintain mental health as resources is constantly being consumed, and it is harder for people with limited resources to cope with insecure situations, as it is claimed that investment of resources is required to perform the protection against resource loss or the threat of resource loss (Hobfoll, 1989). This makes the people who have limited resources are more vulnerable to insecurity. Besides, stress has been found to result in releasing of norepinephrine and corticotrophin, which are associated with anxiety disorders (Brunello et al., 2003). Therefore, we infer that insecurity, across different domains and indicating a general experience of the current life situation and the society, can harm mental health.

H1. Insecurity is negatively related to general mental health.

2.2. Optimism and insecurity-mental health relationship

Optimism is a tendency that people attribute specific negative incidents to temporary and external factors, while attribute positive incidents to permanent and internal factors (Seligman, Abramson, Semmel, & Von Baeyer, 1979). It is a comprehensive tool to explain life events, which is good for mental health (Ammirati, Lamis, Campos, & Farber, 2015).

Optimism has been studied as a moderator to buffer the relationships between stressors and behavioural and emotion consequences (Hirsch, Wolford, LaLonde, Brunk, & Parker-Morris, 2009; Jackson, Sellers, & Peterson, 2002; Segerstrom, 2005). According to the theory of explanatory style, optimistic people are used to appraising a stressful situation in a more positive way and believing the arriving of positive events and consequences in the future, while pessimistic people hold the opposite beliefs. Thus, by providing positive feelings and expectations, optimism can offer its help as a protective factor against the deleterious influence that stress may have on mental health (Jackson et al., 2002).

The current research focuses on the mediating role of optimism in the relationship between insecurity and mental health. Align with Psychological Capital perspectives, optimism was defined as a state-like psychological resource capacity, which may have a dispositional baseline, and positive expectancies can be its source (Luthans & Youssef, 2007). Optimism not only involves different cognitive tendencies toward past and future events, but also entails different emotional consequences. Optimistic subjects tended to report less anxiety and more happiness (Helton, Dember, Warm, & Matthews, 1999). In addition, when facing challenges, optimism, as a self-regulation mechanism, can promote self-efficacy and resilience, which are essential components of mental health (Carver, Scheier, & Segerstrom, 2010). Therefore, we argue that optimism influences mental health, since optimists' expectations of good outcomes yield more positive feelings. From the perspective of the COR theory, optimism is important for better adaptation to diverse stressors (Ben-Zur, 2012). Optimism makes it easier to allocate resources effectively to adapt with stressful circumstances, as resources brought by positive consequences can be attributed inward, while the resource loss that might be caused by negative consequences would be attributed outward. Moreover, optimistic people have the desire to attain resources to deal with these circumstances, as they are more ready to invest effort (Carver et al., 2010; Feldman, Davidson, & Margalit, 2015). Besides, they have more trust on health promoting activities and are more intended to engage in these activities to ensure positive outcomes (Carver et al., 2010).

On the other hand, optimism can be shaped by the surroundings. Carver et al. (2010) have explored several ways to promote optimism, indicating that optimism can be used and fostered intentionally. Shifren and Hooker (1995) found anger would impair optimism. Wong and Fielding (2007) found that optimism mediated the relationship between quality of life and pain. To sum, if one is living in an environment where hope or security is absent, optimism can be harmed by the negative feelings caused by the environment.

In line with the COR theory, the perspective of social resources may shed light on the mediating role of optimism. A study across ten years (Segerstrom, 2007) discovered that social network growth could predict increase in optimism since the access of social resources envisions a positive future. When concerning insecurity, the perception of insecurity was more severe for people who are short in social resources (Donder, Witte, Buffel, Dury, & Verte, 2012). On the other hand, insecurity itself can harm social resources as people may have to deal with insecurity, which leads to consumption of a lot of resources at the first time, leaving no resource to involve in social activities, as the latter is in the higher level of needs than security (Maslow, 1943). Thus, insecurity may lead to decrease of optimism.

Taken together, we proposed that:

H2. Optimism plays the mediating role in the relationship between insecurity and mental health.

2.3. Attribution style and insecurity-mental health relationship

External attribution, defined as the attributing where 'the cause of negative situations comes from someone or something else' (Sanjuán & Magallares, 2014, p. 444), is one option of coping strategies to insecurity, as one can attribute the negative events and consequences of insecurity to the environment instead of blaming oneself (Kuebler et al., 2014), thus the negative impact of insecurity on optimism may be buffered.

Besides, external attribution is a powerful strategy to maintain current psychological resources, as negative incidents are resource-consuming (Hobfoll, 1989). External attribution performs as a moderator to help us face with the aversive relationships between insecurity and impaired optimism, and between impaired optimism and mental health. To summarize, knowing how to use external attribution properly can help us maintain optimism and mental health. Thus, we formed Hypothesis 3.

H3. External attribution moderates the mediation path of insecurity, optimism and mental health, such that for individuals who have stronger tendency in external attribution, the negative impact of insecurity on optimism and mental health would be reduced.

Fig. 1 shows the proposed theoretical model.

3. Methods

3.1. Procedure and participants

We used a snowball sampling strategy to recruit participants as the participants helped us with recruiting more participants via personal contacts, and they were told that only adult employees were needed. All participants received an instruction through emails. We collected data at two time points, 4–6 weeks apart. The data of general insecurity, attribution style, and demographic information were collected at Time 1, while optimism and general mental health at Time 2. Of the 219 participants, 52.0% were male, and the average age was 29.04 ($SD = 5.92$) years. They came from a variety of industries and occupations.

3.2. Measures

All variables were measured on a seven-point Likert scale, ranging from 1 (*totally disagree*) to 7 (*totally agree*) unless otherwise specified.

3.2.1. General insecurity

Based on the definition and our main concern that focusing on insecurity in a more general way, we developed the measurement of general insecurity which only indicated the general feeling of individuals and did not differentiate the sources of insecurity. The scale includes four items, and the items are described as 'It hardly can be described as safe concerning all aspects of my life', 'I think the current social conditions make feel insecure', 'I felt insecure when walking on the street sometimes', and 'I intended to escape from the society because of my security being threatened'. Preliminary evidence of scale validity was investigated by a sample of 299 participants (40.7% male; $M_{age} = 31.55$, $SD = 5.75$). Only one factor was extracted in exploratory factor analysis using oblique rotation, explaining 66.59% of the total variance. The criterion-related validity examination showed that general insecurity was negatively correlated to emotional stability and openness ($r = -0.288/-0.214$, respectively, $p < 0.01$ for both).

3.2.2. Attribution style

We adopted 8 items from the Multidimensional-Multiattributional Causality Scale (Lefcourt, Von Baeyer, Ware, & Cox, 1979) to measure
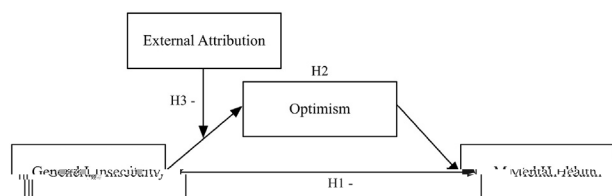

Fig. 1. Theoretical model linking general insecurity, optimism, mental health, and external attribution.

Table 1
Descriptive statistics and correlations.

	M	SD	1	2	3	4
General insecurity (T1)	3.42	1.39	(0.86)			
External attribution (T1)	3.72	1.03	0.517**	(0.83)		
Optimism (T2)	4.88	0.797	−0.331**	−0.232**	(0.62)	
GHQ-12 (T2)	5.28	1.06	−0.375**	−0.235**	0.627**	(0.87)

Note: $N = 219$. Reliabilities (Cronbach's alpha) appear in parentheses along the diagonal.
 ** $p < 0.01$.

external attribution which means attributing achievement and affiliation to contextual characteristics and fortuitous events. The two domains, achievement and affiliation, were chosen as they are more salient issues in daily lives (Lefcourt et al., 1979). A sample item is: 'Often chance events can play a large part in causing rifts between friends.'

3.2.3. Optimism

As we focused optimism as a psychological resource, Psychological Capital theory provided valuable perspectives and measurement instruments. Optimism was measured with a published Chinese version of the 6-item subscale of the Psychological Capital Scale (Luthans, Youssef, & Avolio, 2007; Tong, Wang, & Peng, 2015). A sample item is: 'I always look on the bright side of things regarding my job.'

3.2.4. General mental health

The 12-item version of the General Health Questionnaire (GHQ-12) was widely used to measure general psychological health. In this study, we used a revised version of the questionnaire (Goldberg & Williams, 1988; Wang & Lin, 2011). Participants were requested to indicate how they felt currently and recently on a 7-point scale (1 = *none*, 7 = *always*). A sample item is: 'able to concentrate'.

We also collected data on age, gender (0 for male and 1 for female), and education level (1 for primary school level and 6 for graduate level gradually).

4. Results

Descriptive statistics and intercorrelations for tested variables are reported in Table 1.

We used the hierarchical regression to test Hypotheses 1 and 2 to construct the mediation path. The multiple linear regression coefficients of the related variables are showed in Table 2. In Stage 1, the control variables were put into the regression model. Gender was negatively related to general mental health in all models. In Stage 2, after controlled for gender, age, and education level, general insecurity was negatively correlated with general mental health ($\beta = -0.338$, $p < 0.01$). In Stage 3, when optimism was entered into the model, the effect of general insecurity on general mental health greatly decreased though still significant ($\beta = -0.164$, $p < 0.01$). Beyond that, with the addition of

Table 2
Results of hierarchical regression analysis on the mediation path.

	General mental health		
	Stage 1	Stage 2	Stage 3
Gender	−0.22**	−0.17**	−0.11*
Age	0.11	0.09	0.06
Education level	0.09	0.06	0.11*
General insecurity		−0.34**	−0.16**
Optimism			0.55**
R^2	0.07	0.18	0.44
ΔR^2		0.11**	0.26**

Note: The standardized coefficients (β) are presented above.
 * $p < 0.05$.
 ** $p < 0.01$.

Table 3
Results of hierarchical regression analysis on moderated mediation model.

	Optimism		General mental health	
	Stage 1	Stage 2	Stage 1	Stage 2
Gender	−0.11	−0.10	−0.11[*]	−0.10
Age	0.06	0.04	0.05	0.04
Education level	−0.08	−0.07	0.10	0.10
General insecurity	−0.27[**]	−0.27[**]	−0.17[**]	−0.18[**]
External attribution	−0.09	−0.06	0.00	0.02
Optimism			0.55[**]	0.53[**]
GI × EA		0.17[**]		0.12[*]
R^2	0.14	0.17	0.44	0.45
ΔR^2		0.03[**]		0.01[*]

Note: The standardized coefficients (β) are presented above. GI = general insecurity; EA = external attribution.

   [*] $p < 0.05$.
   [**] $p < 0.01$.

Fig. 2. Plot of the relationship between general insecurity and optimism at two levels of external attribution.
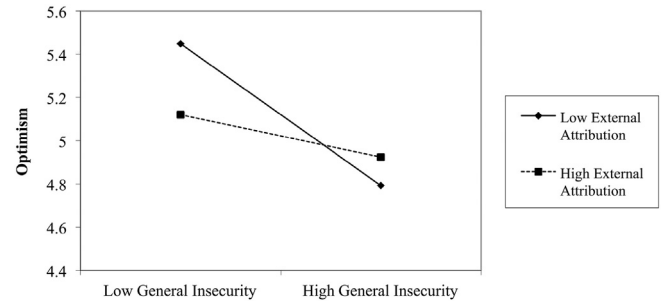
optimism, the model in Stage 3 explained a significant amount of incremental variance in general mental health ($\Delta R^2 = 0.26$).

We tested our Hypothesis 3 by testing the moderating role of external attribution in a hierarchical regression analysis. Results (see Table 3) showed that the addition of the General Insecurity × External Attribution interaction explained a significant amount of incremental variance in Stage 1 of general insecurity on optimism (β = 0.17, $p < 0.01$, $\Delta R^2 = 0.03$), while a slightly significant variance in Stage 2 of general insecurity on general mental health when concerning optimism (β = 0.12, $p < 0.05$, $\Delta R^2 = 0.01$).

We conducted a bootstrap analysis to examine the indirect effect of general insecurity on general mental health with the moderation of external attribution style (see Table 4). The Mode-7 in PROCESS macro (v2.11) was introduced to test the moderated mediation effect (Hayes, 2013; Preacher, Rucker, & Hayes, 2007). Results indicated that, the index of moderated mediation is significant (95% CI [0.013, 0.108]). As the level of external attribution increases, the indirect effect of general insecurity on general mental health through optimism decreased from significant level, −0.19 (External Attribution of −1 SD at the low level; 95% CI [−0.295, −0.110]), to insignificant level, −0.06 (External Attribution of +1 SD at the high level; 95% CI [−0.135, 0.005]). Therefore, Hypothesis 3 was supported. To provide a better understanding of the moderation effect, a plot is shown in Fig. 2.

5. Discussion

The current research examined the relationship between general insecurity and general mental health, in which optimism acted as a mediator and attribution style acted as a moderator. The results supported our claim that general insecurity can be harmful to general mental health through damaging optimism. However, using external attribution strategy when facing insecure situations can help reduce the consuming effect of insecurity and thus maintains optimism and psychological health.

The present findings contribute to our understanding of the impact of insecurity situations, especially with the developing of a new concept, *general insecurity*. Focusing on insecurity in a general way helps us understand why insecurity on its own is influential to relevant psychological and behavioural factors. The construction of general insecurity provides us a chance to investigate the particular impact of insecurity without the influences brought by other factors in a specific domain. More specifically, general insecurity reflects a status in which individual is concerned about s his/her safety, and that may exhaust psychological energy and resources for coping with potential threats. As a result, mental health is impaired.

More importantly, our research addressed the function of optimism and external attribution style in the insecurity-mental health relationship. Firstly, our findings support the mediating function of optimism. Researchers have been arguing whether optimism is dispositional or state-like (Carver et al., 2010). Our attempt of establishing optimism

Table 4
Bootstrap analysis of the conditional indirect effects of general insecurity.

	Coefficient	SE	p
Outcome: Optimism			
General insecurity	−0.47	0.13	0.0003
External attribution	−0.35	0.12	0.0038
GI × EA	0.08	0.03	0.0083
Outcome: General mental health			
Optimism	0.74	0.07	0.0000
General insecurity	−0.13	0.04	0.0027

Conditional indirect effects of general insecurity on general mental health at values of external attribution

Value group	Effect	Boot SE	BootLLCI	BootULCI
Low	−0.19	0.05	−0.295	−0.110
Medium	−0.13	0.03	−0.198	−0.069
High	−0.06	0.04	−0.135	0.005

Index of moderated mediation

Mediator	Index	SE	BootLLCI	BootULCI
Optimism	0.06	0.02	0.013	0.108

Note: Bias corrected confidence intervals (CIs) are set at 95% from the bootstrap analysis with 5000 bootstrap resamples. GI = general insecurity; EA = external attribution. SE = standard error; LLCI = lower level of confidence interval; ULCI = upper level of confidence interval.

as a mediator reveals the fact that optimism can be an alterable state, which can be harmed when an individual is constantly facing negative situations. Previous study has investigated optimism as a mediator in the relationship between pain and quality of life (Wong & Fielding, 2007). We borrow their perspective and propose that optimism can also play a mediating role to explain the mechanism of the relationship between general insecurity and mental health. This can be explained from the perspective of social resources (Carver et al., 2010; Donder et al., 2012; Segerstrom, 2007). Social resources would be consumed under insecure circumstances, and people would be less able to develop and maintain social networks, which is harmful for optimism, especially for resource-poor people.

Secondly, it is crucial to investigate how to protect individuals from being harmed by insecurity. We tested external attribution as an effective moderator which could even eliminate the impact of general insecurity on mental health through optimism. External attribution indicates a tendency that people attribute 'the cause of negative situations comes from someone or something else' (Sanjuán & Magallares, 2014, p. 444). Based on the COR theory, psychological resources would be consumed under negative situations (Hobfoll, 1989). In this case, external attribution as a cognitive strategy can be used to attribute the negative consequences to external factors, and psychological resources can be preserved. As a result, external attribution helps reducing harming effect of insecurity on optimism, and on mental health consequently.

5.1. Limitations

3(ecent4ns)]Tj/3101T8c20.38.3050Td001220128(20)Tj/1101T8cTde0v220m

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