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Perceived Functioning in Evolutionarily Important Domains of Life

Mohsen Joshanloo
Department of Psychology, Keimyung University

Current studies of quality of life tend to focus on a few select areas such as social relationships, income, and physical health, while crucial aspects of life such as sex, love, hygiene, and justice are often ignored. A more comprehensive approach is therefore essential to capture the multidimensional nature of human well-being and to fill the gaps in the currently prevailing perspective. This study assessed perceived functioning in major domains of life in which people are internally motivated to invest. Based on an evolutionary-informed model of human motivation, 15 domains were identified related to 15 basic motives: hunger, lust, comfort, hygiene, safety, attractiveness, love, nurture, resource accumulation, environmental mastery, affiliation, status, justice, curiosity, and play. A new measure was constructed to assess people's perceived functioning in these 15 life domains. A Canadian sample ($N = 660$) and an international sample ($N = 843$) were used. The results showed that people believe they relatively function better in domains such as safety, hygiene, and hunger, while rating lust (sex), status, resource accumulation, and love lowest. Age, gender, and subjective class predicted perceived functioning. Perceived functioning showed significant associations with mental well-being and personality dysfunction in the expected directions. Among the 15 domains, affiliation had the strongest correlation with overall well-being. The findings underscore the need to refine prevailing models of well-being and quality of life by incorporating evolutionary perspectives.

Public Significance Statement
This study identifies 15 domains of human motivation that are essential for capturing the multidimensional nature of well-being. The results suggest that people believe they are functioning relatively well in domains such as safety, hygiene, and hunger, while they rate sex, status, resource accumulation, and love lowest. Affiliation had the strongest correlation with overall psychological well-being. The article highlights the importance of updating current frameworks for well-being and quality of life by incorporating evolutionary perspectives.

Keywords: perceived functioning, life domain, well-being, personality dysfunction, motivation, gender

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To assess how people evaluate various aspects of their lives, researchers typically use measures of life satisfaction (Diener et al., 2013). In overall life satisfaction scales, people are asked to judge their current life as a whole, whereas, in domain satisfaction scales, they are asked to indicate how satisfied they are with different areas of their life (Sirgy, 2021). There is no consensus on which life domains are most important. For example, Cummins (2005) lists 173 different life domains that have been examined in previous research. In practice, however, domain satisfaction measures often consist of fewer than ten domains, including health, income, social relationships, leisure, and work (Costanza et al., 2007). Research using these scales has provided valuable insights

Mohsen Joshanloo https://orcid.org/0000-0001-9350-6219

Correspondence concerning this article should be addressed to Mohsen Joshanloo, Department of Psychology, Keimyung University, 1095 Dalgubeol Boulevard, Dalseo-Gu, Daegu 42601, South Korea. Email: mjoshanloo@gmail.com

into the objective conditions of life and people's subjective evaluation of those conditions (Sirgy, 2021). However, many important aspects of life appear to be overlooked in widely used scales of domain satisfaction. For instance, research shows that people think about food, sleep, or sex quite frequently in their daily lives (Fisher et al., 2012). Yet, these life domains are almost completely ignored in measures of domain satisfaction.

This article proposes that models of human motivation can be used to identify the areas of life that are most important to people. Motives are the reasons why people initiate and perform everyday behaviors (Reiss, 2004). If we know what people are internally motivated to do, we can identify important areas of life. For example, hunger is an important motive that drives all animals to search for food, an activity on which their survival depends. Since we know that hunger is an important motive, it follows that food acquisition is an important area of life in which success or failure has an adaptive value. While most psychologists agree that humans exhibit motivated behavior, there is disagreement about how many basic motives there are. Talevich et al. (2017) identified 161 motives that have been discussed in previous literature. Maslow's (1943) domain-specific model of motivation is widely accepted as a framework for understanding human motivation. However, Maslow did not focus on certain key evolutionary motives, including reproductive and sexual motivations, which are important components of human behavior (Kenrick & Krems, 2018).

In the present study, the aim was to identify key life domains in which people are internally motivated to invest. For this purpose, the study uses the categorization of basic human motives by Aunger and Curtis (2013). In an attempt to bring evolutionary theory to human motivation, these authors define motives as evolved psychological mechanisms that cause animals to satisfy evolutionarily important needs through behavior. In other words, motives are "specific adaptations that evolved to bias behavior towards actions that assisted our ancestors to survive and reproduce in the niches in which they evolved" (p. 50). Aunger and Curtis identified eight basic needs on which human/mammalian biological fitness depends: sexual capital, survival/growth/reproduction of offspring, bodily functions, environmental capital, social capital, and knowledge/skills, maximizing gene copy production, and minimizing environmental threats. Based on these needs, Aunger and Curtis identified 15 basic human motives, which are listed in Table 1. Activities associated with these 15 motives constitute 15 domains of life that are

Table 1
Basic Human Motives

Hunger (attainment of desirable and sufficient food and drink)
Lust (attainment of a desired frequency of sex)
Comfort (attainment of environmental and physical comfort, avoidance of physical pain and injury, attainment of optimal level of cold/heat/noise in the environment, desirable resting conditions)
Hygiene, purity (achieving desirable hygienic and sanitary living conditions, avoiding contagious diseases and contamination in the environment)
Safety (attainment of safety, avoidance of frightening/harmful experiences and people, avoidance of potential or actual accidents and threats)
Attractiveness (attaining and maintaining physical attractiveness, attractive features, possessions, and activities)
Love, pair-bond (achieving and maintaining desirable romantic and/or marital relationships)
Nurture (showing parental love and kinship love, caring for and supporting siblings, own children, or children of relatives)
Resource accumulation, hoarding (obtaining land, money, goods, and services)
Mastery, creating (mastering one's environment, building, changing, repairing, improving, destroying, cleaning, and organizing things in the environment when necessary)
Affiliation (achieving a desirable level of connectedness, trust, cooperation, friendship, teamwork, networking, sharing, and reciprocity)
Status (attaining prestige, status, influence, power, honor)
Justice (creating and maintaining an equitable environment, being treated fairly and treating others fairly)
Curiosity (understanding and explaining new things, acquiring new knowledge, trying new things, finding new ways of doing things)
Play (participating in desired recreational activities, arts, sports, games, and hobbies)

considered important and measured in the present study.

Of note, Kenrick et al. (2010) presented another insightful evolutionarily-based classification of fundamental human motives that follows the same evolutionary principles as the model of Aunger and Curtis (2013). The authors posit that throughout evolutionary history, humans have faced various challenges that threatened their survival and successful procreation of offspring, and that basic motives have evolved to help them overcome these challenges. They propose a model of basic human motives, including basic physiological needs, self-protection, disease avoidance, affiliation, status, mate acquisition, mate retention, and parenting (Kenrick & Krems, 2018; Ko et al., 2020). Here, the model of Aunger and Curtis (2013) was preferred as a basis over the model of Kenrick et al. because the goal of the study was to provide a more comprehensive assessment of evolutionary motives to extend quality-of-life models, and the Aunger and Curtis model provides a more complete framework that includes all of the motives in the Kenrick et al. model as well as additional motives. The present work distinguishes itself from the work of Kenrick et al. in another crucial respect. Whereas Kenrick et al. developed the Fundamental Social Motives Inventory to measure the importance of each motive to participants (Ko et al., 2020), here a scale was developed that assessed perceived functioning in life domains corresponding to each motive. It is argued here that the life domains that matter are those in which individuals are evolutionarily (and thus internally) driven to invest. Optimal functioning in these domains is therefore of adaptive value, as it promotes evolutionary fitness and thus increases the likelihood of survival and reproduction. The primary goal of this study is to measure perceived optimal functioning in these life domains, not how much importance people place on the motives underlying them.

The Present Studies

A measure of perceived functioning was developed for this article, asking respondents to indicate how well they think they are functioning in the 15 domains of life. The personal well-being index (International Wellbeing Group, 2013), the most widely used scale to measure satisfaction with life domains, assesses seven domains: Standard of living, personal health, achieving in life, personal relationships, personal safety, community-connectedness, and future security. A comparison of the domains in the personal well-being index and the new perceived functioning scale reveals many similarities (e.g., the inclusion of safety and connectedness). However, the perceived functioning scale includes dimensions (e.g., attractiveness, lust, hygiene, and status) that are important components of daily life but have received little attention in the life satisfaction literature (Sirgy, 2021). These domains of life have received much more attention in evolutionary psychology. Evolutionary psychologists argue that a complete understanding of human behavior and optimal functioning is impossible if these evolutionarily significant components of daily life are overlooked (Cook et al., 2021; Kenrick & Griskevicius, 2015). Therefore, it is expected that the perceived functioning scale will provide a more complete assessment of the domains of life than short scales of domain satisfaction.

This article reports on two empirical studies that used the new perceived functioning scale. Study 1 used a Canadian sample, whereas Study 2 used a sample from multiple nations. Both studies examined the reliability and factor structure of the scale, the distribution of scores across the 15 domains, and the scale's associations with demographic variables (i.e., age, gender, and class). To establish the nomological network of the new perceived functioning scale and to examine its convergent and discriminant validity, the associations between perceived functioning and mental well-being (life satisfaction, positive affect, negative affect, social well-being, and psychological well-being) and personality dysfunction (self-dysfunction and interpersonal dysfunction) were examined.

Study 1

This study examined the factor structure, reliability, and descriptive statistics of the new perceived functioning scale using a Canadian sample. It also examined its relationships with various aspects of hedonic (life satisfaction, positive affect, and negative affect) and eudaimonic (social and psychological) well-being. While hedonic well-being refers to the presence of positive cognitions and emotions, eudaimonic well-being is concerned with psychosocial skills such as having

meaning in life and quality social relationships (Ryan & Deci, 2001). Perceived functioning was expected to correlate positively with hedonic and eudaimonic well-being, indicating the convergent validity of the new scale. However, very high correlations with well-being components (e.g., >0.8) would indicate a lack of discriminant validity (Kline, 2019). Therefore, moderate and positive correlations with criterion variables are needed to indicate the acceptable validity of the new scale.

Method

Sample Size Determination

There are no uniform guidelines for the exact sample size required for exploratory factor analysis (Dimitrov, 2012). The optimal sample size for factor analysis depends on considerations such as the size of communalities and factor loadings, the number of factors, and the number of indicators per factor (Kyriazos, 2018; Mundfrom et al., 2005). However, for this study, none of these were known a priori. Therefore, the study followed the recommendation that "the larger the sample, the higher the quality of factor solutions" (Dimitrov, 2012, p. 87). Considering the financial constraints, the sample sizes of the current studies were 660 and 843. According to the rules of thumb proposed by Comrey and Lee (1992), $N = 300$ is good, $N = 500$ is very good, and $N = 1{,}000$ or more is excellent for factor analysis. Therefore, the sample sizes can be considered adequate for the present analyses.

Ethics Statement

Both studies were performed in line with the principles of the Declaration of Helsinki. All participants provided informed consent. Approval was granted by the Ethics Committee of Mohsen Joshanloo's institution.

Participants

The online study included 660 Canadian participants ($M_{age} = 51.733$, range = 18–85, $SD = 15.637$), of whom 62.9% were female. Participants were recruited through a data collection company (www.quantability.com) and compensated for their participation. All participants over the age of 17 from the company's online panel were allowed to participate in the survey, and interested individuals opted in. Three attention check questions asked participants to choose a specific response (e.g., "I would like you to choose 'agree a lot' for this item"). Only those who chose the correct response for all three questions were included in the final sample. The survey included other scales that were not related to the current study. Data from this sample were used in a previous study (Joshanloo, 2019) to answer a different research question.

Measures

Perceived Functioning. Fifteen items were used to measure perceived functioning in 15 domains of life: Hunger, lust, comfort, hygiene, safety, attractiveness, love, nurture, resource accumulation, environmental mastery, affiliation, status, justice, curiosity, and play. Participants were asked to rate their day-to-day functioning in these areas from 0 = *poor functioning* to 10 = *excellent functioning*. The scale is provided in the in the online supplemental materials. The items were created by the author based on the descriptions of the 15 motives by Aunger and Curtis (2013). An attempt was made to capture the essence of each domain using simple and nontechnical words and phrases. For example, Aunger and Curtis described the hunger motive as follows: "seeking, acquiring, and consuming resources such as nutrients, water, and oxygen" (p. 52). This description was summarized and simplified for the general respondent in the first item of the scale: "Obtaining desirable and sufficient food and drinks."

Mental Well-Being. Life satisfaction was measured using the Satisfaction with Life Scale (Diener et al., 1985). Each of the five items is rated on a 7-point scale, from 1 = *strongly disagree* to 7 = *strongly agree* ($\alpha = .911$). Positive and negative affect were measured using the Negative and Positive Affect Scale (Joshanloo, 2017; Mroczek & Kolarz, 1998). The scale contains six items for negative affect ($\alpha = .897$) and six items for positive affect ($\alpha = .926$). Respondents indicate how often they felt each of the emotional states in the past 30 days from 1 = *none of the time* to 5 = *all of the time*. Two subscales of the Mental Health Continuum-Short Form (Keyes, 2006) were used to assess social (five questions, $\alpha = .839$) and psychological (six items, $\alpha = .891$) well-being. Items are rated on a 6-point scale, from 0 = *never* to 5 = *every day*.

Subjective Class. The participants were asked to report which class they would describe themselves as belonging to, and presented with five options: 1 = *lower/working class*, 2 = *lower middle class*, 3 = *middle middle class*, 4 = *upper middle class*, and 5 = *upper class.*

Results

Factor Structure and Reliability

A principal axis factoring analysis was conducted. The scree test was used to identify the optimum number of factors to retain. The scree plot is shown in Figure S1 in the online supplemental materials. As the first eigenvalue (6.803) was substantially greater than the next one (1.461), it was concluded that a one-factor solution describes the factor structure of the 15 items adequately. The factor explained 41.592% of the variance with factor loadings ranging between 0.784 (affiliation) and 0.520 (lust). The 15-item scale was also found to be highly reliable with a Cronbach's α of .909.

Level of Self-Perceived Functioning

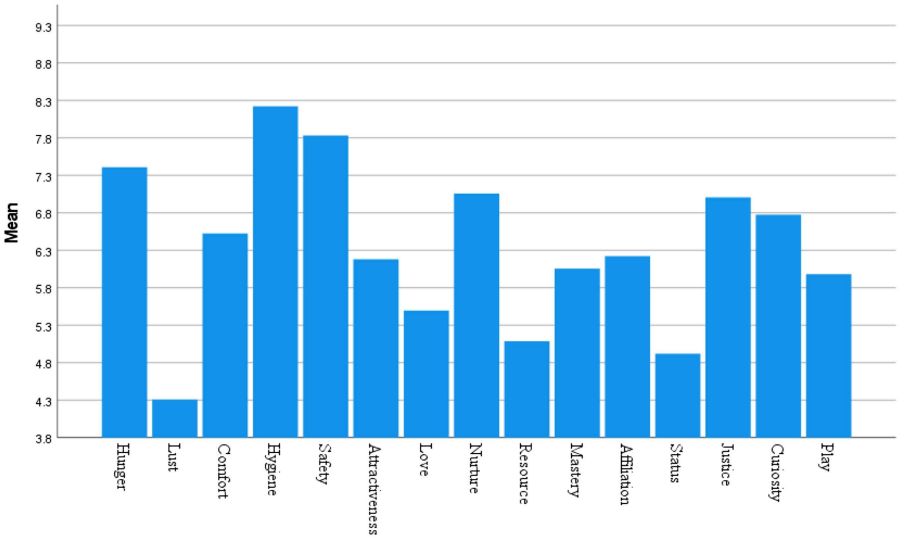
The total average was above the midpoint of the possible range of scores ($M = 6.339$, $SD = 1.803$, min = 0.200, max = 10.000), indicating that people believe they are functioning reasonably well. However, Figure 1 shows that people perceive themselves as functioning below the scale averages in areas such as lust, status, and resource accumulation. Perceived functioning scores were highest for safety, hygiene, and hunger.

Age and Gender, and Subjective Class

The correlation between overall functioning and age was 0.150 ($p < .001$). The individual domains had only weak correlations with age (Table S1 in the online supplemental materials), with the strongest correlations being with hunger (0.212) and affiliation (0.185) ($ps < .001$). Overall, these results suggest a slight age advantage for perceived functioning. Although women ($M = 6.419$) scored higher than men ($M = 6.209$) on overall functioning, the difference was not significant (Cohen's $d = 0.114$). However, Figure 2 suggests that women scored higher in some domains. Tables S2–S4 in the online supplemental materials show that some of the gender differences were significant. The largest gender differences were in nurture (Cohen's $d = 0.357$), justice (Cohen's $d = 0.212$), and hygiene (Cohen's $d = 0.204$) in favor of women. The correlation between subjective class and overall functioning was positive and moderate (0.380,

Figure 1

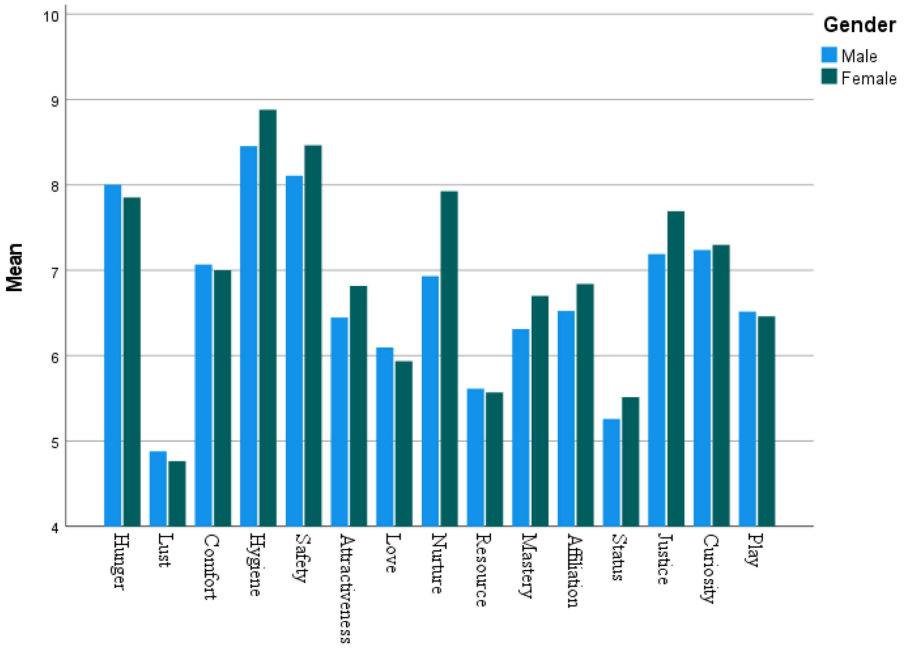
Averaged Ratings for Domains of Perceived Functioning in Canada



Note. See the online article for the color version of the figure.

Figure 2

Perceived Functioning Across Gender Groups in Canada



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$p < .001$). Table S5 in the online supplemental materials shows that subjective class was weakly or moderately associated with all functioning domains. The higher correlations (>0.30) indicate that, in addition to status and resource accumulation, individuals with higher subjective class also reported higher levels of well-functioning in the domains of attractiveness, affiliation, and love.

Association With Mental Well-Being

Perceived functioning was associated with life satisfaction, negative affect, positive affect, social well-being, and psychological well-being at 0.629, −0.522, 0.601, 0.461, and 0.564 (all *ps* < .001). The intercorrelations between the 16 items and the dimensions of well-being are shown in Table 2. Table 2 presents the intercorrelations between the 15 items and the dimensions of well-being. Affiliation exhibited the highest correlation with well-being variables. Additionally, resource accumulation, play, justice, and attractiveness had relatively higher correlations with well-being than other items.

Study 2

Whereas Study 1 used participants from a single country, Study 2 recruited an international sample to see if the results on the structure, reliability, and nomological network of the perceived functioning scale could be replicated in another sample. The same subjective well-being scales (life satisfaction, positive affect, and negative affect) used in Study 1 were used in Study 2 to examine the convergent and discriminant validity of the functioning scale. In addition, two core elements of personality pathology (self and interpersonal dysfunction) were also included in Study 2 to investigate their association with perceived functioning. The functioning scale was expected to have a positive association with subjective well-being and a negative association with personality dysfunction.

Method

Participants

This online study had a sample of 843 participants ($M_{age} = 29.974$, range = 18–65, $SD = 9.455$),

Table 2
Intercorrelations for Study 1

Domain	Social WB	Psychological WB	Life satisfaction	Positive affect	Negative affect	Row average
Hunger	0.280	0.322	0.338	0.304	0.366	0.322
Lust	0.266	0.270	0.394	0.317	0.211	0.292
Comfort	0.281	0.304	0.368	0.296	0.356	0.321
Hygiene	0.205	0.300	0.237	0.268	0.299	0.262
Safety	0.203	0.276	0.306	0.276	0.316	0.275
Attractiveness	0.365	0.429	0.423	0.461	0.387	0.413
Love	0.264	0.362	0.507	0.452	0.332	0.383
Nurture	0.279	0.384	0.402	0.385	0.312	0.352
Resource	0.331	0.375	0.582	0.500	0.442	0.446
Mastery	0.293	0.376	0.434	0.392	0.382	0.375
Affiliation	0.406	0.535	0.535	0.557	0.461	0.499
Status	0.361	0.419	0.472	0.456	0.332	0.408
Justice	0.375	0.479	0.425	0.454	0.384	0.423
Curiosity	0.342	0.414	0.325	0.368	0.308	0.351
Play	0.370	0.437	0.466	0.498	0.391	0.432
Column average	0.308	0.379	0.414	0.399	0.352	0.370

Note. WB = well-being. To make the comparison easier, negative affect was reversed-scored.

of whom 49.2% were female. The final sample included only those who correctly answered the single attention-checking question of the survey (i.e., "I would like you to tick 'completely untrue' for this item"). Participants were recruited through an international data collection website (www.prolific.co) and compensated for their participation. Most participants were from the United Kingdom (204), Australia (125), Spain (110), Germany (105), and the United States (62). Other participants came from various other countries, with sample sizes ranging from 42 (France) to 1 (Denmark and Latvia). Table S11 in the online supplemental materials presents the sample sizes across countries. In total, 27 countries were mentioned by participants. Only participants whose first, second, or official language was English and were older than 17 years were invited to voluntarily participate in the study. However, in response to a question at the end of the survey, 57 participants (6.8%) indicated that English was not their first, second, or official language. These participants were retained in the study because they indicated that they had no difficulty understanding all of the items in this survey. The sample is well-educated. Of the participants, 24% indicated that their highest educational degree was a postgraduate degree (e.g., MS, PhD, or equivalent). All participants provided informed consent. IRB approval for the project has been granted by Mohsen Joshanloo's institution.

Measures

Perceived Functioning and Mental Well-Being. Perceived functioning ($\alpha = .853$), life satisfaction ($\alpha = .872$), positive affect ($\alpha = .899$), negative affect ($\alpha = .852$), and subjective class were measured using the same scales as in Study 1.

Personality Dysfunction. The level of personality functioning scale-brief form 2.0 (Weekers et al., 2019) was used to measure impairments in personality functioning. The rationale behind this scale is that all forms of personality disorder have underlying features in the form of moderate to severe impairments in self-functioning (impairments in identity and self-direction) and in interpersonal functioning (impairments in empathy and intimacy). The scale measures self-dysfunction (e.g., "I have no sense of where I want to go in my life") and interpersonal dysfunction (e.g., "I often feel very vulnerable when relations become more personal"), each with six items. The items were rated on a 7-point scale from 0 = *completely untrue*, and 6 = *completely true*. The αs were .853 and .761, respectively.

Subjective Class

The same item used in Study 1 was used in this study to measure subjective class.

Results

Factor Structure and Reliability

A principal axis factoring analysis was conducted. The scree test (Figure S2 in the online supplemental materials) was used to identify the optimal number of factors to retain. As the first eigenvalue (5.259) was substantially greater than the next one (1.730), it was concluded that a one-factor solution describes the factor structure of the 15 items adequately. The factor explained 30.669% of the variance with factor loadings ranging between 0.682 (justice) and 0.225 (play). The second lowest factor loading (0.399) was for lust which was acceptable, yet play had a lower-than-optimal factor loading in this sample. The internal consistency of the scale was 0.853.

A supplementary confirmatory factor analysis (CFA) was also performed with Mplus using robust maximum likelihood estimation. Thresholds for adequate fit used were a comparative fit index (CFI) of 0.90, a root-mean-square error of approximation (RMSEA) of 0.07, and a standardized root mean square residual (SRMR) of 0.08 (e.g., Kline, 2015). A single-factor CFA was tested, in which the 15 items were specified as indicators of a latent variable. Model fit was unacceptable, $\chi^2(90) = 944.285$, $p < .00$ (RMSEA = 0.106, CFI = 0.721, and SRMR = 0.083). The modification indices were used to modify the model to achieve a better fit. The indices suggested that the addition of residual covariances between love and lust, between safety and hygiene, and between comfort and hunger would improve model fit. The addition of these three residual covariances in a modified model significantly improved fit, $\chi^2(87) = 525.049$, $p < .00$ (RMSEA = 0.077, CFI = 0.857, and SRMR = 0.068). Although the CFI of the modified model was not acceptable, the RMSEA and the SRMR were acceptable (Kline, 2015). It is noteworthy that the current model has an unusually large number of indicators per factor, and research has shown that CFI is negatively affected by increasing the number of indicators per factor (Ding et al., 1995). Overall, the fit of the model was rated as acceptable/adequate. This indicates that the single-factor model is generally consistent with the data. Standardized factor loadings were in line with those of the exploratory factor analysis and ranged from 0.727 (affiliation) to 0.220 (play). The second lowest factor loading was for lust (0.342).

Level of Self-Perceived Functioning

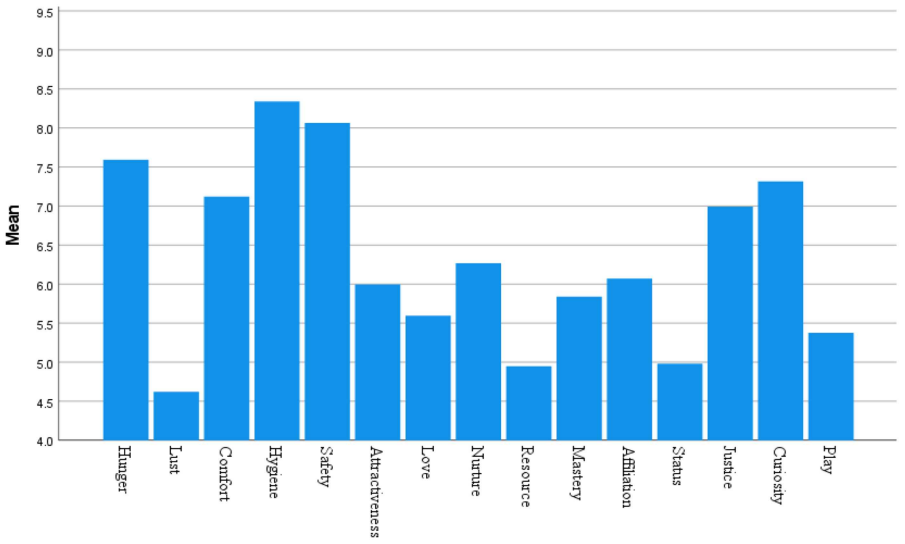
In great agreement with the results of Study 1, the overall average of the items was above the midpoint of the scale ($M = 6.342$, $SD = 1.437$, min = 1.533, max = 9.733), indicating that people believe they are functioning reasonably well. Figure 3 shows that people perceive themselves as functioning below the scale averages in areas such as lust, status, and resource accumulation. Average scores were highest for safety, hygiene, and hunger.

Gender Differences

The measurement invariance of the perceived functioning scale between gender groups was investigated to ensure that the scale is assessing the same construct across the gender groups (Schmitt & Kuljanin, 2008). The modified model from the previous analysis was tested in both groups simultaneously. The criteria used to determine noninvariance were $\Delta CFI \geq -0.010$, $\Delta RMSEA \geq 0.015$, and $\Delta SRMR \geq 0.030$ for metric invariance and $\Delta CFI \geq -0.010$, $\Delta RMSEA \geq 0.015$, and $\Delta SRMR \geq 0.010$ for scalar invariance (Chen, 2007). The fit of the multigroup configural model was similar to that of the model in the whole sample, $\chi^2(174) = 613.986$, $p < .00$ (RMSEA = 0.078, CFI = 0.858, and SRMR = 0.072). The reduction in model fit due to equality constraints on factor loadings (RMSEA = 0.075, CFI = 0.858, and SRMR = 0.074) was not large enough to suggest noninvariance. Therefore, metric invariance was supported. The reduction in model fit due to equality constraints on item intercepts also did not reach the thresholds (RMSEA = 0.075, CFI = 0.849, and SRMR = 0.076), so scalar invariance was supported. These results indicate that the perceived functioning scale has the same factor structure, factor loadings, and item intercepts between gender groups. Thus, perceived functioning has the same meaning for men and women, and scores can be compared across gender groups. Women ($M = 6.375$) and men ($M = 6.321$) scored similarly in overall functioning. However, Figure 4 shows that women scored higher in some areas. Tables S7–S9 in the online supplemental materials show that some of the gender differences were

Figure 3

Averaged Ratings for Domains of Perceived Functioning in the International Sample



Note. See the online article for the color version of the figure.

significant. The largest gender differences were for nurture (Cohen's $d = 0.235$) in favor of women. Gender differences were smaller in Study 2. However, in both studies, the largest gender difference was for nurture.

Age and Subjective Class

The correlation between overall functioning and age was 0.112 ($p = .001$). The individual domains had only weak correlations with age (Table S6 in the online supplemental materials), with the strongest correlation being with nurture (0.205, $p < .001$). Overall, these results suggest a small age advantage for perceived functioning. The correlation between subjective class and overall functioning was positive and moderate (0.254, $p < .001$). Table S10 in the online supplemental materials shows that subjective class was weakly or moderately associated with all 15 domains. Overall, associations with age and class were consistent across studies but somewhat weaker in the second study.

Association With Mental Well-Being and Personality Functioning

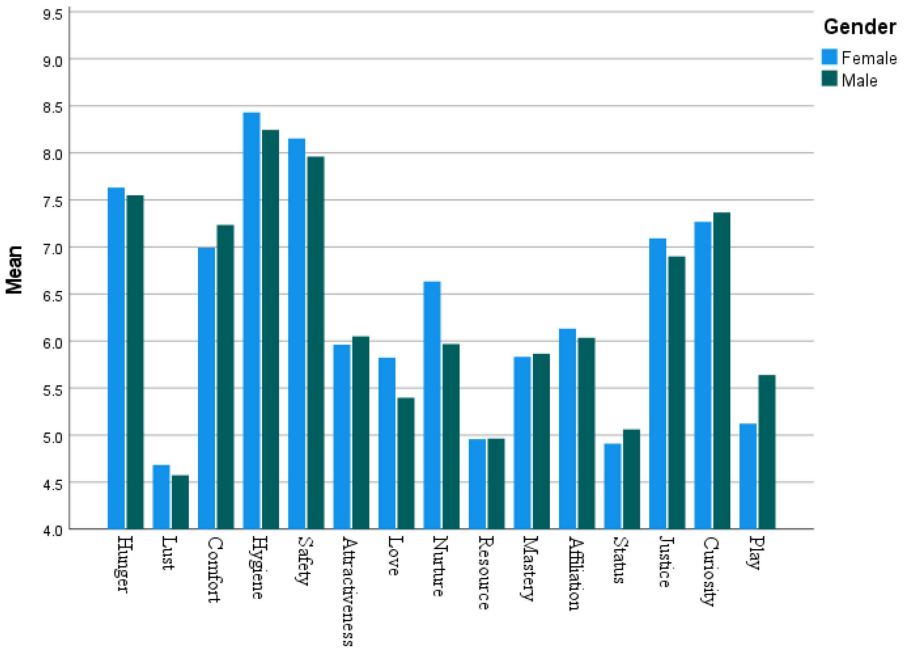
Perceived functioning was associated with life satisfaction, negative affect, positive affect, self-dysfunction, and interpersonal dysfunction at 0.542, −0.443, 0.522, −0.394, and −0.364, respectively (all $ps < .001$). Table 3 presents the intercorrelations between the 15 items and the dimensions of well-being and personality function. Affiliation exhibited the highest correlation with well-being variables. Additionally, status, attractiveness, resource accumulation, and justice had relatively higher correlations with well-being than other items.

Discussion

Life domains have received much attention in the life satisfaction literature. Researchers in this area typically attempt to identify a manageable number of domains that they believe (or find) are the most important determinants of overall life satisfaction (Sirgy, 2021). In the present study, a different perspective was taken in identifying important life domains. The identification of domains was based on Aunger and Curtis' (2013) evolutionarily informed model of human motivation. These researchers identify 15 basic human motives associated with satisfying needs in domains important for evolutionary fitness. In this study, a new scale was developed to measure perceived functioning in 15 domains

Figure 4

Perceived Functioning Across Gender Groups in the International Sample



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related to these motives. The results support the reliability and validity of the new scale and reveal its nomological network. Perceived functioning has weak or moderate associations with demographic variables and weak to strong associations with well-being and personality dysfunction.

Factor Structure and Reliability

Overall, the results of both studies support a single-factor structure for the new scale. Of note, Item 15 (play) in Study 2 had a low factor loading on the extracted latent variable. The item had an acceptable factor loading in Study 1 and its correlation with the total scale in Study 2 was positive and nontrivial (0.216), making retention of the item defensible. The 15-item scale had high internal consistency in both studies. The results of the factor analysis suggested a single-factor solution. This finding aligns with prior research indicating that multi-item measures of domain satisfaction typically exhibit a single-factor structure (Żemojtel-Piotrowska et al., 2017). Thus, although domain items possess some unique variances (Joshanloo, 2023), they share enough common variance to constitute a single latent factor. Even though the assumption of a single-factor structure is largely consistent with the data and demonstrates that the scale is capable of effectively measuring a unified construct of perceived functioning, it is critical to recognize that factor analysis alone does not always dictate the most useful way of using a scale in specific research and application contexts. Categorization of items based on practical, theoretical, or empirical justifications can serve as a valuable approach for researchers to delineate and understand the subtleties of the variables under study. Thus, if researchers choose to use selected items from the scale to measure a particular theoretical domain or to create subscales based on particular theories, such an approach is still warranted. For example, the results of the present study suggest that domains that are more social in nature (e.g., affiliation) have stronger associations with well-being than domains that are more physical in nature (e.g., hygiene and safety). Consequently, it may be useful for a researcher who studies well-being

Table 3
Intercorrelations for Study 2

Domain	Self-functioning	Interpersonal functioning	Life satisfaction	Positive affect	Negative affect	Row average
Hunger	0.121	0.083	0.222	0.260	0.256	0.188
Lust	0.188	0.163	0.215	0.225	0.165	0.191
Comfort	0.158	0.103	0.248	0.251	0.266	0.205
Hygiene	0.115	0.093	0.158	0.148	0.226	0.148
Safety	0.112	0.123	0.173	0.140	0.212	0.152
Attractiveness	0.292	0.261	0.393	0.425	0.323	0.339
Love	0.253	0.248	0.351	0.331	0.235	0.284
Nurture	0.227	0.327	0.382	0.337	0.266	0.308
Resource	0.296	0.241	0.460	0.354	0.320	0.334
Mastery	0.253	0.211	0.299	0.254	0.235	0.250
Affiliation	0.343	0.409	0.450	0.482	0.354	0.408
Status	0.338	0.284	0.479	0.438	0.297	0.367
Justice	0.298	0.293	0.368	0.362	0.320	0.328
Curiosity	0.302	0.235	0.340	0.336	0.267	0.296
Play	0.121	0.065	0.150	0.173	0.158	0.133
Column average	0.228	0.209	0.313	0.301	0.260	0.262

Note. All correlations except that between play and interpersonal functioning were significant at $p < .05$. To make the comparison easier, the functioning and negative affect variables were reversed.

to distinguish these two categories in their studies. Thus, compelling practical and theoretical considerations can override the results of factor analysis in certain contexts.

How Do People Think They Are Functioning in Life?

The results of both studies consistently show that people rate their functioning as above the scale's midpoint. Still, there are differences between the domains. Hygiene, safety, and hunger were the areas with the highest ratings. It is worth noting that both samples are predominantly composed of participants living in countries with a high standard of living. Samples from developing countries are expected to have lower mean scores in these three areas. Lust had the lowest average score, suggesting that the majority of people are not satisfied with the amount of sex they are having. Previous research also suggests high levels of sexual dissatisfaction in the general population. For example, a study of individuals aged 16–74 who had at least one sexual partner in the United Kingdom found that 15.0% of men and 34.2% of women reported having no interest in sex (Graham et al., 2017). Other research shows that the prevalence of sexual inactivity has increased over the past two decades (Ueda et al., 2020). A study in 27 countries showed that more than 56% of respondents were dissatisfied with their sex lives, with nearly a quarter of women and more than a third of men reporting not having enough sex (Mulhall et al., 2008). Thus, an important area of life in which the majority of people feel they are not doing well is sex. Resource accumulation, status, and love were also areas with relatively low ratings. Overall, psychologists, educators, governments, and policymakers need to consider the finding that people are more likely to struggle with areas related to intimate relationships (sex and love) and power (status and resources).

Associations With Demographic Variables

Both studies showed a weak but significant relationship between perceived functioning and age. Thus, on average, older people perceive a higher level of optimal functioning for themselves than younger people do. Inspection of scatter plots revealed no evidence of a nonlinear relationship between age and perceived functioning. While the relationship between age and life satisfaction is best described as U-shaped (Blanchflower & Graham, 2021), and the relationship between age and eudaimonic well-being is linear and negative (Joshanloo, 2018), the relationship between age and perceived functioning is weak, linear, and positive. The gender difference in perceived overall functioning was not

replicated in Study 2. However, a robust gender difference was found in both studies for nurture, with women perceiving more optimal functioning in this area. This suggests that women invest more time and energy in caring for their own children and/or those of their relatives, and perceive themselves as more efficient than men in this area. These findings are consistent with evolutionary psychology research showing that women are generally more motivated to care for offspring and kin than men (Kenrick & Krems, 2018). Finally, subjective class was a robust predictor of levels of perceived functioning in both studies. Hence, higher perceived status enhances functioning in life, not only in domains related to status but also in domains associated with mating (e.g., attractiveness, affiliation, and love).

Associations With Well-Being and Personality Dysfunction

Overall perceived functioning was moderately and positively related to hedonic (life satisfaction, reverse negative affect, and positive affect) and eudaimonic (social and psychological) well-being. This indicates optimal convergent validity of the new perceived functioning scale. The correlations were not too strong to compromise discriminant validity. This means that perceived functioning has sufficient unshared variance with widely used aspects of well-being to be considered a related but distinct construct. Perceived functioning includes functioning in domains such as lust, hunger, hygiene, and attractiveness, which are rarely considered in most models of hedonic and eudaimonic well-being (Keyes et al., 2002). While the two domains of safety and hygiene are associated with the emotions of fear and disgust (Aunger & Curtis, 2013), the perceived functioning scale has no explicit emotional content, distinguishing it from hedonic well-being, which is largely based on emotional experiences (Deci & Ryan, 2008). Perceived functioning was also negatively associated with personality dysfunction. Whereas the perceived functioning scale measures self-perceived functioning in areas of life in which people are evolutionarily motivated to invest to guarantee evolutionary fitness, the scale of personality functioning measures core elements of personality pathology (self and interpersonal dysfunction). These two concepts of functioning were expected to be associated with each other, which was found to be the case in this study. Perceived functioning had stronger associations with well-being domains than with personality dysfunction.

In both examined samples, affiliation exhibited the most robust correlation with overall well-being. Similarly, status, attractiveness, resource accumulation, and justice displayed relatively strong associations with well-being in both samples. Conversely, hygiene, safety, lust, hunger, and comfort demonstrated the weakest associations with the components of well-being in both samples. Consequently, a significant portion of the unshared variance between perceived functioning and well-being could be attributed to the latter five domains. It is noteworthy, however, that a notable disparity emerged between the two samples in relation to play. Specifically, play manifested a considerably robust association with well-being in the Canadian sample, while displaying a substantially weaker association within the international sample.

The relationship between mental health and the strength of evolutionarily significant motives, as assessed by the Fundamental Social Motives Inventory, has also been examined in prior research (e.g., Krems et al., 2017). For example, Ko et al. (2020) observed that individuals who reported higher levels of kin-care related to family and children motivation exhibited better overall mental health. Conversely, individuals who reported higher levels of mate-seeking motivation displayed poorer mental health outcomes. These findings, along with the current study's results, collectively indicate that both the intensity of specific motivations reported by individuals and their perceived attainment of desirable outcomes within these domains of life have implications for individual well-being. Consequently, these two lines of research contribute synergistically and complementarily to the understanding of the complex interplay between motives and mental health. Findings from both lines of research consistently underscore the importance of affiliation for mental well-being. By recognizing the unique importance of the affiliation motive for mental well-being, practitioners and policymakers can better prioritize and address this specific domain when developing strategies and initiatives to improve overall mental health outcomes.

Limitations

The study also had some limitations. The samples used in this article are convenience samples and are by no means nationally representative. For example, the median age of Sample 1 (55 years) is considerably higher than the median age of the resident population of Canada, which was 41.1 years in 2021.[1] Future studies will need to include random and more representative samples to obtain more generalizable results. Although Study 2 aimed for an international sample, individuals from developing countries are underrepresented in the sample. Future studies should therefore include samples from countries with lower levels of economic development. The present results are likely to paint a picture of perceived functioning only in affluent and highly educated countries. The data were collected before the COVID-19 pandemic. The pandemic may have changed the way people assess their functioning. For example, the areas of safety and hygiene are expected to become more prominent during a pandemic, and the results for these two areas could change as new data are collected. The impact of the pandemic on how people perceive the various domains of their lives remains to be explored in future research. Finally, it is important to acknowledge the fact that the two studies reported here did not establish incremental validity for the new scale. Future research endeavors should aim to investigate whether the perceived functioning scale exhibits improved psychometric properties and predictive validity when compared to established measures of domain satisfaction, such as the Personal Well-Being Index (International Wellbeing Group, 2013).

Conclusion

This study represents a pioneering effort to measure perceived functioning across a wide range of life domains using an evolutionarily informed model of motivation. The conceptualization and measurement developed in this study shed light on aspects of well-being that have traditionally been overlooked in prevailing models of well-being and quality of life. As a result, this study contributes to the enrichment and diversification of concepts within the fields of well-being, quality of life, and evolutionary psychology. Further research is needed to explore additional conceptual and psychometric aspects of the scale, including its cross-cultural validity. By capturing dimensions of well-being that are often neglected in conventional models, the developed concept and scale expand our understanding of subjective functioning and its implications for overall well-being. In addition, these findings have important implications for policymakers, educators, and psychologists by highlighting specific areas that warrant increased attention in efforts to promote well-being and enhance individuals' quality of life.

[1] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810002601.

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