

Gelotophobia and age: Do disposition towards ridicule and being laughed at predict coping with age-related vulnerabilities?

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Abstract

The present study examines how dispositions to ridicule and being laughed at (gelotophobic, gelotophilic or katagelastistic) assist, or hinder, coping with age-related problems or vulnerabilities. A sample of 131 adult participants completed the PhoPhiKat-30, the PPK-Vulnerability Statement Comparison (PPK-VSC), and the Third Age Vulnerabilities Anxiety Survey (TAVAS). Results showed that the PhoPhiKat-30 is a reliable self-report instrument in its English language form. The dispositions to ridicule and being laughed at (as measured by the PhoPhiKat-30) together with education level and amount of worry about actual or potential problems predicted the nature of the response to the age-related vulnerabilities. People of low education, who generally fear being laughed at but who also ridicule others, and have not experienced many age-related vulnerabilities but worry about them, indicate that they would act gelotophobically when facing such problems. Gelotophilia, higher education and not experiencing worrying vulnerabilities are predictive of a tendency to make others laugh at ones problems. Katagelasticism, increased age, no education above compulsory schooling, and a higher number of problems encountered but not worried about relates to laughing at the misfortunes of others. The implications of the results for those interacting with older people are discussed.

Key words: age-related problems, gelotophobia, gelotophilia, katagelasticism, ridicule, life span

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Introduction

Humor repeatedly is assigned a positive role in aging. Bowling and Dieppe (2005) asked people over 50 what elements constituted successful aging. Among the most popular definitions was “having a sense of humor.” Based on elaborated longitudinal studies, Vaillant (2002) showed a positive relationship between humor and aging. He suggests that over time humor, being one of the more adaptive coping strategies, matures and as such “becomes a mechanism for healthy aging” (p. 62). Furthermore, he stated that humor “transforms pain into the ridiculous” (p. 63). Martin (2007) concluded that older people having “a greater breadth of life experience may enable them to have a generally more humorous outlook on life and an increased ability to use humor in coping with life stress” (pp. 267).

Nevertheless, it is important to take into account the multidimensionality of humor, as not all humor is the same (Ruch, 1996). Besides the positive, good-natured humor, which assists successful interactions in daily life (Nezlek & Derks, 2001) and helps coping with personal limitations, there are less positive types of humor, such as sarcasm, mockery, disparagement and ridicule. No one enjoys being on the receiving end of negative humor, but individual differences can be observed in the amount of dislike from the slight emotional discomfort of being the butt of a joke to having a pathological fear, namely, gelotophobia.

Gelotophobia and age

Gelotophobia is a comparatively new field in the literature. Therefore very little has been written about age-related changes. It has been proposed that gelotophobia emerges early in life and several stages have been postulated. According to Titze (2009) the nature of the early infant-caretaker relation lays the foundation for the later induction of the fear that may take place in childhood and adolescence (e.g., by traumatizing experiences of being laughed at by peers) or also later in adulthood (e.g., by bullying at the work place).

If, however, ridicule and bullying are the catalysts to the onset of the fear of being laughed at, could the downturn in ones abilities (both physical and mental), which are prone to be ridiculed from those more able, induce a surge of late onset gelotophobia? While no systematic study of age changes involving the elderly has been conducted, the existing data do not point to a decline (or increase) of gelotophobia with increasing age. Thus, it is expected that in a sample of elderly people gelotophobic tendencies will be found. In other words, they will hide embarrassing events from others in order not to be laughed at by them.

Age specific vulnerabilities

Proyer, Hempelmann and Ruch (2009) asked participants about the reasons they were laughed at during the past year. They found that embarrassing situations and doing some-

thing awkward or clumsy came out most frequent in a list of 102 derisible situations. Yet, although these things can refer to the infirm, this compilation was not age specific. No classification of age specific situations conducive to ridicule exists – neither for younger nor older people. However, age-related decline will not only lead to additional reasons for being ridiculed but also to other, more severe, consequences. Therefore looking at such age-related classifications may be instructive.

Draper (1994) identified fourteen problems that are connected to attempted suicide among the elderly. These fourteen problems are classified as vulnerabilities of old age and relate to: illness, isolation, depression, decline in physical health, grief, relationships, accommodation, financial, psychiatric, lack of control, social support, medication, sensory impairment and family conflicts. This classification of problem areas will serve as a basis for building a more comprehensive list of problematic life circumstances of older people that, by nature, might also be conducive to ridicule. Designing an instrument that incorporated these age specific vulnerabilities may enable older people to relate to areas of potential ridicule and this should be even more sensitive for those with the fear of being laughed at. However, gelotophobia is not the only disposition to being laughed at and ridicule and other dimensions should also be considered.

Gelotophilia and age

Gelotophiles experience joy from being laughed at (Ruch & Proyer, 2009a). They actively see an audience and have an inclination to use personal situations that could be embarrassing to elicit laughter of others. They will candidly recall misfortunes and mishaps and situations in which they behaved in a stupid way. Proyer, Hempelmann and Ruch (2009) found that there is a relation between gelotophilia and age-related reasons for being laughed at. The example they gave was that gelotophiles show “behavior that is interpreted as improper for one’s age by others” (p. 225).

Having this ability may mean that they do not take life so seriously, that they can breeze through troubles and deflect the impact of shame, thus not be affected negatively by such situations. The question then is, will this help in later life, when vulnerabilities do occur? Can older gelotophiles cope better and not be concerned about the decline since they will have more things to use as ‘props’ for their funny personal stories?

Katagelasticism and age

Katagelasticists actively seek out situations to ridicule. They enjoy moments when they can laugh at others. They take advantage of situations, speaking out, even inappropriately and drawing attention to others whom they feel are acting in a ridiculous way, going beyond what would be considered acceptable norms for such behavior (Ruch & Proyer, 2009a). Katagelasticism is an unrefined humor disposition and may lead the katagelasticist into conflicts. Ruch and Proyer (2009a, p. 189) describe them as being as “somewhat antisocial” with a “rude component”.

Previous studies (Proyer, Hempelmann & Ruch, 2009; Proyer & Ruch, 2010, this issue; Renner & Heydasch, 2010, this issue; Ruch, Beermann & Proyer, 2009; Ruch & Proyer, 2009a) indicated a gender difference, with katagelasticism being higher among males than females. Katagelasticism correlates negatively with age, making it pertinent to this study.

Vaillant (2002) points out that humor matures. Thus over time, katagelasticists may learn better ways to interact. It could also be that when they are facing their own personal problems they become more sensitive, and so learn not to ridicule or mock others as they develop empathy for those who have similar problems. Therefore a decline should be expected with old age.

Aim of the present study

Using the fourteen age-related vulnerabilities specific to the elderly sample, the aim of the study is to see whether or not gelotophobia, gelotophilia and katagelasticism predict how people deal with these potential sources of ridicule. The fourteen specifically representative domains will be recognized by older people, if not by experiencing them personally, then by witnessing them among their peers.

In order to assure that the problems are prevalent, the age of the participants should be 60 and older. However, a few younger participants will assure variability in the degree to which they are affected by the vulnerabilities. Ideally, 50 % of the sample should encounter the problems. This will allow examining whether people affected by a problem respond differently from those not confronted with that vulnerability.

Not everyone who encounters a problem will worry about it. This might be particularly true for the gelotophiles, who want to share these mishaps with others. Conversely, gelotophobes might be the people who worry about a problem that they see in others, or know about, without actually experiencing it themselves. Thus, elderly people can be asked if they fear or laugh at something that they never actually experienced but do worry about. It will be interesting to see what is more important for gelotophobes, gelotophiles and katagelasticists: the actual presence (vs. absence) of a problem, or the perceived threat; i.e., whether or not people worry about it. Furthermore, the level of education is expected to have a negative correlation with katagelasticism due to its unrefined nature.

Finally, and most importantly, a regression analysis will determine the weight of different sets of predictors of typical response of older people to such vulnerabilities. It is assumed that the general dispositions to ridicule and being laughed at (as measures by the PhoPhiKat-30) extend to how one copes with age-related vulnerabilities and are the best predictors. It is also expected, however, that life circumstances (whether one has already encountered such problems or not, and whether they lead to worry or not) as well as the above-mentioned socio-demographic variables will improve the overall prediction.

Method

Participants

The sample consisted of adult ($N = 148$) respondents. Participants provide basic demographic information, including nationality (74 % British, rest American, Australian, Canadian, Irish, New Zealand) and native language (all native English speaking), age (range 30-92 years, $M = 64.3$, $SD = 9.8$), gender (females 86 and 62 males), marital status (64 % of the participants were married) and education level (age of leaving education; starting with age 14; median of 16 years; 51 % holding at least a first degree). Some participants did not fill in all scales or were too young. So a final sample was derived consisting of 131 (57 % females, age: $M = 64.47$; $SD = 9.41$) for the analysis.

Measures

The *PhoPhiKat-30* (Ruch & Proyer, 2009a) is a 30 item questionnaire for the measurement of the degree of *gelotophobia* (sample item: “When they laugh in my presence I get suspicious”), *gelotophilia* (“I seek situations in everyday life, in which I can make other people laugh at me”), and *katagelasticism* (“I like to compromise other persons and enjoy when they get laughed at”). Each scale comprises 10 items in a four-point rating-answer format (1= “strongly disagree” to 4= “strongly agree”). All items are positively keyed. As this was the first application of the PhoPhiKat-30 in the English culture a psychometric analysis was undertaken first. The medians of the corrected item-total correlations (CITC) were .48, .58, and .54, and Cronbach’s Alpha were .78, .79, and .78, for the gelotophobia, gelotophilia, and katagelasticism scales, respectively. The means indicated that gelotophilia was most strongly present ($M = 2.58$; $SD = 0.58$) in the sample, followed by gelotophobia ($M = 1.99$; $SD = 0.52$) and katagelasticism ($M = 1.88$; $SD = 0.54$). Gelotophobia and katagelasticism were uncorrelated ($r = .09$). Gelotophilia correlated negatively with gelotophobia ($r = -.26$) and positively with katagelasticism ($r = .38$). About 20 % of the participants exceeded a mean score ≥ 2.5 in gelotophobia and, thus, could be classified with at least a slight fear of being laughed at (see Ruch & Proyer, 2008).

The *PPK vulnerability statement comparison* (PPK-VSC; Platt, 2009) measures how strongly people are inclined to make gelotophobic, gelotophilic and katagelasticistic statements when given specific situations where age-related vulnerabilities might be the cause of laughter and ridicule. In order to ensure correct representation, the situations utilize fourteen known vulnerabilities for older individuals provided by Draper (1996). For example, the statement for the vulnerability *isolation* was “The weather has been particularly cold so you have not ventured outside. This means you have not seen or spoken to anyone for days. You are feeling really miserable and lonely”. Three response statements are provided, each representing one of the prototypical laughter styles, namely the gelotophobic (“People would laugh at me for feeling miserable and lonely, so I prefer not to tell anyone”), gelotophilic (“I will enjoy telling someone how miserable and lonely

I felt and make them laugh at my story”) and katagelastistic (“I would not get miserable or lonely. I would laugh at people who feel that way just because they stayed at home”). Participants were asked to rate how close their own answer would be compared to each of the three statements on a 6-point rating scale (0 = not at all; 5 = very like my answer). The position of the three answers was counter balanced. The answer scores were averaged across the fourteen situations to give a total score for each of the three laughter related-habits. The scales had acceptable reliability (Pho: .84, Phi: .86, and Kat: .74) and also the median of the corrected item-total correlations was acceptable (Pho: .45; Phi: .52; Kat: .38). Gelotophilic answers were most strongly present ($M = 3.35$; $SD = 0.73$), followed by gelotophobic ($M = 1.96$; $SD = 0.67$) and katagelastistic answers ($M = 1.47$; $SD = 0.43$). Katagelastistic answers were correlated with both gelotophobic ($r = .26$) and gelotophilic ($r = .21$) answers, but the latter two were uncorrelated.

The *Third Age Vulnerabilities Anxiety Survey* (TAVAS; Platt, 2009) assesses the stance of individuals towards age-related vulnerabilities. It surveys each of fourteen vulnerabilities that participants have: not experienced and not worried about (=A1), experienced but not worried about (=A2), not experienced but worry about (=A3) and experienced and worry about (=A4). The vulnerabilities used were: illness, isolation, depression, decline in physical health, grief, relationships, accommodation, financial, psychiatric, lack of control, social support, medication, sensory impairment and family conflicts (for an overview see Draper, 1996). Frequencies for each of the four answer categories were derived as well as the total score for “experienced” and for “worried”.

Procedure

Each respondent completed online self-report measures on a data collection website between May and July 2009. Participation was elicited by placing advertisements on forums specifically targeted to the over 60’s. Letters with the advertisement were sent to residential homes and retirement communities across the United Kingdom. As well as this, every participant was asked to forward the questionnaire website URL to people they knew who met the criteria in order to obtain a ‘snowball’ effect. Each question was set in a forced answer option on the website, meaning participants could not skip a question and move on to the next without first answering. They could, however, log out and complete the process at a later time. Multiple questionnaires could not be answered from one computer as once the survey was completed any further access was disabled. Though Internet-based data collection is controversially discussed from a scientific point of view (e.g., because of the danger of sampling biases) there is evidence that it is comparable to traditional methods of data collection (e.g., Gosling, Vazire, Srivasta, & John, 2004). Feedback from the study was sent to all participants willing to leave an optional contact address.

Results

For both PhoPhiKat and PPK-VSC the correlations between these six scores and the socio-demographic data (age, gender, education level, relationship status, etc.) were computed and presented in Table 1.

Table 1:
Descriptive statistics, psychometric results, and correlations with sociodemographic data for the scales of the PhoPhiKat-30 and PPK-VSC

	Sex	Age	Relation	Year in Ed	Further Ed	Degree
<i>PhoPhiKat</i>						
Pho	-.10	.04	-.15	-.12	-.09	-.14
Phi	-.09	.09	.15	-.07	.08	-.06
Kat	-.34*	.11	.14	-.19*	.01	-.06
<i>PPK-VSC</i>						
Pho	-.15	.15	-.02	-.28*	-.15	-.08
Phi	.01	.04	.11	.13	.10	.17
Kat	-.09	.32*	.15	-.22*	-.23*	-.09

Note. $N=130-131$; *Age* = correlation with age, *Sex* = correlation with gender (1 = males, 2 females), *Relation* = correlation with relationship status (1 = single; 2 = in a relationship); *Year in Ed* = Years in education; *Further Ed* = Further education (1 = no; 2 = yes); *Degree* (1 = no; 2 = yes).

* $p < .05$.

Table 1 shows that the analysis of the sociodemographic variables yielded several expected findings. Katagelasticism in the PhoPhiKat-30 (but not the PPK-VSC) was higher in males than females. Age did not have an impact on the PhoPhiKat-30 scales (due to the restricted age range leaving out the high scoring adolescents) but the probability of katagelastistic answers in the vulnerability-related situations increased with age. The years of education correlated negatively with frequency of geotophobic answers in the PPK-VSC and also negatively with katagelasticism in both instruments. Lacking further education went along with laughing at others who were embarrassed due to the age-related vulnerabilities. The correlations with relationship status or obtaining a degree failed to be significant.

Occurrence and subjective evaluation of the vulnerabilities and their relationship with laughter related habits. The four response options to the fourteen vulnerabilities in the *Third Age Vulnerabilities Anxiety Survey* (TAVAS) were examined next. Their relative frequency was computed. Overall, the most frequent option chosen was that people did experience it but did not worry about it (35.5 %) followed by not having experienced and not worry (33.3 %). Worries in general were less frequent. In 21.6 % of the cases someone experienced a problem and worried and in 9.7 % people worried about something that is yet to come. The relative frequencies of the four answers are presented in Table 2.

Table 2:

Percentage of individuals having or not having experienced the vulnerabilities and whether or not they worry about it

Type of vulnerability	A1	A2	A3	A4
Illness	7.6	51.1	9.2	32.1
Isolation	38.2	38.2	8.4	15.3
Depression	41.2	29.8	6.1	22.9
Decline in physical health	16.8	35.1	19.1	29.0
Grief	6.1	55.7	6.1	32.1
Relationships	12.2	54.2	5.3	28.2
Accommodation	51.1	28.2	7.6	13.0
Financial	29.8	32.8	4.6	32.8
Psychiatric	70.2	12.2	8.4	9.2
Lack of control	50.4	22.1	14.5	13.0
Social support	55.0	25.2	11.5	8.4
Medication	24.4	55.7	3.1	16.8
Sensory impairment	39.7	23.7	22.1	14.5
Family conflicts	22.9	32.8	9.2	35.1

Note. $N = 131$. A1 = I have never experienced and I do not worry about it, A2 = I have experienced but I never worry about it; A3 = I have never experienced but I do worry about it; A4 = I have experienced and I do worry about it.

Table 2 shows that sensory impairment (22.1 %) and decline in physical health (19.1 %) were the problems that have not been experienced yet but that people worry about the most. Family conflicts (35.1 %), financial problems (32.8 %) were the vulnerabilities that participants worried about and experienced most frequently. Grief and medication (both 55.7 %) were most frequently experienced and not worried about. Psychiatric problems (70.2 %) and lacking social support (55.0 %) were most prevalent in the category of not experienced and not causing worries.

The total vulnerabilities scores were correlated with the total scores of the PhoPhiKat-30 and PPK-VSC and are presented in Table 3.

Table 3 shows that gelotophobia correlated positively with worrying about the vulnerabilities irrespective of whether one did experience it or not, and negatively with the number of vulnerabilities where people are not worrying (whether or not they experienced them). In fact, the total number of vulnerabilities one worries about increased with the fear of being laughed at, and the total number of problems experienced was uncorrelated with gelotophobia. Gelotophilia only correlated with the number of problems experienced and not worried about. Gelotophiles did report more problems that were not worrisome. Katagelasticism did not correspond with anything.

Table 3:
Intercorrelations between the scales of the PhoPhiKat-30 and the three responses to the situations and the responses to the vulnerabilities

Type of Response	PhoPhiKat-30			PPK-VSC		
	Pho	Phi	Kat	Pho	Phi	Kat
A1	-.25*	-.02	.06	-.05	-.06	.17
A2	-.16	.20*	-.06	-.14	-.02	.12
A3	.21*	-.11	-.01	.22*	.11	-.12
A4	.26*	-.10	-.02	.04	.01	-.21*
Sum Worry	.33*	-.14	-.01	.15	.07	-.23*
Sum Experience	.12	.09	-.07	-.08	-.01	-.10

Note. $N = 131$. A1 = I have never experienced and I do not worry about it; A2 = I have experienced but I never worry about it; A3 = I have never experienced but I do worry about it; A4 = I have experienced and I do worry about it. Sum Worry = A3+A4; Sum Experience = A2+A4.

* $p < .05$.

More importantly, the amount of experience with vulnerabilities and their worry potential predicts the type of responses in the PPK-VSC. Worrying a lot about age-related vulnerabilities that one had *not* experienced predicted avoiding talking about the events to avoid being laughed at. Gelotophobes worry about what they have not experienced yet. Finally, having experienced vulnerabilities that make one worry also went along with a low level of laughing at others who experience such problems. Conversely, katagelastistic answers emerge more often when one has encountered few such situations that made one worry (but this relationship failed to be significant).

Predicting gelotophobic, gelotophilic and katagelastistic answers. The intercorrelation among the three PhoPhiKat-30 scales and the responses in the situations (i.e., the PPK-VSC) were computed next. Most importantly, there was the expected positive correlation between the homologous scales. High scores in gelotophobia correlated positively with giving answers that reflect a fear of being laughed at when in situations representing vulnerabilities ($r = .45$). Likewise, gelotophilia predicted answers involving others laughing at one-self in challenging situations ($r = .46$). Finally, katagelastistics indicated that that they would laugh at people who were in situations when they have to deal with that problem ($r = .36$).

In order to understand the determinants of the three types of responses to the situations (PPK-VSC) stepwise multiple regression analyses were computed with the three PhoPhiKat-scales, the four vulnerability total scores (A1 to A4) and the sociodemographic variables (gender, age, years in education, further education, academic degree) as predictors. Four variables entered the equation (Pho: $\beta = .32$; Kat: $\beta = .24$; Years in education: $\beta = -.24$; Total events not experienced but causing worry: $\beta = .19$) and produced a multiple regression coefficient of .59; $F(4, 125) = 16.348, p < .05$. Three variables together predicted gelotophilic answers (Phi: $\beta = .49$; academic degree: $\beta = .19$; Total events not experienced but worry: $\beta = .16$) and together produced a multiple regression of .52; $F(3,$

127) = 15.974, $p < .05$. Finally, four variables entered the equation for katagelastistic answers (Kat: $\beta = .35$; Age: $\beta = .24$; Total events experienced but not worry: $\beta = .17$; further education: $\beta = -.17$) and yielded a multiple regression of .51; $F(4, 126) = 11.261$, $p < .05$.

Discussion

The present study examined how older people react to being laughed at when faced with potential ridicule due to age-related vulnerabilities and the main predictors of those problems. Although the vulnerabilities could be experienced by anyone at any age, they are predominantly problems that occur with advanced age. This decline in quality of life is inevitable and cannot be avoided, and so will resonate more with an aging population.

First and foremost it can be said that in the regression analyses the homologous scales were always the most powerful predictors and entered the equation first (i.e., gelotophilia in the PhoPhiKat was the best predictor of gelotophile responses in the PPK-VSC). This confirms that the general laughter-related habits also predict the more specific inclination to make gelotophobic, gelotophilic and katagelastistic statements when in situations where age-related vulnerabilities might be the cause of laughter and ridicule. In other words, the stance of individuals towards ridicule and mockery will extend to how they deal with problems arising when they get old.

However, other factors need to be considered to fully understand the emergence of gelotophobic, gelotophilic and katagelastistic statements among the elderly. In fact there is a complex interplay between the general tendencies, age, education, and the actual experience of and worry about age-related vulnerabilities. In detail, preferring not to tell anyone because of the anticipated ridicule when facing age-related vulnerabilities is typical for gelotophobes that are also katagelastists, and who also have a lower education and have not really experienced such vulnerabilities but still worry about them. A high score in katagelastism should lead to the belief that one will get laughed at when encountering problems (since one would laugh at others). Since lower education is a predictor of katagelastism, one might speculate that the fear of laughter might stem from one's peers. The fear of events to come that one has not yet experienced adds to the problem; perhaps as one has seen problems in others or worries about them in general. These factors together explain almost 36 % of the variance.

Gelotophilic answers seem to involve a different and partly opposite dynamic. For example, individuals who enjoy telling someone how miserable and lonely they feel and make them laugh at their story were more educated (e.g., held an academic degree) on top of being a gelotophile. They also had a higher number of vulnerabilities they not experienced but worried about. This is striking as both gelotophobic and gelotophilic answers are predicted by education and the worry about problems not yet experienced. Not surprisingly it is reversed for the education marker. Higher education is conducive to eliciting laughter from others by telling others about ones mishaps while lower education goes along with preferring not to tell anyone in order to avoid ridicule. However, both share more events they have not yet experienced but worry about. It seems that worrying about

things with which one does not have first hand experiences induces both dispositions making them appear as coping strategies. One might also argue that while this factor looks the same for both, it might have different qualities. At face value the more educated gelotophiles might anticipate such events while the gelotophobes actually worry more about them. This is only a speculation, however, and cannot be substantiated now, as the distinction between anticipated and worried about was not made in the present study. Together these variables do explain 27 % of the variance suggesting that other, as yet unknown, factors need to be taken into account as well.

Katagelastistic answers were rare but people confessing that they would laugh at people who experience vulnerabilities were older katagelastistics (of both sexes) of no further education than compulsory schooling who had already encountered more such vulnerabilities but did not worry about them. Typically, katagelasticism is high in younger males and decreases with age. They are high on Eysenck's Psychoticism dimension (Proyer & Ruch, 2010, this issue) that depicts under-socialized people who disregard danger and do not change behavior even when experiencing punishment. In the present case, having experienced vulnerabilities does not go along with worrying, despite advanced age. The same factors may interfere with schooling, and the present study showed that a shorter education is known to go along with a more generalized katagelastistic tendency. It seems that not being aware of the worrying impact of vulnerable situations facilitates endorsing statements that reflect laughing at others. Unawareness of the potential distress of being ridiculed over such embarrassing situations allows one to be katagelastistic. These four predictors do explain 27 % of the variance. Perhaps Psychoticism or other related personality factors would add to the total prediction.

The situations incorporated in the age-related vulnerabilities (i.e., PPK-VSC) were modeled to the three types of intended answers. While, like in the PhoPhiKat-30, gelotophilic tendencies were most prevalent and gelotophobic answers were more frequent than katagelastistic answers, the mean for the latter was particularly low. It seems that either people do not laugh directly at *specific* problems of others (although they do so in general as the PhoPhiKat-30 shows), or they are less willing to convey this information. Another explanation might be that it is easy to endorse those tendencies in the more unspecific items of the PhoPhiKat-30. Nevertheless, the results mean that in these situations older people were inclined to say something that would make people laugh at their vulnerabilities. To a lesser extent, they preferred not to tell others of the things happening to them to avoid people laughing at them. Laughing at others who are affected by those age-related vulnerabilities appeared to be very heartless and indeed had a disproportionately low mean. Whether or not these represent true tendencies still remains an open issue.

While the correlations among the corresponding concepts were convincing, there are two untested implications in the findings. First, there is the time sequence. Criterion and predictor were assessed at the same time. So it cannot be said that the laughter habits already existed before the age-related vulnerabilities appeared. A longitudinal study would be needed to disentangle these two factors. Nevertheless, it has been shown that there is at least a short term stability: the 6 month test-retest correlations of the scales were .70 to .76 for the short version and .75 to .80 for the standard PhoPhiKat scale.

Secondly, the mean level of the scales stays relatively stable during later adulthood (Ruch & Proyer, 2009a). While this is not a substitute for a longitudinal study, it makes it more likely that lifelong acquired habits relating to ridicule will also determine how one will deal with the emerging shortcomings due to general decline. The other assumption is that the verbal responses reflect behavior. While it cannot be ruled out that the verbal responses are affected by social desirable responding, there is ample evidence that the scores predicted actual behavior (e.g., Ruch, Altfreder, & Proyer, 2009).

The PhoPhiKat-30 was used to assess gelotophobia, gelotophilia and katagelasticism among English speaking adults for the first time. A psychometric analysis yielded reliability estimates (Cronbach alpha, corrected item total correlations) that are comparable to the ones reported for the German assessments. Furthermore, the intercorrelation among the three concepts, the rank order of the means, and also most socio-demographic correlates were comparable. Therefore the use of the scale in further studies with English speaking populations can be recommended. The situations that were designed to incorporate age-related vulnerabilities and the dispositions to ridicule and being laughed at (i.e., the PPK-VSC) did yield approval (with the possible exception of katagelasticism) in the sense that people did select them. As a measure of how individuals relate to laughter and ridicule, the PhoPhiKat-30 correlates with the specific answers in the situations and the correlations between the PhoPhiKat-30 and PPK-VSC were sufficiently high, supporting the assumption that the situations evoked answers that are valid.

There are limitations to this study, of course. A longitudinal study would allow that any changes are highlighted as they occur and the types of problems and advantages the different laughing at dispositions bring about. The other limitation is that the situations may have elicited social desirability. Laughing at others is not seen as something people would want to admit to do, even if they did do so. However, social desirability also shows that having the ability to use embarrassing situations for the pleasure of others is something that is seen as an advantage and a skill people wish to be seen as having. Future studies may benefit from having peer reports to corroborate the participant's information.

The results of this research have practical implications. As people get older they increasingly rely on help from others. Often, those who work as care givers learn of the benefits of laughter for well-being. However, it is important to remember that not everyone will perceive laughter as positive. For example, just because a person is laughing about an embarrassing incident, it does not mean that it should be treated as being more trivial. More than likely the event will still be a worry for the older person. Therefore, such incidents should still be treated with the appropriate gravitas. Others will protect themselves from embarrassment and fear of ridicule by isolating themselves when age-related decline occurs. For them, if the caregiver adopted a more serious demeanor it would elicit less fear and create an opportunity for them to develop a better relationship. If the caregiver adopted a more serious demeanor it would elicit less fear and create an opportunity for them to develop a better relationship.

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