

Aspects of Spirituality, God Images, and the 'Self-Centredness' in 17-years-old Adolescents Attending Religious Education at High-School

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ABSTRACT. We investigated associations between different aspects of spirituality, life satisfaction and self-interest among adolescents. In this anonymous survey (pilot study) using standardized questionnaires, we enrolled 54 adolescents (mean age 17.4 ± 0.73 years) attending religious education classes in a high-school. Pupils' life satisfaction was high overall, particularly with respect to friendships, family and self, but lowest with respect to school. The young people appreciated Conscious interactions the most, while they gave low scores for Prayer / Trust in God and Transcendence conviction; Search for insight / Wisdom reached intermediate scores. In general, female students had higher scores than males, particularly with respect to Conscious interactions. However, the statement that "consideration for others is fine, but what really matters in the end is that I get ahead in school and my career" was accepted by 41% and rejected by 37% (22% were undecided). This attitude of self-interest (and implicitly rejected mutual consideration) correlated inversely with the statement of being "an interested student". Stepwise regression analyses identified three variables that impact on this attitude: The strongest predictors were male gender, (dis-)satisfaction with school, and overall life satisfaction; aspects of spirituality were not of significant relevance in this prediction model. The implicit 'self-centredness', rejected by 75% of girls, but accepted by 64% of boys, may have an impact on their social behaviour as adults. Teachers should support and encourage male adolescents in particular to develop as responsible and considerate individuals.

ZUSAMMENFASSUNG. In einer anonymen Querschnittsuntersuchung (Pilotstudie) sollten mit Hilfe standardisierter Fragebogen bei 54 Jugendlichen (mittleres Alter $17,4 \pm 0,73$ Jahre) Aspekte der Spiritualität, Lebenszufriedenheit und Selbst-Zentrierung untersucht werden. Die Zufriedenheit der am Religionsunterricht eines Gymnasiums teilnehmenden Schüler mit verschiedenen Dimensionen des Lebens war generell hoch, insbesondere für Freundschaften, Familie und mit sich selbst, am geringsten jedoch für die Schulsituation. Von den untersuchten Aspekten der Spiritualität wurde ein Bewusster Umgang (mit sich, den anderen und der Umwelt) am stärksten wertgeschätzt, während eine Religiöse Orientierung (Gebet / Gottvertrauen) und Transzendenzüberzeugung geringe Zustimmung fanden; Suche nach Einsicht / Weisheit erzielte intermediäre Zustimmungsscores. Generell zeigten hier Mädchen höhere Scores als Jungen, insbesondere für den Bewussten Umgang. Die provokant formulierte Aussage "Rücksicht ist schön und gut, aber letztendlich geht es sowohl in der Schule als auch im Berufsleben doch nur darum, selber voran zu kommen" erzielte bei 41% der Jugendlichen Zustimmung und bei 37% Ablehnung (22% waren unentschieden). Diese Haltung der Selbstbezogenheit (und impliziten Ablehnung einer Rücksichtnahme) korrelierte invers mit der Aussage, ein interessierter Schüler zu sein. Mittels Regressionsanalysen konnten drei Variablen mit einem signifikanten Einfluss auf die Selbstbezogenheit identifiziert werden. Die wichtigsten Prädiktoren waren männliches Geschlecht der Schüler, (Un-)Zufriedenheit mit der Schulsituation und generelle Lebenszufriedenheit, während die Aspekte der Spiritualität keine signifikante Relevanz in diesem Prädiktionsmodell hatten. Die implizite Selbstzentrierung, die von 75% der Mädchen abgelehnt, jedoch von 64% der Jungen befürwortet wurde, hat möglicherweise Auswirkungen auf ihr Sozialverhalten als angehende Erwachsene. Lehrer sollten daher insbesondere Jungen darin unterstützen und ermutigen, sich als verantwortungsvolle und rücksichtsvolle Individuen zu entwickeln.

Introduction

The impact of Europe's trend of secularisation and individualisation on ethical, political, social and spiritual development is quite unclear. Although there are strong differences with respect to distinct religious denominations (i.e. Muslims from Turkey, Catholics from Poland etc.), Ziebertz and Kay stated in their international empirical study about religiosity in young people from Europe that "religion is seen as compatible with modern life" [17]. On the other hand, our studies enrolling both healthy adults [6] and patients with chronic diseases indicate that the interest in conventional religiosity is much lower when compared to the individualized or more secular aspects of spirituality (i.e., existentialistic and humanistic/social issues) [4]. Moreover, intrinsic religiosity was of moderate relevance for most patients with chronic diseases, while a conscious way of living and positive attitudes, which can be regarded as internal coping styles within the concept of 'locus of disease control', were valued significantly higher [5]. In fact, the more secular aspects of spirituality (i.e., conscious living, positive attitudes) were associated with life satisfaction, lower depression and less anxiety, rather than reliance on God's help as a measure of intrinsic religiosity [3].

Decline of institutional religiosity may have various effects, i.e. on social welfare responsibilities, on social and religious support communities, value systems, ethical decisions, autonomy, etc. One may suggest that the current era of social insecurity due to several unsolved problems and unmet promises may lead to unrestricted autonomy as social norms seem to become less important. Instead, an 'Ego-centred' attitude tends to predominate, as conceptualized by hedonism (i.e., pleasure has an ultimate importance), eudemonism (i.e., happiness as an ultimate importance), and utilitarianism (i.e., the moral worth of an action is determined solely by its contribution to overall utility, for example, to happiness or pleasure). For many, traditional ethical standards are of arguable importance. In fact, as stated by Ziebertz, "young people are born into a situation where plurality is normal and where existing values, convictions and life styles are no longer attributable to a single world view" [16]. This means that ecclesiastic interpretations (which are often paternalistic) of personal life planning and underlying ethics become more and more irrelevant, particularly because "adolescents typically develop very critical attitudes towards traditional worldviews" [16]. The consequences can be ethical and social indifference. A 'Me Foremost' attitude of self-dependence might be the consequence of neo-liberal social Darwinism, while humanity as a value, an ideal or a mission seems to lose its importance among the general principles of western societies [1]. - But is this really true?

Priestley mentioned that "to dwell on the spirituality and on spirituality is to emphasize the subjective, to dwell on the process of being and becoming" [13]. In fact, there is a "need for attentiveness to children's spirituality" [14], because as adults they will form and influence future economics, politics, education and thus society.

We intended to investigate associations between different aspects of spirituality, perceived God images, life satisfaction, and an attitude of self-interest. For this hypotheses-generating pilot study we deliberately focussed on high-school adolescents attending religious education, because adolescents in Germany mainly encounter religious instruction through school [16].

Materials and Methods

Participants

In this anonymous survey, we enrolled two high-school courses of adolescents attending religious education (either Catholic or Protestant) in a secondary school located in a medium-sized town (with about 49,000 habitants) in the eastern part of Nordrhein-Westfalen, West Germany. Similarly to the study by Ziebertz [16], the survey was conducted among school pupils in the 11th grade of a high-school (Gymnasium, equivalent to UK "grammar school"). They were selected because one may assume an interest in spiritual/religious issues, while their non-religious counterparts had the opportunity to choose philosophy/ethical education instead. The respective religious education teachers of the participating classes distributed the anonymous questionnaires. The 54 students (and their teachers) were assured of confidentiality, gave informed consent to participate, and completed the questionnaire, which asked for neither names nor initials, by themselves. We had neither inclusion nor exclusion criteria (just the will to participate).

Measures

Aspects of Spirituality (ASP) were measured with a shortened version of the 40-item ASP questionnaire which was primarily designed to measure a wide variety of current aspects of spirituality beyond conceptual boundaries [6]. The shortened 26-item version of the ASP 2.0 was validated in a sample of 971 individuals (Büssing et al., in preparation) and demonstrated very good internal consistency (Cronbach's alpha = 0.940). It avoids exclusive terms such as church and Jesus (the term 'God' was used just once), and differentiates *Religious orientation: Praying / Trust in God, Search for Insight / Wisdom, Conscious interactions* (with yourself, environment, others, including patience, tolerance and generosity), and *Transcendence conviction* (rebirth, existence of

higher powers and beings, man is a spiritual being etc.). The items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not really apply; 2 - don't know; 3 - applies quite a bit; 4 - applies very much). The scores are referred to a 100% level (4 "applied very much" = 100%).

Perception of God images were measured with 10 items referring either to negative perceptions associated with God (i.e., *Guilt, Punishment, Failure, Fear*; Cronbach's $\alpha = 0.89$) or to positive perceptions (i.e., *Happiness, Love, Affection, Security, Shelter*; $\alpha = 0.94$) and *Disinterest*. The items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not truly apply; 2 - don't know; 3 - applies quite a bit; 4 - applies very much).

To measure *life satisfaction*, we used the 8-item Brief Multidimensional Life satisfaction scale (BMLSS) [2] which refers to the Huebner's 'Brief Multidimensional Students' Life Satisfaction Scale' [11,18]. The eight items of the BMLSS refer to intrinsic dimensions (*Myself, Overall life*), social dimensions (*Friendships, Family life*), external dimensions (*School, Where I live*), and the prospective dimension (*Financial situation, Future prospects*). The internal consistency of the instrument was good (Cronbach's $\alpha = 0.869$). Each item was introduced by the phrase: "I would describe my satisfaction with ...", and scored on a 7-point scale from dissatisfaction to satisfaction (0 - Terrible; 1 - Unhappy; 2 - Mostly dissatisfied; 3 - Mixed (about equally satisfied and dissatisfied); 4 - Mostly satisfied; 5 - Pleased; 6 - Delighted). The BMLSS sum score was referred to a 100% level ("Delighted").

Self-rated behaviour as a learner in terms of self-interest was assessed with three items, i.e., I would describe myself as an interested learner; For me it is important to actively plead my own interests; Consideration for others is fine, but what really matters in the end is that I get ahead in school and my career ('centre of interpretation'). We are aware that mutual consideration is socially desired and thus pupils would probably respond (cognitive) positively when asked directly; thus we chose the indirect phrase. The three items were scored on a 3-point scale (disagreement, don't know, agreement).

Statistical analysis

Analyses of variance (ANOVA), cross tabulations (Pearson's χ^2), correlation (Spearman rho) and stepwise regression analyses were performed with SPSS 15.0 for Windows (SPSS GmbH Software, Munich). We considered a level of $p < 0.05$ as statistically significant.

Results

28 adolescents were female (52%), 26 male (48%); their mean age was 17.4 ± 0.73 years. 27 were Catholics (50%), 25 Protestants (43%), and 2 stated that they had no religious affiliation. There were no significant gender specific differences in the religious education courses with respect to religious affiliation ($p=0.9$). However, 46 would not ascribe themselves as religious or spiritual (85% R-S-), 6 as religious but not spiritual (11% R+S-), 1 as spiritual but not religious (2% R-S+), and 1 as both religious and spiritual (2% R+S+).

35% considered themselves to be interested students, 22% did not agree and 43% were not sure. 67% stated that they actively plead their own interests (17% did not agree, 17% were not sure). Importance of getting ahead oneself instead of mutual consideration (in terms of school and career) was confirmed by 41%, rejected by 37%, while 22% were not sure.

Life satisfaction

We analysed how the adolescents estimated their satisfaction with various dimensions of life. As shown in table 1, the pupils' life satisfaction was overall high, particularly with respect to *Friendships, Family* and *Self*, but lowest with respect to *School*. There were no significant gender-specific (Table 1) or religious affiliation differences (data not shown).

		Life Satisfaction dimensions (Scores 0-6)							
		Family	Friendships	School	Self	Where I live	Overall life	Financial situation	Future perspectives
all	mean	4.52	5.33	3.72	4.48	4.72	4.53	4.02	4.15
	SD	1.31	0.85	1.25	1.19	1.35	1.10	1.50	1.01
female	mean	4.79	5.46	3.79	4.39	4.96	4.57	4.36	4.04
	SD	1.07	0.64	1.37	1.26	1.14	1.07	1.45	1.07
male	mean	4.23	5.19	3.64	4.58	4.46	4.48	3.65	4.28
	SD	1.51	1.02	1.11	1.14	1.53	1.16	1.50	0.94
F-value		2.472	1.401	0.178	0.317	1.897	0.089	3.087	0.773
p-value		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	0.085	n.s.

Table 1: Life satisfaction in students

Aspects of Spirituality

As shown in table 2, the adolescents appreciated *Conscious interactions* highest, while they had low scores for *Prayer / Trust in God* and *Transcendence conviction*; *Search for Insight / Wisdom* reached intermediate scores, indicating neither interest nor disinterest. In general, female students had higher scores than male students, particularly with respect to *Conscious interactions* (Table 2). However, *Prayer / Trust in God* was significantly lower in Protestants than in Catholics (19.6 ± 17.4 versus 36.4 ± 22.7 ; $F(2,52)=4.9$; $p=0.012$), while all other aspects of spirituality did not significantly differ ($F(2,52)<1.0$; n.s.).

		Prayer / Trust in God	Search Insight / Wisdom	Conscious interactions	Transcendence Conviction	Life Satisfaction Sum Score
All	mean	27.84	51.32	68.73	39.62	75.35
	SD	21.78	18.74	14.66	22.22	13.26
Female	mean	34.83	55.51	74.96	45.61	77.26
	SD	22.85	14.98	12.44	20.80	13.91
Male	mean	20.30	46.82	62.02	33.17	73.29
	SD	18.10	21.48	14.07	22.27	12.47
F-value		6.646	3.007	12.854	4.503	1.213
p-value		0.013	0.089	0.001	0.039	0.276

Values > 50% indicate a positive attitude or agreement, while scores < 50% indicate disinterest or disagreement.

Table 2: Aspects of Spirituality and Life satisfaction in students

If one differentiates adolescents with high religiosity (*Prayer / Trust in God* scores > 60%), intermediate (40-60%) or low religiosity (< 40%), it became obvious that the majority (67%) had low, 19% intermediate and 15% high religiosity scores (Table 3). Students with high religiosity had a significantly higher *Transcendence conviction* and a trend towards higher *Conscious interactions* scores.

Prayer / Trust in God		Prayer / Trust in God	Search Insight / Wisdom	Conscious interactions	Transcendence Conviction	Life Satisfaction Sum Score
< 40% (n=36)	mean	14,20	49,19	66,18	32,47	75,48
	SD	10.09	20.76	14.37	22.70	13.46
40-60% (n=10)	mean	47.81	55.36	69.00	54.38	72.04
	SD	5.24	13.28	9.07	14.45	8.93
> 60% (n=8)	mean	64.24	55.88	79.84	53.39	78.89
	SD	2.32	14.39	17.68	10.14	17.13
F-value	Mean	141.121	0.693	3.069	6.842	0.589
p-value	N	<0.0001	n.s.	0.055	0.002	n.s.

Values > 50% indicate a positive attitude or agreement, while scores < 50% indicate disinterest or disagreement.

Table 3: Aspects of spirituality and life satisfaction with respect to the degree of religiosity

To address the question of whether spiritual attitudes may develop with increasing age and life experience, we analysed 416 adolescents and young adults (all with a high school education, extracted from the data of a current study [Büssing et al., in preparation]) with respect to three age categories (≤ 20 years, 21-30 years, 31-40 years), and found that both *Prayer / Trust in God* and *Transcendence conviction* increased significantly with age and became of relevance in individuals > 30 years of age (Figure 1). In contrast, *Search for Insight / Wisdom* and *Conscious interaction* was of relevance also for younger individuals, but increases significantly with increasing age, too (Figure 1).

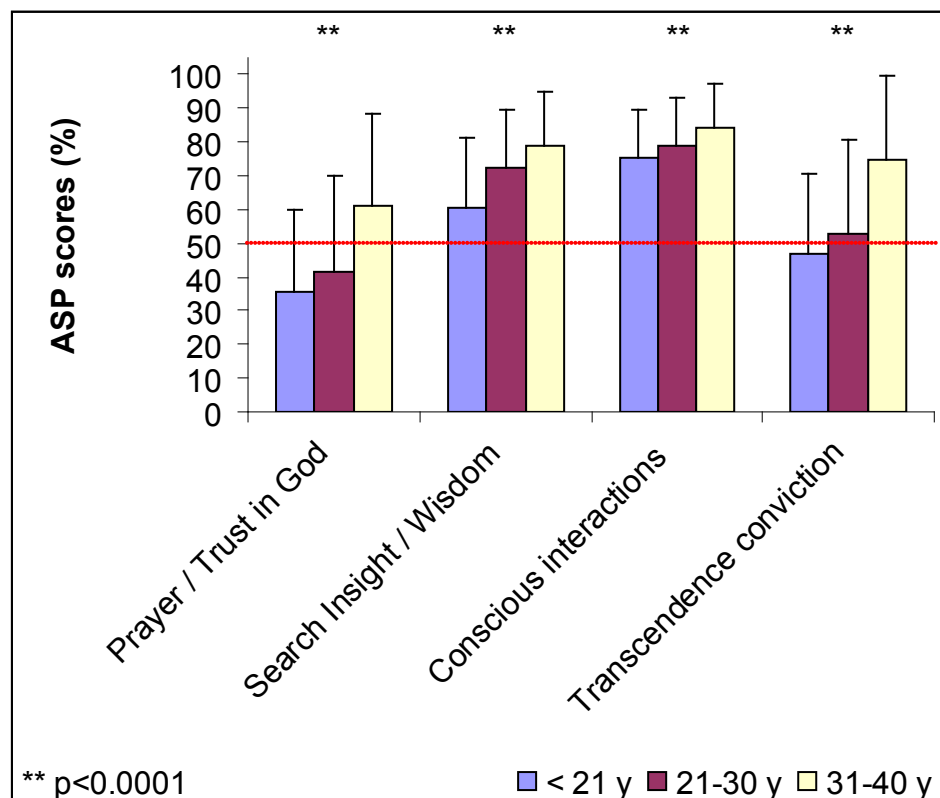


Figure 1: Aspects of spirituality in individuals with a high-school education (n=416; 46% women, 54% men; 75% Christians, 10% others religious denominations, 15% none; Büssing et al., in preparation). Individuals were differentiated with respect to age categories: ≤ 20 years (n=130), 21-30 years (n=154), and 31-40 years (n=125). Age categories differ significantly ($p < 0.0001$; ANOVA).

God images

Among the negative perceptions of students' God images, *Guilt* was mentioned by only 7% (rejected by 77%), *Punishment* by 10% (rejected by 79%), *Failure* by 23% (rejected by 77%), *Fear* by 8% (rejected by 76%), and *Disinterest* by 30% (rejected by 47%), while among the positive perceptions *Happiness* was mentioned by 28% (rejected by 34%), *Love* by 27% (rejected by 43%), *Affection* by 25% (rejected by 38%), *Security* by 39% (rejected by 39%), and *Shelter* by 42% (rejected by 43%). Thus, although 30% indicate *Disinterest*, up to 42% indicate positive perceptions.

Correlation analyses

Correlation analyses revealed that *Prayer / Trust in God* was moderately associated only with the life satisfaction dimension *Family* and strongly with positive God images, albeit also negatively with disinterest (Table 4).

	Prayer / Trust in God	Search Insight / Wisdom	Conscious interactions	Transcendence Conviction
Prayer / Trust in God	1.000	.316 *	.322 *	.569 **
Search insight / Wisdom		1.000	.355 **	.576 **
Conscious interactions			1.000	.246
Transcendence Conviction				1.000
Life Satisfaction				
Sum Score	-.015	-.300 *	.158	-.271 *
Family	.304 *	-.144	.159	-.053
Friendships	-.191	.044	.113	-.154
School	-.097	-.343 *	.131	-.189
Self	-.141	-.241	-.049	-.183
Where I live	-.035	-.229	-.057	-.220
Overall life	-.069	-.342 *	.058	-.178
Financial situation	.032	-.233	.228	-.252
Future perspectives	-.158	-.160	.115	-.343 *
School Attitude				
Interested learner	.033	-.090	.139	-.030
Actively plead own interests	.007	.176	.421 **	.036
Self-interest instead mutual consideration	-.220	-.135	-.242	-.160
Perception God Images				
Guilt	.266	.227	.098	.320 *
Punishment	.219	.229	.216	.305 *
Failure	.141	.151	.242	.225
Fear	.197	.211	.238	.148
Disinterest	-.545 **	-.143	-.104	-.278 *
Happiness	.692 **	.387 **	.307 *	.568 **
Love	.561 **	.293 *	.395 **	.400 **
Affection	.698 **	.253	.312 *	.537 **
Security	.649 **	.209	.407 **	.454 **
Shelter	.621 **	.250	.506 **	.338 *

* $p < 0.05$; ** $p < 0.01$ (Spearman rho, 2-tailed)

Table 4: Correlation between Aspects of Spirituality, life satisfaction, God images and school attitudes in students

In contrast, *Transcendence conviction* was negatively associated with the life satisfaction dimension *Future perspectives*, and associated strongly (positive) with *Prayer / Trust in God* and *Search for insight / Wisdom*, and with positive God images (particularly *Happiness* and *Affection*), but moderately negative also with *Guilt* and *Punishment*.

Search for Insight / Wisdom correlated negative with life satisfaction dimensions *School* and *Overall life*, and positive with God image *Happiness*

Conscious interactions were associated with none of the life satisfaction dimensions, but positively with positive God images, strongly with *Shelter*. Moreover, there was a moderate correlation with the students' attitude to actively plead their own interests and the scale *Conscious interactions*, which can be explained by significant correlations with the items "interact consciously with yourself" ($r=0.411$; $p=0.002$), and "develop compassion" ($r=0.350$, $p=0.010$), while "interact consciously with others" was significant just in trend ($r=0.254$; $p=0.064$), and "practice generosity" and "interact consciously with environment" had no significant impact ($r<0.2$, $p>0.2$). None of the other aspects of spirituality correlated with self-interest.

Satisfaction with *School* correlated moderately with *Future perspectives*, *Self*, *Financial situation* and *Overall life* (Table 5). The perception of being an interested student was associated with *School* satisfaction and *Financial* satisfaction. To actively plead their own interests correlated with life satisfaction dimensions *Friendships* and *Self*. Self-interest instead of mutual consideration correlated weakly negative with *School* satisfaction (Table 5). None of the God images significantly correlated with the three learners' attitudes (data not shown). However, satisfaction with *School* correlated significantly ($p<0.05$) and negative with the perceived God images *Affection* ($r=-.313$) and *Guilt* ($r=-.289$).

	Family	Friendships	School	Self	Where I live	Overall life	Financial situation	Future perspectives
Life Satisfaction								
Family	1.000	.157	.408 **	.292 *	.373 **	.393 **	.347 *	.213
Friendships		1.000	.203	.371 **	.210	.354 **	.021	.147
School			1.000	.492 **	.312 *	.501 **	.402 **	.450 **
Self				1.000	.395 **	.608 **	.257	.533 **
Where I live					1.000	.605 **	.450 **	.293 *
Overall life						1.000	.420 **	.399 **
Financial situation							1.000	.523 **
Future perspectives								1.000
School Attitude								
Interested learner	.257	-.028	.402 **	.118	.107	.219	.308 *	.187
actively plead own interests	.110	.371 **	.126	.295 *	.242	.235	.253	.133
Self-interest instead mutual consideration	-.130	.153	-.279 *	.103	.130	.117	-.075	-.053

* $p<0.05$; ** $p<0.01$ (Spearman rho, 2-tailed)

Table 5: Correlation between life satisfaction dimensions and school attitudes

Consideration as an attitude

Next we analysed which individuals rejected or accepted the statement that it is important to get ahead oneself both in school and career instead of mutual consideration, and which were undecided. These three groups did not significantly differ with respect to life satisfaction, *Prayer / Trust in God*, *Search for Insight / Wisdom*, or *Transcendence conviction* ($F<2.1$, $p>0.1$), while *Conscious interactions* had the lowest score in those accepting this statement ($F(2,51)=5.0$, $p=0.010$). However, more male than female pupils would accept the statement, i.e., 75% of girls rejected, 64% of boys accepted, and 58% of boys were undecided ($p=0.032$). There were no significant differences between Catholics or Protestants ($p=0.5$).

Self interest and rejected mutual consideration correlated significantly (inverse) with the statement to be an interested student ($r=-0.322$; $p=0.017$), but not with the attitude to actively plead own interests ($r=-0.044$, $p=0.8$).

Stepwise regression analyses identified three variables with an impact on self-interest ($R^2=0.273$). The strongest predictor was male gender (Beta=0.311, $t=2.519$, $p=0.015$), negatively modulated by satisfaction with *School* (Beta=-0.437, $t=-3.106$, $p=0.003$), and positively by *Overall life* satisfaction (Beta=0.346, $t=2.467$, $p=0.017$). Perceived God images and aspects of spirituality were not of significant relevance in this prediction model.

Discussion

Although we investigated just a small sample of adolescents with a high educational level, the preliminary results indicate that *Conscious Interactions* with self, others and environment were of highest importance to them, while *Prayer / Trust in God* and *Transcendence conviction* were of low interest; in contrast, the existentialist *Search for insight / Wisdom* was of moderate interest. All aspects of spirituality increased with age (Table 1), particularly *Religious orientation* and *Transcendence conviction* become relevant at > 30 years of age. One may suggest that individual life experiences drive individuals to ask for other resource to rely on in times of need, and thus, adolescents in trend are much more convinced to be able managing their problems alone than elderly. This is in partial contrast with a finding among young Protestant adults; their interest in church or religion was lowest among 18-29 year old individuals, in other words at the start of a self-dependent conduct of life, rather than during their school days [9]. A recent study by Werres confirmed that individuals in early adulthood ($n=47$; 22-30 years of age) had lower religiosity scores than adolescents ($n=32$; 16-21 years), and that elderly ($n=61$; >50 years) had the highest scores [15]. However, with respect to their spirituality scores, both mean and variances increased with age; the highest median was found in 31-50 year old individuals ($n=44$) [15]. To interpret our findings, one may suggest that the adolescents are either undecided or in fact not (yet) interested in religious/spiritual issues because they encounter more concrete struggles in relationships, family life, pressure to perform, anxiety about their future, etc.

In an international empirical study about religiosity among young people, Ziebertz investigated German individuals and confirmed a “certain degree of secularisation” [16]; nevertheless, “young people also think in religious terms, although these only partially coincide with the religious traditions represented by the churches” [16]. Another study among German youth found that just 30% belief in God and 19% in other higher powers, and about 28% are not interested in religion at all; moreover, youth accepted church as an institutional instance of moral, but with low relevance for their factual life [12].

In our study, several attendants of religious education had no interest in religious orientation or stated disinterest as a perceived negative image of God, moreover, a majority regarded themselves as neither religious nor spiritual (R-S-). With respect to the primary demographic results, ours are comparable to those of Ziebertz who analysed data of 1.925 pupils from the 11th grade (i.e. 52% versus 55% females, mean age 17.4 versus 17.8 years, 50% versus 63% Catholics, 43% versus 31% Protestants). In Ziebertz’s study [16], 46% regarded themselves as ‘believers’, while 28% did not; this contrasts with our finding that 85% of the adolescents (cognitively) regarded themselves as neither religious nor spiritual. When asked about their perceived (emotional) God images, 42% indicate positive perceptions – and this proportion is similar to Ziebertz’s ‘believers’. Thus, the cognitive and emotional substructure of adolescents’ spirituality may strongly differ. Cognitively they do know that there is no scientific evidence for the existence of higher beings (i.e., God), and consequently most will state they are neither religious nor spiritual or at least disinterested in God, while the positive God perceptions indicated by several of them indicate an emotional longing to be sheltered, guided, and beloved by an external transcendental being providing meaning and in an complicated life. To verify this, further studies are needed.

Similar to the results of Ziebertz who stated that for girls “religion has an important function in modern life, both for the individual, as well as for society” [16], female pupils in our study had significantly higher interest in spiritual issues than males; they are more open, particularly with respect to *Conscious interactions*.

In adults we have investigated the conceptual frameworks of spirituality using the ASP questionnaire too, and found that *Gratitude, Reverence and Respect, Compassion, Generosity and Patience, Insight, Awareness and Wisdom* and *Transcendence conviction* revealed the highest scores, while *Prayer / Trust in God and Shelter* and *Equanimity* gained much lower attention [6]. With increasing age and life experience, the importance of several expressions of spirituality significantly augmented, particularly for *Prayer / Trust in God and Shelter, Insight, Awareness and Wisdom, Transcendence conviction, and Equanimity* [6], which is quite similar to the findings among adolescents and younger adults mentioned here. However, the overall high scores of the adults reflect the importance they would ascribe to the distinct expression of spirituality and not necessarily their concrete practice.

The adolescents investigated by Ziebertz had a “considerable experience deficit regarding religion and faith” [16]. We may assume the same in our population, because most were undecided about their perceived God images or rejected even the positive images; in line with this suggestion is the fact that *Transcendence conviction* and *Prayer / Trust in God* increased with age (and experience in life). As a possible consequence, the religious world views of the adolescents investigated by Ziebertz are mainly Pragmatism (i.e., only the human being can give meaning and sense in life), Universalism, Metatheism, Naturalism and

Agnosticism, while Christian, Critical and Atheistic were rejected [16]. From a conceptual point of view this means that a much more open and pluralistic world view is dominant rather than dogmatic or limited concepts. Because every point of view thus is possible without an explicit focus, adolescents may regard themselves as the 'centre of interpretation', and thus an ego-centred attitude with an implicit 'elbow mentality' is consequent.

To assess how the underlying spiritual attitudes of the enrolled adolescents may impact life satisfaction and learner attitudes, we have performed correlation analyses. We found moderate associations between aspects of spirituality and various life satisfaction dimensions, particularly between *Search for insight / Wisdom* and the dimensions school and overall life. With respect to attitudes as learner, there was a moderate association between *Conscious interactions* (with self, others and environment) and the attitude of actively pleading own interests, while none of the facets of spirituality were associated with the rejection of consideration and an implicit 'self-centredness'. This means that although 41% of the adolescents attending religious education stated that it is important to get ahead oneself instead of consideration of others (in terms of school and career), spirituality cannot be regarded as a significant buffer of this attitude. In this sample, there were no significant differences with respect to this attitude in individuals with high, intermediate or low scores of *Prayer / Trust in God* ($p=0.23$) or *Conscious interactions* ($p=0.41$). In fact, stepwise regression analyses indicated that the strongest predictors of this attitude were male gender and (dis-)satisfaction with school. This implicit 'elbow mentality', rejected by 75% of girls, but accepted by 64% of boys, may have an impact on their social behaviour as adults. Thus, teachers should support and encourage particularly male adolescents to develop as responsible and considerate individuals. One may suggest that young people relying on this attitude have either had the experience that it is not worthwhile to care for others and/or they have role models which assure that self-interest guarantees social and economic effort (in terms of a 'survival of the fittest'). To verify this hypothesis, further studies with larger sample sizes, different cohorts and different 'educational styles' are needed.

In fact, it is supposed that parents of children in Waldorf (Steiner) schools create a sub-culture in the community with specific ideas, values and life-styles. At least in Sweden, parents from Waldorf school pupils "had adopted some form of spiritual or religious life view and disassociated themselves from atheism and materialism" [7]. Dahlin found that about 40% of the parents stated that they "embraced a Christian outlook on life" and 40% that they "embraced an anthroposophical world view" [7]. Their view of society was "characterised by fellow feeling, humanism and solidarity with the disadvantaged", and they disassociated themselves from "competitiveness and egoistic individualism", and thus contrasted somewhat with the general Swedish population [7]. It is obvious that parental attitudes would have an impact on the attitudes and behaviour of their children, and thus there is a rationale to assume that children from Waldorf schools might behave differently if compared to conventional schools. Indeed, the Swedish study confirmed that Steiner school students felt more "responsible for social and moral issues", and "for the future moral development of society" than students of municipal schools. Whether this is a unique feature of Swedish Waldorf pupils or a characteristic prevalent also in Waldorf students from other European countries remains to be clarified. Findings from Gidley confirmed that students from Steiner schools in Australia identified individual contributions they could make to solve problems, such as activism, values changes, education and personal properties categorized as "spirituality" (i.e., personal and community empowerment, conscious development, and compassion) [10]. She stated that in the students' "ideal future they also identified a quality that could be called 'future care'" [10]. Whether this is true for other socio-cultural backgrounds, and whether this may have an impact on 'self-centeredness' remains to be clarified.

A limitation of this study is its small sample size and restriction to high-school adolescents. Yet, this investigation does not claim to be representative, indeed, we have deliberately focussed on high-school adolescents attending religious education (in terms of a positive selection) in order to generate hypotheses which can be tested in larger cohort studies enrolling adolescents from different school levels, 'educational styles' and diverse socio-cultural backgrounds. These future studies should also approach ethical issues and the self-competence of adolescents. It is important to address ethical development in terms of autonomy, connectedness (with others and environment) and spirituality (i.e., engaging our lives with others, going beyond the ordinary, meaning in life, trust and reliance on higher sources etc.), because these qualities have to be encouraged and fostered. Learning is a social process, and adolescents have to acquire the skills to deal with their emotions, learning to care for others, establish positive relationships and make responsible decisions, as emphasized by Devaney et al. [8]. Gidley advised that educational futurists and teachers should support "young people to envision alternative, positive futures" because "where conscious imagination is not cultivated, tactic images will creep in anyway" [10]. Cultivation and nourishment of such imagination processes may have long-term strengthening processes [10].

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