

Hope as an emotion of expectancy: first assessment results

Hoffnung als Erwartungsemotion: erste Befunde zur Messung

Abstract

Theoretical background: Based on deficiencies of present conceptions of hope, an appraisal model is proposed as an alternative approach, in which hope is defined as the expectancy that a possible event, which a person rates positively, will occur in the future. The event depends both on situational and internal factors. This model differentiates between a subjective probability of occurrence and a subjective probability of affiliation. The first refers to a person's estimation of the probability that a positive event can occur in general (e.g. the chances of recovering from a life-threatening illness); the second refers to the estimated probability that he/she belongs to those, for which the positive outcome is likely.

Objective: The present contribution is a first validation of the appraisal model of hope.

Methods: On a sample of prisoners (N=172) the degree of hope never to be incarcerated again after serving the present sentence was tested. Furthermore, personality dimensions, psychological distress, perceived social support and features of childhood delinquency were assessed using questionnaires.

Results: As expected, the results indicate that both probability-estimations are largely independent of each other and were predicted by different factors (such as duration of arrest, anxiety, social support, or childhood delinquency).

Keywords: hope, expectation, appraisal-theory, assessment, prisoners

Zusammenfassung

Theoretischer Hintergrund: Basierend auf Defiziten bisheriger Konzeptualisierungsversuche des Konstruktes Hoffnung wird hier ein bewertungstheoretisches Hoffnungskonzept als Alternative vorgeschlagen, in dem Hoffnung als die Erwartung definiert wird, dass ein mögliches Ereignisses, das eine Person positiv bewertet, in der Zukunft stattfinden wird. Das Ereignis hängt dabei sowohl von situativen als auch internalen Faktoren ab. Im Modell wird dabei zwischen einer subjektiven Eintrittswahrscheinlichkeit (Einschätzung der Wahrscheinlichkeit, dass ein bestimmtes positives Ereignis generell eintreten kann) und einer Zugehörigkeitswahrscheinlichkeit (Einschätzung der Wahrscheinlichkeit, dass ein solches Ereignis für die Person eintritt) unterschieden.

Zielsetzung: Der vorliegende Beitrag stellt eine erste Validierung des Erwartungsmodells der Hoffnung vor.

Methoden: In eine Stichprobe von Strafgefangenen (N=172) wurde das Ausmaß der Hoffnung, nach Verbüßung der gegenwärtigen Haftstrafe nie mehr erneut inhaftiert zu werden, gemessen. Weiterhin wurden Persönlichkeitsmerkmale, psychische Belastung, wahrgenommene soziale Unterstützung und Merkmale der kindlichen Delinquenz über Fragebogenverfahren erfasst.

Ergebnisse: Wie erwartet zeigen die Ergebnisse, dass beide Wahrscheinlichkeitseinschätzungen voneinander weitgehend unabhängig sind und zudem von unterschiedlichen Faktoren vorhergesagt werden (wie

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Dauer der Haftstrafe, Ängstlichkeit, soziale Unterstützung oder kindliche Delinquenz).

Schlüsselwörter: Hoffnung, Erwartung, Bewertungstheorie, Messung, Strafgefängene

Introduction

In the past decade considerable efforts have been undertaken to measure hope. Different types of measurements have been established and utilized, e.g. the Snyder Hope Scale (HS) [37], [40], the Hope Index [45], [46], [47], the Nowotny Hope Scale (NS) [34] or the Herth Hope Scale (HHS) [22], [23]. Other ways of measuring hope using content analytic methods were presented by Gottschalk [18], [19] and Hinds [25] some years earlier.

These different attempts at measuring hope are based on various theoretical approaches, that implicate contrary assumptions. In recent years, only Snyder's hope theory [38], [42], [43] seems to be referred to in empirically oriented articles. In this paper, we will briefly consider the pros and cons of the current assessment methods and underlying theoretical assumptions. Based on these considerations, an appraisal model of hope, described in detail elsewhere [21] will be proposed. Following this approach, we distinguish between two appraisals: the probability of occurrence and the probability of affiliation concerning a specific object. First results from a derived object-specific measure of hope are presented.

Theoretical Concepts

Most researchers have emphasized that hope consists of the expectancy that something desired will happen and assume that hope arises when something threatening occurs [14], [24], [32], [43], [49]. The elaboration of this general description, however, has led to different concepts. Based on Stotland's approach [49] the subjective degree of probability of the wished event corresponds to the degree of hope. Hereby the concept of hope is imbedded in motivational theories: hope refers only to goals that are attainable by the hoping person him/herself. Similar to this motivational aspect is Snyder's theory of hope [39], [42], [43]. Snyder et al. [37] define hope "as a cognitive set that is based on a reciprocally derived sense of successful (a) agency (goal-directed determination) and (b) pathways (planning of ways to meet goals)" (p. 571). In such definitions, hope can be understood as the sum of intrinsic motivation, personal self-efficacy and outcome expectancy. This hope theory excludes objects that are solely dependent on external factors (such as recovering from chronic illness). Aside from the fact that such a narrow interpretation of hope varies from the general semantic understanding of hope, such a concept is not applicable to specific problems such as research regarding how people cope with chronic illness. Further-

more, hope is seen as a dispositional concept, which stays stable across different situations and over time. The Hope Scale [37], [41] is the instrument most often employed to measure hope (e.g. [9], [11]). It consists of 12 items (four agency, four pathways and four fillers). Evidence for its validity is provided by negative correlation with the Hopelessness Scale [3], [26], [37] and with the Beck Depression Inventory [2], [35]. We agree with Schwarzer [36] in assuming that the HS assesses the subjective conviction of self-cause and of different ways of action. But that hardly differs from generalised expectancies of competence and consequence. In fact there is a noticeable correlation between self-efficacy and the Hope Scale [31].

A comparison of previous concepts leads to the following contradictions and unresolved problems, respectively:

1. The subjective probability of occurrence has a different meaning in the various concepts described. For some approaches a medium probability of occurrence (50%) is characteristic of hope [1]. In other approaches, the probability of occurrence itself corresponds to the degree of hope [49].
2. The high retest-reliability of several instruments to measure hope indicates a trait concept. This differs from the view of hope as an emotional state and also from the common understanding of hope. These instruments are, therefore, perhaps better suited to measure "optimism" rather than hope.
3. The different concepts of hope are contradictory with regard to the dependence on internal vs. external factors [8], [43].
4. Some concepts do not sufficiently demarcate hope from self-efficacy [43].
5. Hope, on one hand, is assumed to be associated with threatening situations, while on the other hand is being assessed in a general manner without any specification of a situation, i.e. decontextualized.

An Appraisal Model of Hope

What follows is an appraisal model of hope that takes into account the above mentioned weaknesses and contradictions [21]. We firstly wish to make a distinction between hopefulness as a trait (similar to optimism) and hope as an emotional state. In the following model we will be referring to the latter. Cognitive theories of emotion emphasize that the formation, quality and intensity of an emotion are based on exact appraisals [7]. Specific emotions can, therefore, be defined by a particular appraisal. In the case of hope it is a matter of expectancies [5] arising in situations in which important goals seem to be blocked [4], [27], but for which a positive development

is, nevertheless, possible. *Therefore, hope can be defined as the expectancy that a positively rated event is likely to occur in the future. The event depends both on situational and internal factors.* Hence, hope can only arise if a norm is threatened that is relevant for self-worth (like e.g. health).

The following example will illustrate the problem of existing theories of hope, as well as explain the appraisal model: A person suffering from a life-threatening illness firmly believes in his physician's capability of curing him. At the same time he states that the likelihood of such a recovery is very small. Based on general understanding, we would call this person very hopeful. In the sense of Averill it is not a question of hope, but rather of "wish" or "illusion" [1]. Using Snyder's theory [43] this person does not hope, because the positive event (the recovery) depends solely on external factors (the ability of the physicians, possibilities of medical treatment etc.). In the appraisal model of hope the positive event can be influenced by both internal and external factors. The fixation of the probability of occurrence on 50% is rejected as well. In the present concept, this subjective probability of occurrence is only one part of the hope process. The other crucial parameter is the so-called *probability of affiliation*. It is assumed that a person will first rate to what extent a positive event is likely to occur or to what extent a negative event may be avoided (*subjective probability of occurrence*). In a second step, this person tends to estimate to what extent he/she belongs to a fictitious sample of people to whom such events occur (*subjective probability of affiliation*). The more this person believes that he/she belongs to the "winners", the greater the sense of hope. The extent of hope consists of the degree of subjective probability of affiliation. The idea of conceptualizing a second level of probability is not new. Tolman [50] already used the term "confidence" referring to the degree of certainty concerning a formerly rated probability of occurrence. A fictitious person can estimate that a specific event will occur with a probability of 20%. At the same time this person believes that he/she belongs to this group with a high probability of 70% (cf. Figure 1). It should be emphasized that these different probabilities are not conditional probabilities. A person can maintain the subjective probability of affiliation, even if the subjective probability of occurrence changes.

The lower the subjective probability of occurrence, the greater the cognitive work that has to be done in order to achieve a high level of hope. We, therefore, decided to denote the difference between subjective probability of affiliation and subjective probability of occurrence as *work of hope* [27]. Breznitz [8] has shown how this work of hope can be accomplished: e.g. positive aspects of the situation could be emphasized and negative aspects ignored.

In the appraisal model presented, hope is defined as an emotional state developing on the basis of specific situational appraisals. The very high correlation ($r=.74$) between the Snyder's Hope Scale and the trait positive

affect [51] reported recently by Steed [48] indicates that hope has been conceptualized in a too general way.

It was our aim in the present study to examine the adequacy of the concept of hope described above. For this purpose, a sample had to be chosen within which two shared aspects could be expected: Firstly that the situation threatened subjective norms and secondly a commonly shared aim implying a high positive valence. In the present study, a sample of prisoners was selected. Being arrested threatens the subjective norm of living in freedom. After spending time in jail it can be assumed that not being arrested again becomes a positive value. This sample was suitable for the purpose of measuring the hope of not being arrested again.

Generally, it is assumed that the two levels of hope are independent of each other (Hypothesis 1). In reference to the selected specific object of hope (never to be arrested again) ancillary considerations are made. It is assumed that the appraisal of the subjective probability of occurrence depends on multiple factors such as general opinions, beliefs and individual experiences. This is why it is hypothesized that neither personality traits nor factors such as psychological distress or social support can predict the degree of the subjective probability of occurrence (Hypothesis 2a). The subjective probability of affiliation relates to the actual degree of hope. Although no study has focused on the hope of never being arrested again, specific assumptions based on a general psychological understanding of the jail situation can be made. On one hand, it can be presumed that psychological distress (anxiety, depression) can negatively affect the degree of hope (Hypothesis 2b), because of modified information processing in stressful states of mind. On the other hand, the social support experienced *before* being arrested should increase the degree of hope, because of the possibility having a social network as a resource after the sentence has been carried out (Hypothesis 2c). Even though it is assumed that the degree of hope is primarily independent of personality traits, in this specific case, it is presumed that the degree of hope can be partly predicted by agreeableness (Hypothesis 2d). Because constructs such as "conflict, cooperation and kindness are part and parcel of this construct" [12], the agreeableness dimension is probably the one most concerned with interpersonal relationships [20]. Finally, we assume that personal childhood delinquency predicts the degree of hope in a negative way (Hypothesis 2e). This assumption is not only made, because conduct problems during childhood are among the best predictors of future offences and the development of a criminal career [15], [33], but also because of personal learning experiences. The subjects, through their delinquent behavior during childhood, know that they have a tendency to break the law and that it is more difficult for them to observe the law.

These hypotheses are made in regard to hope in this specific context. It is possible that, in other settings, hope could dependent on a completely different set of factors. The hypothesis that the level of hope is an independent parameter is viewed as a general characteristic, while

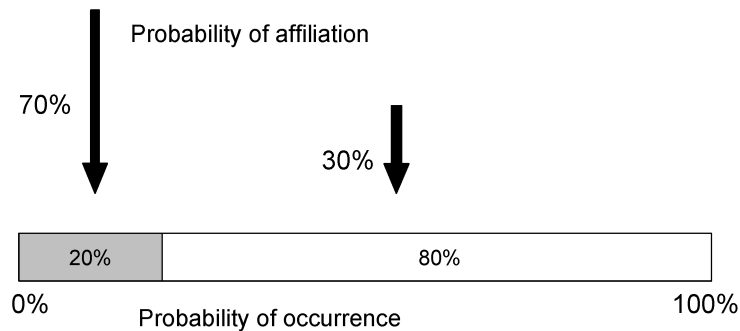


Figure 1: Example of the two levels of hope during the process of hope

the other hypotheses are related to the specific experience of being in detention.

Methods

Participants

The participants in this study were 172 detained offenders from four prisons in Germany (Saxony). Responses from subjects who obviously falsified their answers (e.g., accidental responses) or those who had more than 10 missing data were excluded ($n=5$), leading to a final sample of 167 male ($n=152$) and female ($n=15$) detainees aged between 25 and 35 years ($M=29.1$ years, $SD=3.0$). Of the sample, 29.9% ($n=50$) were arrested because of property offences (e.g., embezzlement, larceny, blackmail), 28.1% ($n=47$) because of violent crime (e.g., bodily harm, murder), 22.2% ($n=37$) because of motoring offences (e.g., driving while intoxicated, driving without driver's license), 6% ($n=10$) because of other offences, such as e.g. sex offences or infringements of controlled substance legislation (missing information concerning offence: $n=23$). Sentence length ranged from 1 month to 15 years ($M=2.5$ years, $SD=2.9$). 50.3% ($n=84$) found themselves in detention for the first time. The design of the study was approved by the interior ministry of Saxony. Furthermore, the interior ministry gave the permission to conduct the study in four prisons.

Measures

In addition to demographic data (e.g., age, gender, secondary school qualifications) the following variables were assessed:

Hope

We assessed the degree of hope not to be arrested again after the present sentence had been served. According to our conceptualization described above, we differentiated between the subjective probability of occurrence and the subjective probability of affiliation. Therefore, the subjects were initially asked to estimate what percentage of other inmates would not be arrested again after the present sentence had been served (probability of occur-

rence). Furthermore, they were asked to estimate the probability of belonging to those who would never be arrested again (probability of affiliation). Visual analogue scales ranging from 0% to 100% were given as response options for both questions (Figure 2).

Personality dimensions

The Big-Five dimensions "Neuroticism", "Extraversion", "Openness to Experience", "Agreeableness", and "Conscientiousness" were assessed using a short form of the NEO Five Factor Inventory (NEO-FFI) by Costa & McCrae [10]. The German short form "NEO-FFI-30", developed by Körner et al. [28] on a representative population sample ($N=1908$), consists of 30 items (6 items per scale). For each item subjects have to indicate the extent of agreement with ratings in five-level Likert format. According to Körner et al. [28] the five short-scales achieve a high internal consistency ($\alpha=.67-.81$) and are highly correlated with the original NEO-FFI scales ($r=.88-.93$). The reliability in the present study ranges from $\alpha=.61$ to $\alpha=.78$.

Psychological Distress

To measure psychological distress, the subscales "somatization", "depression", "anxiety", and "anger-hostility" from the Symptom-Checklist SCL-90 R by Derogatis [13] were administered. The four subscales consist of 41 items, which describe physical and psychological symptoms (e.g. "headaches", "feelings of loneliness"). Subjects had to indicate the frequency of the symptoms within the past seven days on a five-point Likert scale. We used the German version of the SCL-90 R by Franke [16] who reported a satisfactory level of internal consistency ($\alpha=.70-.89$). In the present sample the internal reliabilities were estimated to be $\alpha=.78-.88$.

Childhood delinquency

Delinquency during childhood was measured using 10 items of the subscale "Conduct Problems" from the Self-Appraisal Questionnaire (SAQ) by Loza [29], [30]. The SAQ was developed to cover the predominant predictive areas of violent and nonviolent offender recidivism. The 10 items describe delinquent behavior (e.g. "stealing",

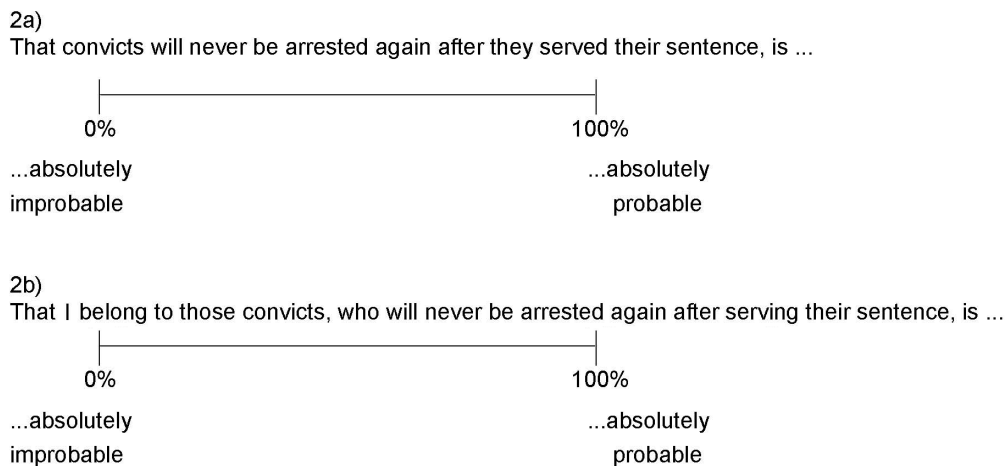


Figure 2: Visual analogue scales for measuring hope never to be arrested again

“damaging foreign property”), and subjects, using yes or no responses, indicated whether the behavior was demonstrated before the age of 15. Using the complete 18-item scale, Loza et al. [29] reported the internal consistency to be $\alpha=.87$; the German translation and abridgement of the scale reached a consistency of $\alpha=.79$ in the present sample.

Social support

To measure the social support that offenders obtained before imprisonment, the 22-item short form of the Social Support Questionnaire (SOZU-K-22) [44] was employed. This widely used German self-report questionnaire consists of 22 items (e.g. “I don’t know anybody who wants to go out with me”, “I often see myself as an outsider”) with response options in seven-point Likert-format where only the extreme points are expressed (“exactly true”, “not true”). Based on a representative sample of the German population, Fydrich et al. [17] reported an internal reliability of $\alpha=.91$ for the short form. In the present study, the SOZU-K-22 was modified insofar as the subjects were firstly requested to respond with respect to the time *before* imprisonment after which the statements were worded in the past tense. In the present study we found that the internal reliability for the modified version was also $\alpha=.91$.

Subjects were also requested to give some *information about the prison sentence*. They had to indicate the length of the prison sentence and the time they had already spent in custody. Furthermore, subjects were asked if this was their first prison sentence.

Procedures

Subjects between the ages of 25 and 35 years were asked to volunteer in the study via notice boards or via inquiries made by social workers and psychologists working in the prisons. The inmates were promised a reward (€ 3) for their participation and they were assured of the confidentiality and anonymity of the data treatment. Of the 416 subjects invited to take part in the study, 172

participated. The subjects completed the questionnaires in groups with 6 to 10 persons during working time. In each examination trial, two research associates were present to administer the scales (including the instructions given in the original scales) with no time limits.

Results

Relation between the hope dimensions

The bivariate correlation between both hope dimensions (i.e. the estimation of the general probability that others would not be arrested again and the estimation of the probability of belonging to this group) was low at $r=0.18$ ($p<.05$, two-tailed). As shown in Figure 3, both dimensions can be expected to be widely independent (with a common variance of 3%).

Prediction of the hope dimensions

To predict both hope dimensions, a total of 14 variables were entered as predictors, including age, sentence length, and duration of arrest, social support, the four variables of psychological distress, the five personality variables, and childhood delinquency. For each hope dimension the analyses were conducted twofold: Firstly, we conducted a simple regression analysis using all of the predictor variables simultaneously. In order to determine a small set of variables sufficient to provide an acceptable proportion of variance accounted for, we subsequently used a stepwise procedure with backward selection of predictors. As can be seen in Table 1, only 14% of the variance of the estimated probability of occurrence could be accounted for by using all of the 14 variables. Only agreeableness was a significant predictor. This variable together with the duration of arrest accounts for 9% in the final model of the stepwise procedure. In contrast, the estimated probability of affiliation could be accounted for 36% when using all variables. As shown in Table 2, results of the stepwise procedure with only five predictors (anxiety, social support, neuroticism, agreeable-

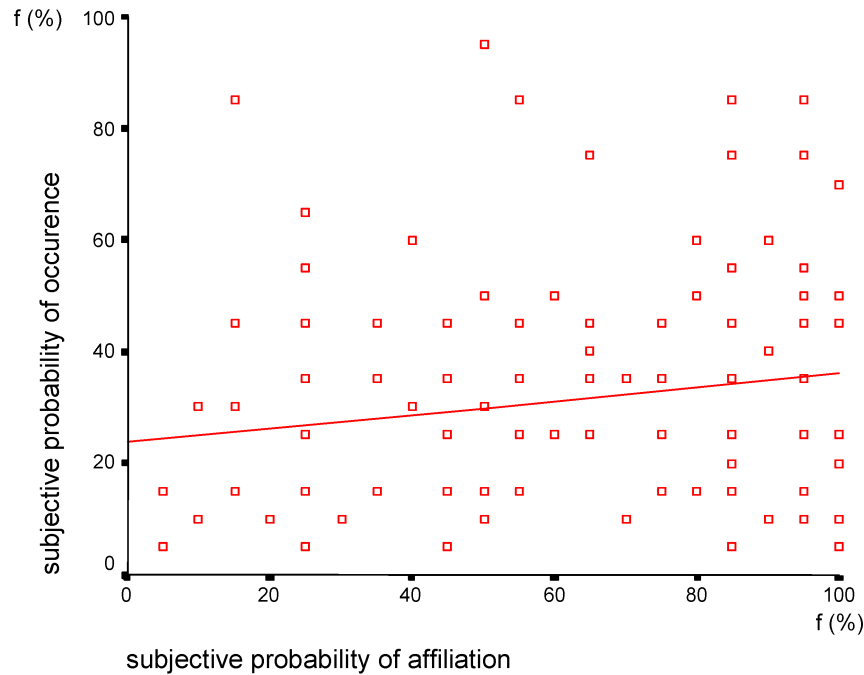


Figure 3: Scatter diagram of the hope-dimensions “subjective probability of occurrence” and “subjective probability of affiliation” (never to be arrested again)

Table 1: Results of simple and stepwise regression analyses for predicting the subjective probability of occurrence (never to be arrested again)

| | Simple regression analysis | | | | Stepwise regression analysis | | | |
|------------------------|----------------------------|---------|----------|----------|------------------------------|---------|----------|----------|
| | <i>b</i> | β | <i>T</i> | <i>p</i> | <i>b</i> | β | <i>T</i> | <i>p</i> |
| Age | -0.70 | -.11 | -1.20 | .231 | | | | |
| Sentence length | -0.00 | -.01 | -0.07 | .947 | | | | |
| Duration of arrest | -0.19 | -.17 | -1.29 | .200 | - 0.19 | -.19 | -2.23 | .028 |
| Psychological distress | | | | | | | | |
| Somatization | 2.28 | .07 | 0.55 | .583 | | | | |
| Depression | -0.77 | -.03 | -0.20 | .842 | | | | |
| Anxiety | 0.21 | .01 | 0.05 | .961 | | | | |
| Anger-hostility | 1.74 | .07 | 0.48 | .629 | | | | |
| Social support | 3.46 | .14 | 1.45 | .150 | | | | |
| Personality dimensions | | | | | | | | |
| Neuroticism | 1.88 | .08 | 0.72 | .471 | | | | |
| Extraversion | -4.81 | -.17 | -1.65 | .101 | | | | |
| Openness | -0.82 | -.03 | -0.33 | .742 | | | | |
| Agreeableness | 5.61 | .21 | 2.06 | .042 | 5.89 | .22 | 2.67 | .008 |
| Conscientiousness | 3.11 | .10 | 0.95 | .344 | | | | |
| Childhood delinquency | -0.09 | -.01 | -0.12 | .908 | | | | |

Note: Simple regression analysis: multiple $R=.38$, $R^2=.14$, adjusted $R^2=.04$, $F=1.42$, $df=14$, $p=.156$. Stepwise regression analyses: multiple $R=.30$, $R^2=.09$, corrected $R^2=.08$, $F=6.53$, $df=2$, $p=.002$.

Table 2: Results of simple and stepwise regression analyses for predicting the subjective probability of affiliation (never to be arrested again)

| | Simple regression analysis | | | | Stepwise regression analysis | | | |
|------------------------|----------------------------|---------|----------|----------|------------------------------|---------|----------|----------|
| | <i>b</i> | β | <i>T</i> | <i>p</i> | <i>b</i> | β | <i>T</i> | <i>p</i> |
| Age | - 0.54 | -.06 | -0.75 | .456 | | | | |
| Sentence length | 0.01 | .01 | 0.06 | .952 | | | | |
| Duration of arrest | -0.06 | -.04 | -0.35 | .730 | | | | |
| Psychosocial distress | | | | | | | | |
| Somatization | 5.18 | .10 | 1.01 | .313 | | | | |
| Depression | 1.29 | .04 | 0.27 | .786 | | | | |
| Anxiety | -9.12 | -.24 | -1.77 | .079 | -7.48 | -.19 | -2.20 | .029 |
| Anger-hostility | -1.96 | -.06 | -0.44 | .659 | | | | |
| Social support | 5.15 | .15 | 1.75 | .083 | 6.46 | .19 | 2.48 | .014 |
| Personality dimensions | | | | | | | | |
| Neuroticism | 9.81 | .31 | 3.06 | .003 | 10.34 | .33 | 3.57 | <.001 |
| Extraversion | 4.64 | .11 | 1.29 | .198 | | | | |
| Openness | -0.02 | .00 | -0.01 | .996 | | | | |
| Agreeableness | 2.38 | .06 | 0.71 | .482 | 16.94 | .36 | 4.75 | <.001 |
| Conscientiousness | 14.99 | .32 | 3.72 | .000 | | | | |
| Childhood delinquency | -3.21 | -.32 | -3.51 | .001 | -3.38 | -.34 | -4.59 | <.001 |

Note: Simple regression analysis: multiple $R=.60$, $R^2=.36$, adjusted $R^2=.29$, $F=4.83$, $df=14$, $p<.001$. Stepwise regression analyses: multiple $R=.58$, $R^2=.34$, corrected $R^2=.31$, $F=13.14$, $df=5$, $p<.001$.

ness, and childhood delinquency) are equally successful in predicting this criterion with an accounted variance of 34%.

Discussion

The purpose of this study was to examine the usefulness of the presented appraisal model of hope. The main focus was set on the postulated independence of the two levels of hope. This hypothesis could be supported, suggesting the necessity to assess both kinds of probability ratings. Subjects differentiated between a general probability of occurrence pertaining to a self-worth relevant and positive event on one hand, and a subjective probability with which this event may be the case for them on the other hand. We assumed, that Averill's hope criterion of 50% regarding the probability of occurrence could be generated by a blending of the two levels of hope. Indeed our assumption is corroborated not only by the statistical independence, but also by calculating the overall mean value of $M=48.2\%$ ($SD=18.40$) from the two levels of hope.

The implication arising from the fact that both levels of hope can be predicted by different variables is twofold. Firstly, it further supports the conceptual independence of the two levels of hope, and, secondly, it provides evidence for the validity of the concept due to the type of predictor variables. As expected, only 8% of variance of the probability of occurrence was accounted for by the selected predictor variables compared to an accounted variance of 31% in relation to the subjective probability of occurrence. The corresponding hypotheses can be

partially sustained. Anxiety, social support (experienced before being arrested), agreeableness and childhood delinquency provide a substantial contribution to the explained variance of the subjective probability of affiliation. Admittedly, two findings are contrary to the postulated hypotheses. The first is that depression does not relate to the degree of hope. The other is that neuroticism predicts the degree of hope positively. It may come as a surprise that the hope of never being arrested again is unrelated to depression, yet similar findings were presented by Bisno et al. [6]. In their study hope for a positive therapy outcome (assessed by a questionnaire the authors developed themselves) was likewise unrelated to depression (assessed via BDI, [2]). Further examination is needed to decide whether this lack of association is due to deficiencies in the assessment method. The predictive value of neuroticism can only be explained ex post facto and requires the generation of novel hypotheses that will need further testing. One possibility is that neuroticism goes hand in hand with an overestimation of one's own abilities and skills, which, in turn, increases the degree of hope.

In summary the appraisal model presented here, defines hope as an emotional state developing on the basis of *specific* situational appraisals. Until now most authors, in their concepts, viewed hope as a trait. However, if you wish to assess the degree of hope, you have to refer to the specific object or event, respectively. This is important, especially for research in the area of psycho-social medicine. With regard to patients suffering from a life-threatening illness, it is not possible to assess a general sense of hope-specific assessment of the hope for recov-

ery is required. In doing so, it is sometimes necessary to differentiate between different hope-sources (e.g. different kinds of therapy). However, it is not possible to measure such a differentiation when applying a general trait-model of hope.

Two main issues need to be addressed in future studies. Firstly, the presented appraisal model of hope needs to be compared to established questionnaires (like the HS) in order to establish whether the appraisal model provides a substantial gain in explaining hope related processes. Secondly, studies need to be carried out to examine whether the presented method of measuring hope is indeed as state dependent as postulated here. For this purpose experimental designs with mood manipulations should be provided.

Notes

Conflicts of interest

None declared.

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