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Experience of Wondering Awe and Perception of Nature as a Resource during the COVID-19 Pandemic—Findings from a Cross Sectional Survey of Participants in Jerusalem

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Abstract: During the COVID-19 pandemic most people had to cope with the negative implications of the lockdowns, and perceived times of social isolation and loneliness, and thus low wellbeing. Among the best predictors of positive changes of pandemic related attitudes and behaviors was the experience of pausing in wondering awe with subsequent feelings of gratitude. As these observations came from a secular society with a Christian background, we now aimed to analyze to what extent Jewish people from Israel were experiencing such moments of wondering awe during the COVID-19 pandemic, and how these perceptions are related to their psychological wellbeing. For that purpose, between June and July 2021 a cross-sectional survey with standardized questionnaires was applied among 147 participants from Jerusalem. Those with high wellbeing and those who can rely on their faith as a resource to cope with the pandemic were more intensively perceiving moments of Awe/Gratitude. Awe/Gratitude and a low perception of COVID-19 related stressors were the best predictors of participants' psychological wellbeing. Against our expectation, Awe/Gratitude was not significantly associated with the experience of nature and enjoying reflective times of silence. Both resources, Awe/Gratitude as an experiential aspect of spirituality and Nature/Silence as a source to encounter the sacred in one's life, are relevant and should be supported.

Keywords: wondering awe; nature perception; coping; wellbeing; Jewish faith; Jerusalem; COVID-19 pandemic



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1. Introduction

During the COVID-19 pandemic, which challenged people worldwide, most had to cope with the negative implications of the lockdowns, particularly in terms of social isolation and feelings of loneliness that affected their wellbeing. As a consequence, there were significant increases in stress perception, anxiety, and depression (Cristóbal-Narváez et al. 2020; Salari et al. 2020; Simon et al. 2020; Büssing et al. 2020b, 2021a), and finally a higher prevalence of major depression and anxiety (COVID-19 Mental Disorders Collaborators 2021) and post-traumatic stress disorder and panic attacks (Anjum et al. 2020). During the course of the pandemic, as the restrictions continued and the number of infections continued to rise more and more during the different waves of the infection, self-perceived burdens because of the pandemic increased and wellbeing decreased (Büssing et al. 2021a, 2022b).

Nevertheless, particularly during the first phase of the pandemic, people also experienced positive changes in their attitudes and behaviors, particularly in terms of access to nature, more intensive relationships, enjoying times of silence, reflection of life, etc. (Büssing et al. 2020a, 2020b). Interestingly, among the best predictors of these positive changes was the experience of pausing in wondering awe with subsequent feelings of gratitude (Büssing et al. 2021a, 2021b).

Such feelings of wondering awe are emotional reactions towards touching situations and experiences (Keltner and Haidt 2003; Silvia et al. 2015) and may imply moments of wonder, admiration, or even veneration (Keltner and Haidt 2003; Büssing 2021). Perceived vastness is regarded as a further criterion (Keltner and Haidt 2003), while this vastness is only rarely experienced by most people (Büssing 2021). The triggers of awe perceptions are heterogeneous and can be attributed to four main categories: (1) Nature, (2) Persons, (3) Unique Moments, and (4) Aesthetics, Beauty, and Devotion (Büssing et al. 2021b). One may differentiate ‘small’ moments of aesthetic fascination from more profound, touching experiences that impact a person’s life in terms of a spiritual transformation (Cohen et al. 2010; Silvia et al. 2015; Büssing et al. 2021b). Awe is regarded as a specific aspect of the multidimensional construct Spirituality (Gomez and Fisher 2003), where religiosity is a specific, but not an exclusive aspect (Gall et al. 2011; Büssing 2019). While James (1997) regarded it even as a religious experience by itself, it is nevertheless also experienced by non-religious people (Büssing 2020), either non-religious but spiritual (R-S+), or even non-religious and non-spiritual (R-S−) people (Büssing et al. 2014).

However, awe perception and subsequent feelings of gratitude are in fact related to the frequency of practices such as meditation and prayer (Büssing et al. 2022a), indicating that a person’s underlying spirituality and related spiritual practices may sensitize openness and mindful awareness towards specific touching moments in life (Rudd et al. 2012; Büssing et al. 2021a). This in turn may contribute to wellbeing (Rudd et al. 2012; Krause and Hayward 2015; Silvia et al. 2015; Büssing et al. 2021a).

What about the situation in Israel where “Days of Awe” (Yamim Noraim; ימים נוראים), the holy days between Rosh Ha-Shanah (start of the new year) and Yom Kippur (the feast of Reconciliation), were practiced by pious Jews (Agnon 1995)? To what extent have Jewish people in Jerusalem experienced moments of wondering awe during the COVID-19 pandemic with its social restrictions, and how is it related to their psychological wellbeing?

In the first half of 2021 with its peak of infection rates in January, the vaccination rates in Israel were quite high (around 60% in summer). Then, in May 2021 Israel’s society was largely turning to “normality” (Abbany 2021). In mid-June 2021, Israel’s government almost completely abolished the mask requirement in closed rooms, and reintroduced it a week later because of the outbreak of the Delta variant of the virus (fourth wave). Tourists were not allowed to visit Israel, and large gatherings of people in closed rooms were forbidden again.

During the first phase of the pandemic in Israel, nursing students feared becoming infected, economic insecurity, a lack of personal protection equipment at work, etc., with increases in anxiety levels (Savitsky et al. 2020). A population-based study from Israel showed that mental health symptoms increased with the second lockdown (Ben-Ezra et al. 2021). As the access to organized recreation and sporting facilities was restricted, it was not surprising that “70% of Israelis trained less than their usual routine” (Dor-Haim et al. 2021). As sporting activities together with others can support wellbeing (Eime et al. 2013), this is an important finding. Further, after two lockdowns in Israel the frequency of alcohol consumption was increasing (Bonny-Noach et al. 2021). A more beneficial resource to cope with the outcomes of the restrictions on mental health was the ‘sense of coherence’ (Mana et al. 2021), which implies a salutogenic approach to view life as “comprehensible, manageable, and meaningful” (Antonovsky 1987), and thus might be beneficial to cope with the pandemic.

The aim of this study was to analyze the experience of Awe/Gratitude as a resource to perceive “sacred moments” in the life of orthodox/traditionalist or liberal Jewish participants from Jerusalem. As it was shown in a sample from Germany that the experience of nature and the times of silence was the mediator of the link between Awe/Gratitude and psychological wellbeing (Büssing et al. 2022a), we further aimed to analyze how awe relates to the perception of nature as an additional resource, and to psychological wellbeing during the COVID-19 pandemic. In fact, a perception of nature may improve wellbeing and mood states and can reduce stress (Van Den Berg and Custers 2011; Capaldi et al. 2014; Joye

and Bolderdijk 2015). Moreover, we intended to clarify whether participants' religious convictions and religious/spiritual practices are related to Awe/Gratitude, as it was observed in other groups (Büssing 2021). For that purpose, we differentiated the perceptions of three characteristic groups based on their religiosity which are represented best in Jerusalem: (1) The "orthodox" community is isolated from the larger social structure by neighborhood locality, a non-governmental education system, a unique dress code, and minimal (if any) exposure to the regular media. They have tight family and community ties and high levels of social support and mutual assistance. (2) The non-orthodox "traditionalist" ("religious") groups follow a comprehensive religious orientation which has a significant impact on daily activities, but are not fundamentalists or isolated from the rest of the population. (3) The third group defines itself as "secular" and observes minimal Jewish religious traditions. We assume that Jewish people from these three groups regard themselves as religious, and thus we addressed their religious trust as a resource to cope with the pandemic, also their prayer activity as an indicator of their religiosity, frequency of meditation as an indicator of non-religious spirituality, and experience of awe and gratitude as an experiential aspect of spirituality—which is experienced by religious and also non-religious, but spiritual people (Büssing et al. 2014; Büssing 2020).

2. Materials and Methods

2.1. Participants

This anonym cross-sectional online survey involved a convenience sample of participants recruited between June and July 2021 among staff members of the Hadassah University Hospital Ein Kerem and the Mount Scopus Hospital in Jerusalem, Israel. During the pandemic and the respective lockdown in Jerusalem, these participants were easily available on the one hand, and had a more or less similar socioeconomic and educational background (i.e., medicine, psychology, hospital administration) on the other hand.

They were invited by email, were informed about the purpose of the study on page 1 of the Hebrew language online questionnaire, and they consented to participate by filling out the questionnaire. The study was approved by the IRB committee of Hadassah University Hospital (#HMO-0912-20).

2.2. Measures

At the start of the pandemic, there was no instrument available that assessed peoples' perceived changes of attitude and behaviors because of the pandemic restrictions. Thus, a group of researchers from different fields developed the PCQ with its add-on modules (Büssing et al. 2020b). To gain consistency of instruments and make data comparable, these were also used in collaborative projects from different countries.

For this study, the questionnaire package was translated by forward and backward translation technique. The primary survey started in German language and was then applied in English language, too. Here, the questionnaire was translated from English to Hebrew by a native Hebrew speaker and the resulting Hebrew version was re-translated into English by an English native speaker expert translator who did not see the primary English version. Compatibility between the original questionnaire written in English and the Hebrew version was checked and the items were adjusted where appropriate. The Hebrew version was finally checked for content and cultural consistency.

2.2.1. Awe and Gratitude

To address times of pausing in wondering awe in specific situations as a perceptive aspect of spirituality, we used the 7-item Awe/Gratitude scale (GrAw-7) (Büssing et al. 2018). This single factor scale has good internal consistency (Cronbach's $\alpha = 0.82$). Characteristic items are: "In certain places, I become very quiet and devout", "I stop and am captivated by the beauty of nature", "I pause and stay spellbound at the moment", "I stop and then think of so many things for which I'm really grateful". All items were scored on a 4-point scale (0—never; 1—seldom; 2—often; 3—regularly), referred to a 100-point scale. In

this sample, Cronbach's alpha is 0.71, and the scale has two factors (factor 1 with five items: ed1, ed2, ed3, ed6, ed7; factor 2 with two items: ed4, ed5) which explain 56% of variance. However, to make data comparable, these factors were not used.

Awe (or Reverence) is translated in Hebrew as *יראת כבוד* and consists of the words *כבוד* (respect) and *יראת* (fear). It thus means fearful respect or respect with fearful admiration. However, the connotation of fear is an ancient one (e.g., standing in fear in front of a powerful man) which in today's usage is not valid anymore.

2.2.2. Perceived Changes in Terms of Nature/Silence

During the pandemic, people observed changes in their attitudes, perceptions, and behaviors. These changes were assessed with the Perception of Change Questionnaire (PCQ) (Büssing et al. 2020b). In its first version, four items addressed the topics of being in nature and consciously enjoying times of silence (Büssing et al. 2020a): "I go outdoors much more often"; "I perceive nature more intensely"; "I consciously take more time for silence"; "I enjoy quiet times of reflection". This 4-item factor Nature/Silence has good internal consistency in the validation sample (Cronbach's alpha = 0.82) (Büssing et al. 2020a), and also in this sample from Jerusalem (Cronbach's alpha = 0.82).

From the PCQ, four additional items were used. These address changes in praying/meditation activities (C29 I pray/meditate more than before), religious trust (C32 I have confidence in a higher supporting power), hope in a better future (C26 I work to ensure that the world becomes fairer in the future), and a reappraisal intention (C9 I pay more attention to what's really important in life).

All PCQ items were introduced by the phrase "Due to the current situation . . . ", which refers to the COVID-19 pandemic. Agreement or disagreement to these statements were scored on a 5-point scale (0—does not apply at all; 1—does not truly apply; 2—neither yes nor no; 3—applies quite a bit; 4—applies very much).

2.2.3. Psychological Wellbeing

Psychological wellbeing was measured with the WHO-Five Wellbeing Index (WHO-5) (Bech et al. 2013). It uses items such as "I have felt cheerful and in good spirits" or "My daily life has been filled with things that interest me". The frequency of these experiences is scored from at no time (0) to all of the times (5). Here, we report the sum scores ranging from 0 to 25; scores < 13 would indicate low wellbeing or even depressive states. In this sample, the scale's internal consistency is very good (Cronbach's alpha = 0.92).

2.2.4. Perception of Burden

Perceived restrictions of daily life (e.g., of being under pressure and stressed, of being anxious and insecure, lonely and socially isolated, and being burdened by a difficult financial-economic situation) due to COVID-19 pandemic were measured with five numeric rating scales (5NRS), ranging from 0 (not at all) to 100 (very strong) (Büssing et al. 2020b). These five variables are an add-on of the PCQ and were combined to the factor COVID-19 related burden ("Stressors") which had good internal consistency in the validation sample (Cronbach's alpha = 0.80), and also in this sample (Cronbach's alpha = 0.81).

2.2.5. Indicators of Religiosity

Religious Trust was operationalized using item A37 from the Reliance on God's Help scale (Büssing et al. 2015). It states, "faith as a strong hold in difficult times" (here in the context of the COVID-19 pandemic) and is scored as disagreement, indifference, and agreement. The frequency of spiritual/religious practices such as meditation or praying was assessed with a 4-grade scale ranging from never to at least once per month, at least once per week, and at least once per day.

2.2.6. Health Behavior

The frequency of sporting activities, alcohol consumption, and intake of mood-enhancing medications was assessed with a 4-grade scale ranging from never to at least once per month, at least once per week, and at least once per day as described.

2.3. Statistical Analyses

Descriptive statistics are presented as frequencies for categorical variables and as means (\pm standard deviation, SD) for numerical variables. Analyses of variance (ANOVA) as well as first order correlations (Spearman rho) and linear regression analyses with stepwise variable selection method based on probabilities (p -values) were computed with SPSS 28.0. Given the exploratory character of this study, we set a stricter significance level at $p < 0.01$. With respect to classifying the strength of the observed correlations, we adjusted the thresholds to $r > 0.5$ as a strong correlation, an r between 0.3 and 0.5 as a moderate correlation, an r between 0.2 and 0.3 as a weak correlation, and $r < 0.2$ as negligible or no correlation. For ANOVA, η^2 values < 0.06 are considered as small effects, between 0.06 and 0.14 as moderate and > 0.14 as strong.

3. Results

3.1. Description of the Sample

Primarily, 197 Jewish participants, eight with other religious affiliations and one who did not respond to this question, responded to the questionnaire package. As we aimed to analyze the experiences of Jewish participants, the later nine participants were not enrolled in the analyses. However, not everyone responded to the Awe/Gratitude scale. These non-responders ($n = 50$) did not significantly differ from the responders ($n = 147$) by gender, age, or being a liberal vs. orthodox/traditional Jew (data not shown).

In the sample of responders, women (82%) and liberal Jews (49%) were predominant (Table 1). For more than one third of them, their faith was a strong hold in difficult times, one third were indifferent, and 28% did not agree.

In total, 29% of the participants had low wellbeing scores, and 33% had higher loneliness scores. COVID-19 related burden was perceived as rather low.

An analysis of health behaviors revealed that sporting activities were performed most frequently (64% at least once per week), followed by praying activities (43% at least once per week) (Table 1). Alcohol consumption (14% at least once per week) and mood-enhancing medication (11% at least once per week) were rarely used. Meditation as a mental health stabilizing activity was practiced by 13% at least once per week.

Table 1. Description of the sample ($n = 147$).

	n	%	Mean \pm SD [Range]
Gender	147	100.0	
Female	121	82.3	
Male	26	17.7	
Mean age	137		47.5 \pm 12.6 [19–72]
Jewish Orthodox	14	9.5	
Jewish Traditionalist	61	41.5	
Jewish Liberal	72	49.0	
Faith as strong hold in difficult times	133	100.0	2.11 \pm 0.81 [1–3]
Does not apply	37	27.8	
Neither yes nor no	45	33.8	
Applies a lot	51	38.3	

Table 1. *Cont.*

	n	%	Mean \pm SD [Range]
Area of profession	147	100.0	
Medicine	57	38.8	
Administration	41	27.9	
Other (i.e., economy, marketing, pedagogy, psychology)	49	33.3	
COVID-19 related Stressors (5NRS)	147		37.4 \pm 24.3 [0–100]
Frequency of health behaviors			
Sporting activities	132		2.73 \pm 0.93 [1–4]
Alcohol consumption	132		1.62 \pm 0.77 [1–4]
Mood-enhancing medications	133		1.30 \pm 0.87 [1–4]
Praying	132		2.33 \pm 1.32 [1–4]
Meditation	133		1.36 \pm 0.84 [1–4]
Loneliness (NRS)	144	100.0	34.8 \pm 32.4 [0–100]
No (0)	33	22.9	
Moderate (10–50)	63	43.8	
High (>50)	48	33.3	
Wellbeing (WHO-5)	147	100.0	15.2 \pm 5.4 [0–25]
Low (<13)	43	29.3	
Moderate (13–18)	55	37.4	
High (>18)	49	33.3	

Abbreviations: 5NRS—five numeric rating scales; NRS—numeric rating scale; WHO-5—WHO Wellbeing Index; SD—standard deviation.

3.2. Awe/Gratitude Perceptions

With respect to the intensity of Awe/Gratitude perceptions (Table 2a), the general perception of “great gratitude” was perceived by most participants often to very often (84%), followed by valuing beauty in life (78%). General feelings of awe were perceived often to very often by 63%; 69% became very quiet and devout in certain places. Among the participants, 56% stopped often to very often, captivated by the beauty of nature, 52% paused and stayed spellbound at that moment often to very often, and 53% stopped and then thought of so many things for which they are really grateful.

These Awe/Gratitude perceptions were similar in women and men, in orthodox/traditionalist, and liberal Jews, and were only different with respect to their wellbeing status (Table 3). The three groups of professions differentiated in this study did not significantly differ in their awe perceptions (data not shown). However, Awe/Gratitude scored highest in participants with high wellbeing and lowest in those with low wellbeing.

3.3. Nature/Silence Perceptions

With respect to the perceptions of Nature and Silence (Table 2b), enjoying quiet times of reflection (39%), and perceiving nature more intensely (38%) had the highest agreement scores, followed by consciously taking more time for silence (34%), while going outdoors more often scored lowest (24%).

Here, no significant differences were observed for gender, nor for being orthodox/traditionalist or liberal, nor for their wellbeing status (Table 3).

Table 2. a. Intensity of Awe/Gratitude perceptions in the sample.

	I Have a Feeling of Great Gratitude	I Have a Feeling of Wondering Awe	I Still Have Learned to Experience and Value Beauty	I Stop and Am Captivated by the Beauty of Nature	I Pause and Stay Spellbound at the Moment	In Certain Places I Become Very Quiet and Devout	I Stop and Then Think of So Many Things for Which I'm Really Grateful
N	147	145	144	144	142	140	141
Mean	2.14	1.72	1.96	1.69	1.60	1.77	1.67
SD	0.70	0.76	0.75	0.76	0.72	0.63	0.75
Never (%)	1.4	4.8	4.2	2.8	2.8	1.4	3.5
Seldom (%)	14.3	32.4	17.4	41.0	45.1	29.3	39.0
Often (%)	53.7	49.0	56.9	41.0	41.5	60.0	44.0
Very often (%)	30.6	13.8	21.5	15.3	10.6	9.3	13.5

Abbreviation: SD—standard deviation.

Table 2. b. Intensity of Awe/Gratitude perceptions in the sample.

	I Go Outdoors Much More Often	I Perceive Nature More Intensely	I Consciously Take More Time for Silence	I Enjoy Quiet Times of Reflection
N	132	131	133	130
Mean	1.78	2.15	1.92	1.96
SD	1.07	1.25	1.15	1.20
Disagreement (%) ¹	40.1	31.3	38.4	38.5
Indifference (%)	35.6	30.5	27.8	22.3
Agreement (%) ¹	24.3	38.1	33.9	39.3

¹ The two agreement and the two disagreement scores were combined to one agreement and one disagreement statement. Abbreviation: N—number; SD—standard deviation.**Table 3.** Experience of Awe/Gratitude and Nature/Silence in subgroups.

		Awe/Gratitude	Nature/Silence
All participants	Mean ± SD	59.77 ± 14.45	48.75 ± 24.02
Gender			
Women	Mean ± SD	59.89 ± 14.62	49.27 ± 24.00
Men	Mean ± SD	59.20 ± 13.89	46.35 ± 24.51
F value		0.05	0.29
p value		0.83	0.44
Eta ²		0.00	0.00
Jewish			
Orthodox/Traditionalist	Mean ± SD	60.69 ± 15.71	50.03 ± 21.55
Liberal	Mean ± SD	58.75 ± 12.66	48.85 ± 25.48
F value		0.67	0.08
p value		0.03	0.95
Eta ²		0.01	0.00
Wellbeing status			
Low (<13)	Mean ± SD	54.50 ± 14.70	47.59 ± 25.54
Moderate (13–18)	Mean ± SD	58.36 ± 11.14	47.79 ± 21.48
High (>18)	Mean ± SD	65.99 ± 15.49	50.85 ± 25.74
F value		8.45	0.25
p value		<0.0001	0.78
Eta ²		0.11	0.00

Abbreviation: SD—standard deviation.

3.4. Correlation between Awe/Gratitude and Nature/Silence with Indicators of Wellbeing and Spirituality

The experience of Awe/Gratitude and perceived changes in terms of Nature/Silence were not significantly associated, and their correlation pattern with indicators of wellbeing, spirituality, and health behaviors was different (Table 4). Awe/Gratitude is moderately related to Faith as a resource and to psychological wellbeing, while Nature/Silence is not significantly related. Awe/Gratitude is weakly related to more intensive praying, but not with meditation, while Nature/Silence is weakly related to more frequent meditation practices but not with praying. Nature/Silence is further related to the intention of working to ensure that the world becomes fairer in the future and to paying more attention to what is really important in life, while Awe/Gratitude is not significantly related to these intentions. Both resources (Awe/Gratitude and Nature/Silence) are not significantly related to COVID-19 related stressors (Table 4).

The frequency of alcohol consumption and the usage of mood-enhancing medications were not significantly related to both resources (Table 4). Instead, sporting activities were weakly related to Nature/Silence.

In terms of specifying the results in terms of the feeling of “great gratitude” (item 1 of the GrAw-7 scale), then this gratitude is similarly and moderately related to faith as a strong hold, a confidence in a higher power, the frequency of praying, and wellbeing—as the GrAw-7 scale is related, too (Table 4).

Table 4. Experience of Awe/Gratitude and Nature/Silence in subgroups.

	Awe/Gratitude Score	Feeling of Great Gratitude	Stopping and Being Grateful	Nature/Silence Score
Awe/Gratitude (GrAw-7)	10.000	0.597 **	0.748 **	0.187
Indicators of Spirituality				
My faith is a stronghold in difficult times	0.317 **	0.385 **	0.293 **	0.071
C29 pray/meditate more than before	0.235 **	0.153	0.222	0.186
C32 confidence in a higher supporting power	0.284 **	0.353 **	0.180	0.034
Frequency of meditation	0.080	0.021	0.118	0.271 **
Frequency of praying	0.263 **	0.337 **	0.228 **	−0.071
Indicators of Wellbeing				
Psychological wellbeing (WHO-5)	0.310 **	0.357 **	0.135	0.071
COVID-19 related Stressors (5NRS)	−0.065	0.163	−0.068	0.116
C26 work to ensure that the world becomes fairer in the future.	0.123	0.029	0.086	0.364 **
C9 pay more attention to what’s really important in life	0.185	0.049	0.147	0.371 **
Frequency of health behaviors				
Frequency of sporting activities	0.162	−0.040	0.075	0.259 **
Frequency of alcohol consumption	0.033	−0.152	−0.033	0.001
Frequency of mood-enhancing medications	0.049	−0.118	0.059	0.087

** $p < 0.01$ (Spearman rho). Abbreviations: 5NRS—five numeric rating scales; WHO-5—WHO Wellbeing Index.

3.5. Predictors of Awe/Gratitude

As Awe/Gratitude was significantly related to different variables which may have an impact on this perception, stepwise regression analyses were performed to identify the best predictors of Awe/Gratitude as a dependent variable. We found that psychological wellbeing, more intensive praying activities during the pandemic, and faith as a strong hold to cope with difficult situations predicted Awe/Gratitude, explaining together 25% of variance (Table 5). While wellbeing and Faith as a strong hold are both relevant predictors of Awe/Gratitude, they are nevertheless not significantly associated ($r = 0.14$; n.s.). Frequency of praying and confidence in a higher supporting power were not significant in this model.

Table 5. Predictors of Awe/Gratitude and Wellbeing, respectively.

Dependent Variable: Awe/Gratitude (GrAw-7) Model 3: $F = 13.0$, $p < 0.001$; $R^2 = 0.25$¹	Beta	T	p
(constant)		8.010	<0.001
My faith is a strong hold in difficult times	0.195	2.261	0.026
Psychological wellbeing (WHO-5)	0.351	4.213	<0.001
C29 I pray/meditate more than before	0.259	2.977	0.004
Dependent variable: Wellbeing (WHO-5) Model 2: $F = 17.7$, $p < 0.001$; $R^2 = 0.23$²	Beta	T	p
(constant)		4.856	<0.0001
Awe/Gratitude (GrAw-7)	0.351	4.288	<0.001
COVID-19 related burden (5NRS)	−0.282	−3.439	<0.001

¹ Not significant in the model: Frequency of praying and Confidence in a higher supporting power. ² Not significant in the model: age, gender, frequency of praying, meditation or sporting activities, and loneliness.

3.6. Predictors of Wellbeing

Which of the aforementioned stressors and resources contribute to participants' wellbeing? Regression analyses revealed that the best predictors of psychological wellbeing as dependent variables were Awe/Gratitude (which explains 15% of variance) and low COVID-19 related burden (which further explains 8% of variance) (Table 5). Participants' age, gender, frequency of praying, meditation or sporting activities, and their loneliness scores had no significant influence in this model.

4. Discussion

In this study, we have analyzed the relevance of the resource Awe/Gratitude for Jewish participants during the fourth wave of the COVID-19 pandemic. Their Awe/Gratitude scores were lower compared with participants from Germany (65.3 ± 19.7). People with high wellbeing and those who can rely on their faith as a strong hold perceived Awe/Gratitude more intensively. The small group of Orthodox Jews showed a trend of higher Awe/Gratitude scores ($F = 3.4$, $p = 0.034$, $\eta^2 = 0.046$). This would fit with the intention of pious Jews to consciously celebrate the “Days of Awe” (Yamim Noraim). During these days of introspection, one may pray, repent, and do good deeds to others, so that God may grant a further year of “good life”. However, when the small group of Orthodox Jews were combined with the larger fraction of Jewish Traditionalists and both were compared with the group of Liberal Jews, there were no significant differences in their perception of Awe/Gratitude. In this sample from Jerusalem, there were no significant gender related differences, while in a more heterogeneous sample from Germany, women scored significantly higher on Awe/Gratitude than men (Cohen's $d = 0.32$) (Büssing 2021).

In contrast to findings from the rather secular Germany (Büssing et al. 2021a, 2021b), in the Jewish participants from Jerusalem recruited during the fourth wave of the pandemic, Awe/Gratitude is not significantly related to the experience of nature and times of silence. This finding is surprising as awe perceptions are often triggered by experiences in nature—but also in other situations. Either the Jewish participants of this study had little access to green or blue areas in Jerusalem or the renewed social restrictions decreased their ability to notice and value these resources.

As their awe perceptions were not related to the experience of nature or to conscious times of silence, what else might have triggered these? To address this, we analyzed free text statements of a small group of Jewish people who described situations where they experienced moments of awe ($n = 5$). These preliminary responses are quite heterogeneous and refer to Health and Family, Concrete Persons, (religious) Rituals of Connection, Conscious gratefulness, Emotional situations, Mindful awareness, and Nature. These findings nevertheless fit to the wide spectrum of awe triggers already described, where Nature as a trigger was often stated, but not as the sole trigger of Awe perceptions (Büssing 2021).

According to Jewish tradition, man should respond to God's act of creating the world with loving reverence, wondering awe, and obedience (Deuteronomy 10:12), and use the seventh day of rest as a holy one (Genesis 2, 1–2) to take the time to stop in wondering awe and to contemplate God's creation. Thus, one would expect that indicators of spirituality will relate to the intensity of awe perceptions. In fact, for the participants from Jerusalem, the best predictors of their Awe/Gratitude perceptions were psychological wellbeing on the one hand, and their spirituality (in terms of more intensive praying activities because of the pandemic, and relying on their faith to cope with the pandemic) on the other hand. People with low wellbeing (in terms of depressive mood states because of the pandemic) may have difficulties to perceive extraordinary moments or even the Sacred in their life, while people who can rely on their faith as a resource and who are still praying are reminded that God can be encountered in everything around them.

Interestingly, the perception of Nature/Silence was related to ideals and hopes such as the intention of working to ensure that the world becomes fairer in the future and to pay more attention to what is really important in their life. Encounters of nature and enjoying moments of quietness and contemplative silence (which are better related to meditation practices than praying activity) seem to inspire these ideals. Detail analyses revealed that the ideal of a better world was best related to perceiving nature more intensively ($r = 0.44$) and enjoying quiet times of silence ($r = 0.34$), while going outdoors more often or consciously taking more times of silence were only weakly related ($r < 0.30$). Thus, the quality of experiences is more relevant than the frequency of chances. Paying more attention to what is important in life was moderately related to consciously taking more times of silence ($r = 0.35$), enjoying these ($r = 0.35$), perceiving nature more intensively ($r = 0.30$), and weakly with going outdoors more often ($r = 0.27$). Here, these conscious moments of silence help to reflect on what is essential in life. However, changed perceptions in terms of Nature/Silence were not related to participants' wellbeing, and this is in contrast to findings from the literature (Capaldi et al. 2014; Joye and Bolderdijk 2015). It might be that accessibility to green and blue spaces are different, and thus the findings are different.

Both resources (Awe/Gratitude and Nature/Silence) were not significantly related to COVID-19 related burden. This means, they probably will not buffer the perceptions of being burdened by the pandemic to a relevant amount, and they do not prevent dysfunctional strategies such as alcohol consumption or the uptake of mood enhancing medications—which are of low relevance in the sample anyway. In terms of psychological wellbeing as a dependent variable, Awe/Gratitude was the best predictor with a further influence of low perceptions of COVID-19 related burdens (Stressors). As this resource contributes to participants' wellbeing, but not Nature/Silence, it should be fostered and trained.

Limitations

Due to the recruitment process among the staff of two hospitals from Jerusalem, we do not assume that the findings are representative for Israel's general society. Men and orthodox Jews are underrepresented in our sample. The participants were mainly from one of Israel's main cities, Jerusalem, while participants from other larger cities or rural areas were not yet involved. For future studies, participants from more rural and green areas should be enrolled, since the nature of the environment may also be relevant as to whether it inspires and can trigger awe perceptions.

As 39% of our sample have a medical background, they are probably better informed about the implications of the COVID-19 infection and the necessity of restrictions, and they may thus score lower in the perceived stressors related to the pandemic. The fact that most of the participants have a more or less similar socioeconomic and educational background (i.e., medicine, psychology, hospital administration) could be regarded as a benefit for the interpretation of data, but could also be a limitation as more heterogeneity would result in more variance of perceptions.

Due to the cross-sectional design of the study, no causal conclusions can be drawn. Moreover, we have no data directly after the first lockdown and can refer only to these data

from the fourth wave of the pandemic. Findings from the different phases of the pandemic from Germany revealed significant negative changes of wellbeing, resources to cope, and a loss of faith because of the pandemic (Büssing et al. 2022b). Whether this is also true in this sample and could contribute to explain the observations remains unclear.

5. Conclusions

The findings of this study underlines that Jewish participants from Jerusalem experienced moments of wondering awe during the COVID-19 pandemic. More intensive praying and having faith to cope with the pandemic were predictors of their Awe/Gratitude perception, which in turn was the best predictor of their psychological wellbeing. Unlike our premise, Awe/Gratitude was not significantly associated with perceived changes in terms of the experience of nature and enjoying reflective times of silence. As green and blue outdoor spaces (i.e., forests, parks, lakes, rivers) were identified as relevant sources to compensate for the social implications of the lockdowns (Labib et al. 2022), we cannot exclude that their accessibility might be different in Jerusalem. Moments of wondering awe could be less often experienced in such green and blue spaces compared with other triggers. Rather, it is the underlying spirituality, in terms of having faith as a strong hold to cope with the pandemic (and thus praying activity), that predicts Awe/Gratitude experiences. In this context, one may assume that religious faith and related practices may sensitize for awe perceptions in specific situations. Nevertheless, the resource Nature/Silence was of relevance too, as it helped to maintain people's hope that the world may become fairer in the future, and as it relates to the reappraisal coping strategy of paying more attention to what is really important in life. Both resources, Awe/Gratitude as an experiential aspect of spirituality (Büssing et al. 2018) (that was linked in this sample to participants' Faith as a hold in difficult times and their praying activity), and also Nature/Silence as a source to encounter the sacred in one's life (which is not related to faith and praying in this sample but to meditation activity), are relevant and should be supported. Nature/Silence as a not specifically religious source may in fact mediate the positive influence of Awe/Gratitude on psychological wellbeing, at least in other samples (Büssing et al. 2022a).

As attitudes and behaviors such as curiosity, open-mindedness, forgiveness, appreciation of beauty, gratitude, hope, and spirituality are related to mindfulness, and as mindfulness training may help to cultivate these (Pang and Ruch 2019), one could consider training programs to support these, as shown by Pang and Ruch (2019). Specific meditation programs may indeed buffer psychological stress to some extent, but they are not necessarily effective in improving negative mood states (Goyal et al. 2014). Even when in experimental (virtual reality) settings, awe experiences triggered higher parasympathetic activation (Chirico et al. 2017), which could in fact decrease stress perceptions to some extent, the long term effects of such training programs addressing different sensorial stimuli are unclear.

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