Social and cultural determinants of help-seeking in Cuba and Germany – A structural equation model approach

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Abstract

Social support is an important determinant of help-seeking in the context of mental health. Previous evidence shows differences in the relation between social support and help-seeking between more collectivistic vs. more individualistic cultures. Especially the cultural informed role of the family might play a key role in help-seeking decisions. Still, many studies have been conducted with minority groups in Western societies which have to face additional struggles due to immigration. The current study investigates help-seeking, social support, cultural values, and help-seeking intentions in the Cuban and German general populations. A cross-sectional questionnaire survey was applied to n = 340 Cuban and n = 340 German adults. Multiple-group structural equation modeling was used to examine measurement invariance between the groups and to explore relationships between the concepts under study in both cultural groups. No measurement invariance could be established for the overall model and most of the measures separately which impedes cross-cultural comparisons. Using plausible values, the structural model was estimated in both samples separately. Not all hypotheses could be supported for the Cuban and German samples. Yet, social support and the importance of family predicted informal and formal help-seeking significantly but differently in both samples. In the light of methodological limitations, their potential to support or to prevent different forms of help-seeking are discussed and possible practical implications derived.

Introduction

The global situation of mental health is one of the key challenges at the present day. 29.2% of the world population are suffering from mental disorders during their lifetime [1]. Still, persons affected frequently do not receive professional help [2–6]. One factor in the fight against the mental health care gap might be social support and informal help which seem

to be preferred by persons affected [7–13]. The social network plays a key role in buffering distress [e.g., 14–16], preventing mental illness [15,17–19], and promoting psychological well-being [20]. Moreover, social support has proven its relevance in the individual help-seeking process [e.g., 14,15,21–23]. Yet, it remains unclear whether social support promotes or hampers professional help-seeking when needed [e.g., 12,24]. Moreover, cross-cultural research hints to culturally informed differences in social support seeking, professional help-seeking, and its respective benefits [25,26]. However, these research questions have rarely been addressed [23]. Therefore, the current study aims to study the associations between social support, help-seeking intentions, and cultural values in Cuba and Germany.

Social support

Social support is defined as the actual experience or the subjective perception to be loved, cared for, and valued as a person. It implies to belong to a social network of mutual obligations and help [23,27,28]. It includes social ties, socially legitimate roles, shared values, affection, and mutual responsibilities [29]. *Functional support* serves a particular objective like information, assistance, or comfort when facing a problem [15,23,29,30]. Additionally, positive interactions and affection have been described as facets of social support [30]. When considering positive effects of social support, subjectively *perceived* support like the awareness of strong social ties and available social support are reducing distress more effectively than the actual use of social support [15,16,23,26,31–33]. Actually, using social support might add distress due to feelings of guilt or by reducing the individual's self-esteem [34,35]. The received support might be perceived as intrusive, controlling or not matching the needs [15,18,36–37]. Apart from this, social support has been discussed in the light of professional health care use which will be addressed in the following section.

Social support and professional help-seeking

Help-seeking has been conceptualized as an adaptive coping process using external resources to deal with personal and emotional problems [38]. It includes informal and formal sources of help. Informal help is often defined as help offered by the social network like family, friends, neighbors, and colleagues [e.g., 8]. Formal help-seeking has been defined more diverse: Some studies conceptualized formal help as treatment offered by a trained mental health professional like psychiatrists, counselors, and psychotherapists. Others included teachers, help-lines, general practitioners, traditional healers, spiritual leaders and so on [38]. The critical difference might be the personal versus professional relation between the provider and the receiver of help [38]. Previous evidence showed that the majority of diverse cultural populations prefered to use informal sources of help or the complementary use of both to solve emotional and personal problems [e.g., 7–13]. Further, informal help has been rated as more helpful than professional help [39–41]. Main advantages of informal help might be its wide dissemination and availability in everyday life and in moments of crisis making it easier and faster to access [e.g., 13,39,41]. Moreover, people might feel understood by providers of informal help due to a shared understanding of causes and adequate dealing with problems resulting in less perceived distance [8,42]. In general, formal help-seeking has been reported to be the last resort when informal help did not solve the problem or suffering was too strong [11,43,44]. Therefore, informal help-seeking has been conceptualized as a barrier to formal mental health care.

At the same time, informal help might contribute to adequate help-seeking and well-being [cf., 39,42]. Four main hypotheses regarding a positive interplay between formal and informal help have been discussed [21,44]: (A) Social networks buffer the negative effects of distress which in turn diminishes the need for professional help [e.g., 14–16], (B) social support replaces professional help at least partly [45], (C) social partners help to recognize

difficulties and refer to adequate formal help [45–47], and (D) the social network shapes the individuals' attitudes, norms, and values about help-seeking [cf., 25,48]. In general, the decision-making process regarding help-seeking seems to be highly social. Literature points out that people generally talk about their symptoms before deciding to seek help. They consider rules, expectations, opinions, and norms of their community in the decision to seek help [25,42,47,49–52]. A social legitimization might be important to prevent negative labeling, mental health stigma, the withdrawal from the social network, or loss of status [39,50,53]. Interestingly, individuals counting on social support or with more contact to family and friends seem to seek more help in general [13,41]. Thus, the social network might facilitate both forms of help-seeking [7,8,13]. In sum, evidence hints more to positive than negative outcomes of social support on mental health and help-seeking. Yet, it emphasizes the important role of the community and the individual's cultural socialization on the help-seeking process which we will address in more detail.

Social support, help-seeking, and culture

Cross-cultural studies raise further questions regarding social support in the context of mental health help-seeking. Mostly, cultural minorities show an even higher priority of informal help compared to Western samples [e.g., 13,41]. In the Latin American and other more collectivistic cultures, the concept of *collective coping* as a culturally informed coping style has been established [54–56]. One of its facets is the preference of informal help-seeking when coping with psychological and emotional distress. In a Mexican American college sample, lower perceived support by family and friends was associated with more formal help-seeking [57]. Correspondingly, less willingness to seek counseling was predicted by higher satisfaction with one's social support in another Latin American college sample [58]. Chiang et al. [54] also reported negative attitudes regarding formal help-seeking and a preference of

informal help-seeking in a sample of Latin and African American students. Additionally, participants reported a strong emphasize on family, family activities, and to keep problems within the family. Problematically, most of our current knowledge is based on immigrant samples. These populations have been studied in foreign contexts and health-care systems. Thus, they are often facing additional struggles like racism, discrimination, acculturation, mistrust in the system, language barriers, financial barriers, and a lack of health insurance [11,59–61]. Further, Latin Americans are a group consisting of several nationalities and ethnicities which might seem culturally similar from an outsider perspective but show peculiarities [cf., 62].

When studying social support and help-seeking cross-culturally, one especially interesting aspect might be the relative importance of the family in the help-seeking process. High importance of family is a core Latin American value called *familismo* [63]. It describes a strong identification with and attachment to the family and their needs [e.g., 64–66]. In this sense, familismo is associated with higher loyalty and obligation to support the nuclear and extended family [27,62,63,67]. Moreover, it demands to involve the family when making decisions. Hence, the family becomes a key source of information and transmits attitudes, values, and norms [48,62]. Familismo has been defined as one of the critical cultural values affecting formal help-seeking in Latin American samples [25,59,68]. Possible effects of familismo on formal help-seeking have been conceptualized in the so-called *alternative resources* vs. *barrier theory*. While the first theory implies that strong social ties have a positive impact on mental health and might buffer the need for additional formal help, the second argues that familismo and other cultural values function as barriers to mental health care [cf., 45,61]. Previous evidence hints in both directions: Generally, familismo builds large social networks offering social support in Latin American communities [69]. Hence, it has been positively associated with informal help-seeking behavior in a representative US-Latin American sample

[45]. Individuals scoring high on familismo talk more to family and friends and perceive less need and intention to seek formal help [61,62]. Otherwise, familismo places the family's needs, privacy, and reputation over the needs of single family members [70]. In this sense, it might hamper formal help-seeking to protect the family's reputation given the high stigmatization of mental disorders in Latin American cultures or because of placing greater trust in the family than in the health care system [59,69]. For a better understanding of their interplay, the current study aims to investigate cultural values, social support, and help-seeking in two different contexts, namely in Cuba and Germany.

Cultural contexts of the current study

We chose Cuba to study social support and help-seeking behavior because of its unique social, historical, and political context. Cuban culture is defined as collectivistic or socio-centric [71–76]. This means that Cubans focus on relationships and experience themselves related to the social environment [77]. This fact is evident in different manifestations of everyday life and social organization [cf., 48,72,78]. Since the overall standard of living is low [79], solidarity and social support form part of Cuban everyday life [80]. Additionally, Cubans ascribe high importance to values like generosity and solidarity and reject egoism [81]. In general, the structure and function of social networks in Cuba have been described as typical for traditional societies in terms of expected roles, gender differences, organization of family life, and care of the elders [78]. The family is conceptualized as the principal base of individual health and well-being. It is the primary source of love, satisfaction, and support. The family satisfies material and spiritual needs [82]. The key role of family in Cuba also manifests in its influence on health behavior and help-seeking. Cuban health care policy is mainly based in the family and family health is one of the main objectives of primary care [48,82]. In this line, 25% of indicators of good health and well-being are directly associated

with family life [83]. Vice versa, the Cuban family is conceptualized as a leading determinant of health and illness. As the most important source of social support, the family is expected to buffer the negative effects of daily hassles [82].

In the context of mental health behavior, Cubans show comparatively positive attitudes towards professional help-seeking in Cuba and in the USA [45,84,85]. Further, both formal and informal help should be easily accessible for Cubans. The Cuban (mental) health care system offers treatment free of charge to every citizen. Mental health care is community-based and outpatient facilities are implemented in the neighborhoods. These *centros communitarios de salud mental* are guided by a social psychiatric approach [86,87]. They work with the families [e.g., 88] and cooperate directly with the communities promoting psychological health, improving social relations, and integrating families and neighborhood residents in the treatment process [89]. In this context, another widespread form of help-seeking is traditional healing [41]. Due to its history of colonialization and slavery in Cuba, the West African animist tradition *Yoruba* synthesized with the Spanish Christian tradition. As a result, the Afro-Cuban religion *Santería* represents an important source of help when coping with emotional, personal, and health problems [54,90].

The German context serves as a useful counterpart to compare social support and help-seeking with Cuba. Germany represents a Western culture with predominant individualistic values [71]. Hence, values like autonomy and independence are encouraged and individual choices, own volitions, and distinctiveness are comparably important [77]. As part of this individualism, family structures and living arrangements are changing. Bearing and raising children has become less attractive [91]. An independence-based family model gets more prevalent [92]. Accordingly, people from Western individualistic societies prefer to rely on themselves when solving problems [26]. To need help seems to be associated with individual failure and weakness [cf., 93]. Yet, levels of perceived social support are generally high [94–96].

Interestingly, in a large German sample, social support was more strongly correlated with mental health outcomes than resilience compared to Chinese and Russian samples [97].

Regarding actual health behavior in the German population, little evidence exists. German lay population prefers informal help compared to formal help, especially in the context of depression [7]. Confidents were most frequently cited as adequate sources of help, followed by mental health professionals, general practitioners, and self-help groups. Germans mainly rejected priests, community nurses, and community mental health centers [7]. Further, religion is of minor importance in German everyday life. Although 64.5% of the general population identify as members of the Christian church [98], the number of members, the importance of religious rituals, and the general interest seem to decrease [99]. In Germany, no comparable informal religious network like the Santerían network in Cuba exists. Public (mental) health care is accessible for almost everyone living in Germany. Health insurance is mandatory and mental health care is covered by every private and public health insurance [100]. Thus, lack of access or poverty are no formal barriers to mental health care in Germany. Still, the globally recognized mental health care gap is present in Germany as well [3]. Further, Germans show less professional help-seeking intentions compared to Cubans [84]. Thus, previous literature hints both to possible similarities and differences in social support and help-seeking between Cuba and Germany.

Hypotheses

Summarized, the current study aims to add empirical data to improve the understanding of help-seeking in different cultural contexts. In addition to the factors introduced above, sociodemographic variables are supposed to play a significant role in the interplay of social support and help-seeking. Generally, higher distress is associated with reduced well-being and both predict more formal help-seeking [22]. Further, we expect gender to influence the

variables of our model in various ways [cf., 101]. In general, women (versus men) report higher levels of distress and worse mental health [27,78]. Previous literature argued that this might be due to more stress exposure in daily life or to gender differences in network involvement [15,102,103]. Women assume more stressful functions and roles in family life compared to men [104–106]. They are more involved with the family and significant others, show more responsibility to maintain family ties, and are more implicated in close relationships and social support [15,27,101,102,107]. In general, they seem to establish more intimate relationships and count on more social support in times of need [27,102].

Based on the literature reviewed above, we modeled associations and linear relations between the variables 'collectivism', 'distress in the past year', 'gender', 'familismo', 'perceived social support', 'current well-being', 'informal help-seeking intention' and 'formal help-seeking intentions' as presented in Figure 1. Further, we expect higher values of collectivism [71] and familismo in the Cuban sample [108]. Lastly, we expect Cubans to seek more informal help compared to Germans [109].

Fig 1. Theoretically derived structural equation model of well-being, cultural values, social support, and help-seeking intentions. *Note.* affect = affection, bene = benevolence, conf = conformity, emot = emotional support/ information, pos = positive interaction, tan = tangible support, trad = tradition; GHSQ = General Help-Seeking Questionnaire [10,110]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

Methods

Sample and sampling

In both cultural settings general population was sampled using opportunity sampling. In the Cuban sample (n = 342), the survey was applied as a paper-pencil version and in Spanish language. Data collection took place at the university hospital *General Calixto García Iñiguez* and by snowball principle in the Cuban capital Havana. Patients and their companions of different outpatient clinics were invited to participate voluntarily while waiting for their consultation term. Data collection took place from May to July 2017. Since we expected biased attitudes towards mental health help-seeking, we excluded mental health professionals from the data analyses (n = 2). The Cuban data showed missing data ranging from 0% (highest education) to 50.6% (GHSQ10 – help-seeking in chat rooms) on item-level and was multiply imputed. The underlying missing data mechanism was tested using the Little's MCAR test [112] and t-test comparisons to check for homogeneity of means and covariances [113]. Little's MCAR test was not significant, X^2 = 12902.493, DF = 12976, p = .675, indicating that data was missing completely at random. We applied multiple imputation to handle missing data using item-level imputation and the regression-based approach *fully conditional specification* [FCS; 114]. Using correlation analyses with missingness variables and univariate t-test comparisons, we identified auxiliary variables to improve the imputation model and enhance statistical power. To achieve convergence and stable imputations despite the high number of variables in the imputation model, we applied parcel summery multiple imputation [115,116]. For convergence diagnostic, we used the potential scale reduction factor and graphical diagnostics and adapted the burn-in interval and the number of between-imputation iterations for each imputation model [114,117,118]. We generated 50 sets of imputations using the software Blimp [117]. Statistical analyses were applied on each filled-in data set separately. To pool the estimated parameters into a single set of results, Rubin's formulas were used [119].

The German sample (n = 407) was recruited online using EFS-Survey Spring Version 2017 [120]. The questionnaires were presented in German. The survey link was spread via

social media and postings in public spaces like supermarkets, restaurants, and bus stations in different German cities. Further, we reached out to the broader German population using open and closed groups on social media platforms to sample participants from diverse population segments. Further, we posted our research on bulletin boards for psychological studies where interested persons can participate voluntarily (e.g., Psychologie heute). Data collection took place from July to October 2016 (n = 207). To reach a sample size comparable to the Cuban sample, we started a second data collection wave from July 2020 to February 2021 (n = 200). The German data set showed no missing values due to a default option remembering the participants to answer all questions. For cultural comparison, we excluded data of participants who reported not being German (n = 25) as well as mental health professionals and psychology students (n = 42). Eventually, we reached a total sample size of N = 680 with n = 340 Cuban and n = 340 German participants.

Ethical considerations

The local scientific committee at the Faculty of Psychology at the University of Havana and the local Institutional Review Board of the Department of Psychology and Sports Science at the University of Münster approved the study. Informed consent was obtained after each participant was verbally informed about the purpose and course of the study. Due to local laws, no monetary compensation was offered to Cuban participants. German participants were invited to participate voluntarily in a raffle of vouchers and were not compensated individually to keep the compensation and intrinsic motivation as comparable as possible.

Measures and procedure

To answer the research questions, we conducted a cross-sectional questionnaire survey. When possible, we used already published German and Spanish versions of the questionnaires. When necessary, original English versions were translated and back translated [121] and adapted to the respective language. First, a sociodemographic questionnaire asked for age, gender, civil status, country of origin, housing situation, and education with single items each. Afterwards, the questionnaires were presented in the order described below.

WHO (Five) Well-Being Index [WHO-5; 111]. The WHO-5 asks for the overall well-being in the last two weeks using five items and a six-point Likert-scale ranging from 0 (*At no time*) to 5 (*All the time*). A sum score was calculated with higher scores indicating more well-being. The WHO-5 shows good psychometric qualities in different languages and cultural settings as well as evidence about its measurement invariance [122,123]. We used already existing German and Spanish versions [124]. The Spanish version shows adequate psychometric properties in the Spanish elderly and student samples both in paper-pencil and online versions [125,126]. In Colombia, acceptable psychometric properties and the one-factor structure were confirmed in the general population and the Colombian youth [127,128]. To the best of our knowledge, no results from the Cuban cultural context exist. In the German cultural context, good psychometric properties, a one-factor structure, and construct validity have also been reported [129].

General Help-Seeking Questionnaire [GHSQ; 10,110,130]. The GHSQ asks for prospective and past help-seeking behavior. Participants indicate the probability of seeking help by ten sources of help like partner, friends, health professionals, or spiritual leaders. Participants are asked to indicate their help-seeking intentions in the next four weeks regarding possible emotional or personal difficulties on a seven-point Likert-scale ranging from 1 (*extremely unlikely*) to 7 (*extremely likely*). Additionally, participants can add other sources of help using an open item or indicate no help-seeking intentions at all. The GHSQ assumes two

subscales named formal and informal help. In an Australian high school sample, the GHSQ showed good psychometric properties and an acceptable internal consistency [110]. The GHSQ has been used widely [e.g., 9, 131–132], but no profound validation exists for the Cuban or German cultural context. The postulated two factor structure was replicated for a wide range of problems and symptoms in a Chilean sample [131]. For the original English version, no consistent factor structure could be confirmed in a US-American sample [133]. Therefore, we will apply the definition suggested by Rickwood and Thomas [38] defining the source of help regarding the private versus professional relation between help-seeker and help-provider. Hence, informal help consists of the items partner, parents, friends, and other relatives. Formal sources of help are defined as mental health professionals, phone helpline, general practitioners, and spiritual leaders. We excluded the items 'chat rooms' since internet is greatly restricted in Cuba and 'Professor/ Academic Advisor' since it did not apply to the general population samples. The second part of the GHSQ asks for previous professional help-seeking and will not be part of the current analyses.

Medical Outcome Study – Social Support Scale [MOS-SSS; 30]. The MOS-SSS offers a multidimensional assessment of perceived social support using 20 items and a five-point Likert-scale ranging from 1 (*never*) to 5 (*always*). The first item is an open item asking for the number of intimate friends and family members. The other 19 items ask for the availability of different aspects of support in everyday life. A total sum score of items 2 – 20 indicates the total extent of social support in everyday life. Moreover, the authors postulated four subscales named *tangible support*, *affection*, *emotional support/information*, and *positive interaction*. Good psychometric properties have been reported for the general factor and the four subscales in the US-American context [30]. In the current study, the Spanish version of the MOS-SSS was used with slight linguistic adaptions of items 8 and 13 for a better fit with the Cuban language [134]. Good internal consistency and different, mostly three-factor

346 solutions have been reported in the Argentinian [135], Colombian [136], and Spanish contexts
347 [134,137]. Since no validation study exists in the German cultural context, the original four-
348 factor structure will be applied in the current study.

349 **ESS Human Value Scale** [HVS; 138]. The HVS aims to measure ten basic human
350 value priorities to compare cultures or individuals. Schwartz postulates the ten basic values
351 *self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, be-*
352 *nevolence,* and *universalism*. The values can be pooled to *individualistic* (power, achieve-
353 ment, hedonism, stimulation, and self-direction), *collectivistic* (benevolence, tradition, and
354 conformity), and *mixed* (security and universalism) interests [139]. These human value priori-
355 ties are conceptualized as beliefs which refer to desirable and trans-situational goals of the in-
356 dividual and her/ his community. They are ordered by importance and serve as standards for
357 moral judgments and behavior [140]. The HVS offers 21 items which shortly describe a per-
358 sonal characteristic. Participants are asked to indicate to which extent they feel to be similar to
359 the person described on a six-point Likert-scale ranging from 1 (*very much like me*) to 6 (*not*
360 *like me at all*). The items were presented gender-matched to the participants. We used existing
361 German [141] and Spanish versions [142]. In a German validation study, nine of ten human
362 value priorities have been confirmed for the German cultural context in the 40-items version.
363 The short version used in the current study showed a six-factor solution. Measurement invari-
364 ance could barely be established between a large number of European countries [143]. Ac-
365 cording to the aims of the current study, we only considered collectivism with the three sub-
366 scales benevolence, tradition, and conformity.

367 **Life Events List** [LEL; 144]. As an additional measure of distress, we asked partici-
368 pants for the occurrence of 23 major life events in the last 12 months. In case of an affirmative
369 answer, participants were asked to rate their individual perception and appraisal of the events.
370 In the current study, a shorter version was used [145]. Further, participants were invited to

add up to three more life events not mentioned in the list. For analyses, we coded the single events as subjectively positive vs. negative life events. Then, we added all negative experienced life events to a sum score.

Pan-Hispanic Familism Scale [PHFS; 66]. We used the five items of the PHFS to assess familismo. On a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) participants indicate their agreement to statements on ideological beliefs about family. The PHSF showed a unidimensional factor structure, good internal consistency, and measurement invariance across language use and country of origin in an US-Latin American sample [66]. For analyses, the mean was calculated with higher scores indicating higher importance of familismo. In the current study, we used the original Spanish items and translated them into German.

Statistical analyses

First, data was analyzed descriptively for each cultural subsample separately and compared between both samples. Inferential statistics were based on two-tailed and one-tailed testing depending on the (non-)direction of hypothesis. Theory-driven, we included the variables mentioned above in a structural equation model (SEM; see Figure 1). Hypotheses were tested using multiple-group SEM [146,147]. In multiple-group SEM, a series of models is tested consecutively to evaluate the influence of the group variable. In the measurement-model of SEM, confirmatory factor analyses (CFA) are used to test the measure's factorial structure. The structural model of SEM uses a regression-based approach assuming linear effects to test the postulated paths between latent factors. Multiple-group SEM allows to establish an overall model fit and different levels of measurement invariance between groups. To evaluate the model fit, we used established fit indices and applied the following cutoff scores for good model fit: >.95 for the *Comparative Fit Index* (CFI) and the *Tucker-Lewis Index*

(TLI), <.06 for the *Root Mean Square Error of Approximation* (RMSEA), and <.08 for the *Standardized Root Mean Square Residual* [SRMR; 148]. Thereby, always the robust version of the fit indices as offered by the package semTools [149] will be reported. Further, we will especially focus on the SRMR as probably most reliable overall fit-index in the context of multiple imputation [150]. In a first step, a baseline model was established. The baseline model is the least restrictive model to establish configural invariance between the groups. In a next step, we tested the model for weak measurement invariance between the groups which demands intergroup equality of factor loadings. After establishing weak measurement variance, we tested for strong measurement invariance which demands intergroup equality of items' factor loadings and intercepts. In the last step, we tested the model for strict measurement invariance which demands intergroup equality of the item's factor loadings, their intercepts, and their measurement error variance [146]. For most of the model estimations reported below, the respective functions indicated that sample sizes were too small to compute gamma. Gamma matrix is used for weighting the results and is based on the number of parameters to be estimated. Computational difficulties might indicate that the number of parameters in the postulated model is too high for the available data. Its impact on the estimates is difficult to appraise [cf., 151]. For each step, we tested statistically whether the model deteriorated compared to the previous step. Therefore, we tested the statistical significance of the difference between the models on a significance level of $p < .05$. Difference tests were estimated using the pooled likelihood-ratio test statistic D2 implemented in the package semTools [149]. Additionally, we considered the change in CFI and RMSEA. For both indices, we considered a change of $\leq .01$ for acceptable not to reject the hypothesis of invariance [146]. In the end, means and predictive relationships of all variables included in the model were compared to derive further conclusions. Statistical analyses were mainly performed with the software package R 4.0.2 and the packages lavaan [152] and semTools [149].

Results

Descriptive analyses

Descriptive results show significant differences between the groups in various characteristics. We aimed to use $p \leq .05$ as significance level. Due to multiple group comparisons, we applied Bonferroni correction as a conservative correction method of multiple testing and used $p \leq .002$ as significance level for the descriptive results. An overview over sample characteristics is provided in the supporting information Table S1 and S2. The Cuban and German samples differed significantly with respect to gender, $X^2 = 12.729$, $df = 2$, $p = .002$, with more female participants in the German (77.1%) compared to the Cuban sample (63.5%). Also, Cuban participants reported a higher mean age ($M = 43.99$ years, $SD = 15.32$ years) compared to German participants ($M = 30.16$ years, $SD = 11.15$ years), $t(33811.839) = -13.111$, $p < .001$. The Cuban and German samples also differed significantly with respect to civil status, $X^2 = 110.044$, $df = 4$, $p < .001$, with more singles in the German (39.4%) compared to the Cuban sample (8.2%). More Cuban than German participants reported to have completed a professional training (Cuba: 35.6%, Germany: 6.2%), $X^2 = 89.010$, $df = 1$, $p < .001$, a high school degree (Cuba: 30.3%, Germany: 13.8%), $X^2 = 26.824$, $df = 1$, $p < .001$, and other graduations (Cuba: 15.9%, Germany: 0.6%) as highest education, $X^2 = 52.619$, $df = 1$, $p < .001$, while more German participants reported to have a master degree (Cuba: 4.1%, Germany: 42.4%), $X^2 = 139.338$, $df = 1$, $p < .001$. Further, more German participants reported to live alone, $X^2 = 12.729$, $df = 2$, $p = .002$, or with non-related others, $X^2 = 12.729$, $df = 2$, $p = .002$, while Cubans reported to live with different members of the nuclear and extended family and various generations (see Table S1 in the supporting information). Still, Cuban and German participants did not report significantly different numbers of negative life events in the past 12

months (Cuba: M = 3.11, SD = 2.83; Germany: M = 2.76, SD = 2.01), t(281.801) = -1.469, p = .143, and did not differ significantly in previous professional help-seeking behavior (Cuba: 37.1%, Germany; 47.6%), X^2 = 4.019, df = 1, p = .045.

Since we collected data in Germany in two waves in 2018 and 2020, we tested the German subsamples for systematic differences to gauge possible influences of the COVID-19 pandemic starting in 2020. We aimed to apply a significance level of $p \leq .05$ and used Bonferroni correction to adjust for multiple testing resulting in a significance level of $p \leq .005$. The German subsamples differed significantly with respect to gender, X^2 = 17.382, df = 2, p < .001, with more female participants in the data collection wave in 2020 (86.5%) compared to the data collection wave in 2018 (67.6%). Further, the Germans participating in the survey in 2020 were significantly older (M = 34.09 years, SD = 12.54 years) than the Germans participating in the survey in 2018, (M = 26.24 years, SD = 7.87 years), t(284.272) = -6.921, p < .001. The German subsamples differed also in their mean well-being, t(331.129) = 4.109, p < .001, with participants in 2020 reporting less well-being (M = 2.37, SD = 1.12) than participants in 2018 (M = 2.84, SD = 0.97). Lastly, the German subsamples differed significantly in familismo, t(338) = 3.652, p < .001, with higher mean familismo in the subsample of 2018 (M = 4.15, SD = 0.85) compared to the subsample of 2020 (M = 3.78, SD = 0.98).

Next, we inspected the zero-order correlation matrices of the Cuban and the German samples which we provide in Table 1. Due to estimation difficulties we had to exclude n = 2 participants from the German sample who indicated their gender as diverse. Eventually, gender was included in the SEM as a dichotomous variable.

Table 1. Zero-Order Correlation Matrix with Confidence Intervals in the Cuban and German Samples.

r [95% CI]	1	2	3	4	5	6	7	8
1. Gender (0 = female, 1 = male)[1]	1.00							
	1.00							
2. Negative life events (LEL)	.096 [.081;.111]	1.00						
	-.163 *[-.177;-.148]*	*1.00*						
3. Well-being (WHO-5)	.168 [.154;.183]	-.178 [-.192;-.163]	1.00					
	.087 *[.072;102]*	*-.191* *[-.206;-.177]*	*1.00*					
4. Collectivism (HVS)	.069 [.054;.084]	.140 [.125;.154]	.018 [.003;.033]	1.00				
	.031 *[.016;.046]*	*.049* *[.034;.064]*	*-.005* *[-.020;.010]*	*1.00*				
5. Familismo (PHFS)	-.078 [-.093;-.063]	-.157 [-.171;-.142]	.120 [.105;.135]	-.132 [-.147;-.117]	1.00			
	-.014 *[-.029;.001]*	*-.203* *[-.217;-.188]*	*.394* *[.382;.407]*	*-.123* *[-.138;-.108]*	*1.00*			
6. Social support (MOS-SSS)	.028 [.012;.043]	-.153 [-.168;-.138]	.153* [.138;.168]	-.169 [-.183;-.154]	.197 [.182;.212]	1.00		
	-.196 *[-.212;-.182]*	*-.108* *[-.123;-.093]*	*.387* *[.374;.400]*	*-.037* *[-.052;-.022]*	*.496* *[.485;507]*	*1.00*		

7. Informal help-seeking intentions (GHSQ)	-.045 [-.060;-.030]	-.068 [-.083;-.053]	.099 [.084;.113]	-.134 [-.148;-.119]	-.260 [.245;.274]	.342 [.328;.355]	1.00
	-.128 [-.143;-.113]	*-.042 [-.057;-.027]*	*.306 [.292;.319]*	*-.082 [-.097;-.067]*	*.354 [.341;.367]*	*.492 [.480;.503]*	*1.00*
8. Formal help-seeking intentions (GHSQ)	-.153 [-.167;-.138]	-.094 [-.109;-.080]	-.051 [-.066;-.036]	-.155 [-.170;-.141]	.055 [.040;.070]	.027 [.012;.042]	.194 [.179;.208]
	.040 [.025;.055]	*.019 [.003;.034]*	*-.144 [-.159;-.129]*	*.074 [.059;089]*	*-.293 [-.306;-.279]*	*-.154 [-.168;-.139]*	*.037 [.022;.052]*

1.00

1.00

Note: Estimations of the German sample are printed in italic. N_{Cub} = 340, N_{Ger} = 338. *CI* = confidence interval, *N* = size of subsample; *SD* = standard deviation; GHSQ = General Help-Seeking Questionnaire [10,110]; HVS = Human Values Scale [138]; LEL = Life Events List [145]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

[1]Due to estimation difficulties we had to exclude n = 2 participants from the German sample who indicated their gender as diverse; eventually, gender was included in the SEM as a dichotomous variable.

Multiple-groups structural equation models

Most of the measures were assessed on a Likert-scale indicating ordinally scaled data. Accordingly, multivariate normality was violated in both groups for almost all measures. Further, we included gender as a categorical variable in the SEM. Therefore, we estimated all models using the robust *Weighted-Least-Squares Mean- and Variance-adjusted* estimator [WLSMV; 153] as implemented in the lavaan package [152]. First, we aimed to introduce the theoretically postulated model (Figure 1) as a baseline model and to establish configural invariance between the samples. The model did not converge indicating that the model was too complex to be estimated from the current data. Hence, we aimed to reduce the complexity of the model without losing to much information by deleting the postulated subscales of social support [MOS-SSS; 30] and collectivism [HVS; 138] from the measurement models of both samples. Again, no solution was found probably due to complexity of the proposed model. Thus, we cannot answer the question whether the Cuban and German samples share the same general factorial pattern of the measures. When restricting some of the estimates, the function *sem.mi* of the semTools-package was able to estimate the model in the current samples. First, we restricted the loadings to be equal between both groups to establish weak measurement invariance. The function *sem.mi* of the semTools-package warned that some Heywood cases were detected. No pooled estimate was a Heywood case so that there was no cause for concern as stated by the function *sem.mi* of the semTools-package. The reduced model with restricted loadings between the groups indicate a good model fit, $X^2(1903) = 1569.721$, $p = .926$, CFI > .999, TLI > .999, RMSEA < .001, $SRMR_{Bentler} = .071$. Still, due to the estimation difficulties and multiple imputation, fit-indices need to be interpreted with caution since they might be overestimated [150]. Therefore, we aimed to perform difference tests between the single estimations of the model. Again, the model became too complex to be estimated based on the current data. Hence, we examined the model estimates based on their confidence

intervals (CI). We compared 110 estimates of the weak invariance model and checked (a) whether the estimate of the German sample falls into the CI of the value estimated in the Cuban sample and whether the estimate of the Cuban sample falls into the CI of the value estimated in the German sample. If this was not the case, (b) we checked whether both CI overlap. If none of these possibilities applied, (c) we categorized the respective estimate as significantly different between both samples. In the weak invariance model of the reduced SEM, 34.5% of the estimates of both samples fall into the CI of the other sample, respectively. Additionally, in 11.8% of cases the estimate of one sample falls into the CI of the other sample. In 17.3% of cases, the CI of both estimates overlapped and 36.4% of estimates were categorized as significantly different between both groups (see supporting information Table S3). To further evaluate differences between the estimates, we plotted the estimates of the Cuban sample against the estimates of the German sample (compare Figure S1 to S4 in the supporting information). A considerable amount of misfit was detected in the estimated intercepts and residuals, especially of the variables collectivism [HVS; 138], formal and informal help-seeking intentions [GHSQ; 110], and social support [MOS-SSS; 30]. Thus, we probably cannot assume for these variables that changes at the level of the latent variable is represented by an equal change at item level scores for the Cuban and German sample when restricting the loadings to be equal between groups. Therefore, we cannot postulate that differences between the Cuban and the German sample at the level of construct represents actual differences between the samples since they might be confounded by differences in measuring the respective construct in both samples [146].

Next, we estimated the model with the restrictions of strong measurement invariance restricting the loadings and the intercepts to be equal between the Cuban and the German samples. No Heywood cases or other convergence difficulties emerged anymore with this amount of restrictions indicating that the number of estimates in the configural and weak

invariance models are too high for the available data. The overall model fit indices show good model fit, $X^2(1941) = 1809.161$, $p = .984$, CFI > .999, TLI > .999, RMSEA < .001, $SRMR_{Bentler} = .076$. While most of the fit indices do not allow to monitor any changes of model fit between the stages of invariance testing, the SRMR as probably least biased fit index [150] shows changes in the expected direction. In sum, the $SRMR_{Bentler} = .076$ indicates a good model-fit. Additionally, we analyzed the results comparing the CI and applying the same categories described above. Out of 66 estimated parameters, 31.8% of estimates of both samples fall into the CI of the other sample, respectively. In 16.7% of cases the estimate of one sample falls into the CI of the other. In 22.7% of cases the CI of both parameters overlapped. In 28.8% of cases considerable differences between the respective estimates was detected. Again, an accumulation of considerable differences was found in the residual estimates of the social support measure [MOS-SSS; 30] and the formal and informal help-seeking measures [GHSQ; 110]. For graphical diagnostics, we plotted the Cuban and German estimates. The graphical diagnostics substantiate the findings. A detailed depiction of the estimates and graphical diagnostics are presented in the supporting information Table S4 and Figure S5 to S7.

Lastly, we applied the assumptions of strict measurement invariance to the data restricting all loadings, intercepts, and residuals to be equal between groups. The overall model-fit indices show a comparable picture as in the steps before with slight deterioration of the fit-indices, $X^2(1985) = 2003.968$, $p = .378$, CFI = .992, TLI = .992, RMSEA = .005, $SRMR_{Bentler} = .084$. Again, we compared the CI of the remaining 22 parameter estimates. In 31.8% of cases both estimates fall into the CI of the other sample, respectively. In 18.2% of cases the estimate of one sample falls into the CI of the other. In 22.7% of cases the CI of both parameters overlapped. In 27.3% none of these possibilities applied indicating significant differences between the estimates of the samples. Again, we investigated differences between the

estimates of both samples graphically (compare Figure S8 and S9 in the supporting information). Altogether, we assume considerable violations of the assumptions of strict measurement invariance between the Cuban and the German samples although fit-indices fall into the cut-offs of good model fit. We expect the fit-indices to be overestimated [150]. Further, the $SRMR_{Bentler}$ = .083 indicates a model-fit slightly above the commonly used cut-off of .08 for good model-fit [148]. Moreover, previous steps of measurement invariance testing indicated considerable deviations between the Cuban and German estimates. In sum, we cannot postulate strict measurement invariance for the measurement model of the postulated model.

Conclusive, we aimed to compare the estimated models of weak, strong, and strict measurement invariance between the Cuban and the German sample using the pooled likelihood-ratio test statistic D2. Comparing the weak and the strong measurement invariance models, the function *lavTestLRT.mi* of the semTools-package informed about some negative residual variances in two data sets. The robustly estimated test indicated a significant deterioration of model-fit between the weak and the strong measurement invariance models, $F_{scaled}(38, 196.726) = 7.332$, $p < .001$. When testing the strong against the strict measurement invariance model, the function *lavTestLRT.mi* of the semTools-package did not indicate negative variance or other Heywood cases. The robustly estimated test indicated a significant deterioration of model-fit, $F_{scaled}(44, 580.349) = 6.487$, $p < .001$. In sum, the estimations of the postulated model were complicated probably due to an imbalance between the complexity of the postulated model(s) and the sample sizes which offered an insufficient amount of information to reliably identify the model. Still, inferential statistics based on overall model-fit and CI-comparisons as well as graphical diagnostics indicated that no measurement invariance can be postulated for the Cuban and German data.

In a next step, we aimed to further understand the difficulties of the postulated measurement models. Therefore, we applied CFA for each measure of the model separately and

tested measurement invariance of each questionnaire. Thereby, we reduced the complexity of each model drastically which should facilitate estimation. Well-being measured by the WHO-5 [111] showed an acceptable overall model fit of the configural measurement invariance model, $X^2(10) = 49.835$, $p < .001$, CFI = .945, TLI = .890, RMSEA = .109, $SRMR_{Bentler}$ = .039. Further, internal consistencies were also appropriate, ω_{cub} = .81 and ω_{ger} = .87. The weak measurement invariance model restricting the loadings to be equal between groups indicated an acceptable overall model-fit as well, $X^2(14) = 61.122$, $p < .001$, CFI = .935, TLI = .907, RMSEA = .100, $SRMR_{Bentler}$ = .050. Still, almost all fit indices showed a difference ≥ .01 between the models indicating a considerable deterioration of the model when restricting loadings to be equal [146]. The overall pooled likelihood-ratio test statistic D2 indicated also a significant deterioration of the model, $F_{scaled}(4, 745.304) = 3.115$, $p = .015$. Hence, we can only assume that we measured well-being similarly between the Cuban and German samples on a configural level. Social support was measured by the MOS-SSS [30] representing one of the key measures of the model. When fitting the CFA with four subscales as originally postulated, the model did not converge due to not positive-definite covariance matrices in various cases. Therefore, we fitted the latent variable without subscales to establish configural measurement invariance between the samples. Although the scale showed very high internal consistencies in both samples, ω_{cub} = .96 and ω_{ger} = .96, the overall model-fit indices showed violations of the assumption of configural measurement invariance, $X^2(304) = 651.685$, $p = .002$, CFI = .767, TLI = .738, RMSEA = .058, $SRMR_{Bentler}$ = .075. Hence, we cannot assume to measure the same construct of social support in the Cuban and the German sample. Next, we tested the measurement model of collectivism assessed with the HVS [138]. As before, we had to disregard the postulated subscales of collectivism since the CFA did not find any solution due to several negative variances and |correlations| > 1.00. When fitting the measurement model without subscales, the model converged without difficulties. Throughout the fit-

indices, no acceptable model fit for configural measurement invariance could be assumed for collectivism, $X^2(18) = 70.860$, $p < .001$, CFI = .836, TLI = .727, RMSEA = .093, $SRMR_{Bentler}$ = .080. Further, internal consistencies were also poor, ω_{cub} = .68 and ω_{ger} = .63. Thus, the measurement of collectivism was not equal between the samples. Familismo was measured unidimensional by the PHFS [66]. The overall fit indices indicated configural measurement invariance between the Cuban and German sample, $X^2(10) = 21.168$, $p = .020$, CFI = .974, TLI = .948, RMSEA = .057, $SRMR_{Bentler}$ = .015. The internal consistencies also showed good reliability, ω_{cub} = .94 and ω_{ger} = .91. The weak measurement invariance model between the Cuban and the German sample showed an even slightly improved overall model-fit, $X^2(14)$ = 20.822, $p = .106$, CFI = .984, TLI = .977, RMSEA = .038, $SRMR_{Bentler}$ = .015 and the pooled likelihood-ratio test statistic D2 indicated no significant deterioration of the model, $F_{scaled}(4, 30691.088) = 1.321$, $p = .260$. Therefore, we estimated the strong measurement invariance model restricting the loadings and the intercepts to be equal between the samples. The overall fit-indices showed no acceptable model-fit, $X^2(18) = 103.663$, $p < .001$, CFI = .801, TLI = .779, RMSEA = .119, $SRMR_{Bentler}$ = .046. Therefore the assumption of strong measurement invariance between the Cuban and the German sample could not be established for familismo which is confirmed by the pooled likelihood-ratio test statistic D2, $F_{scaled}(4, 8793.671) = 15.551$, $p < .001$. The outcome measure informal help-seeking intentions defined as help from partner, parents, friends, and other relatives [111] did not show configural measurement invariance for the Cuban and German sample, $X^2(4) = 20.428$, $p < .001$, CFI = .877, TLI = .632, RMSEA = .110, $SRMR_{Bentler}$ = .054. Although the fit-indices did not show a completely consistent image of model-fit, internal consistencies were also very poor for both samples, ω_{cub} = .52 and ω_{ger} = .54. The measure of formal help-seeking intentions defined as help from mental health professionals, phone helplines, general practitioners, and spiritual leaders showed a slightly better overall model-fit for the configural measurement invariance model, $X^2(4)$ =

17.094, p = .002, CFI = .891, TLI = .673, RMSEA = .098, $SRMR_{Bentler}$ = .042. Still, internal consistencies were only moderate as well, ω_{cub} = .76 and ω_{ger} = .67. Thus, we could not establish configural measurement invariance for formal help-seeking intentions between the Cuban and German samples.

In synopsis, the separated measurement models of almost all measures used in the current study showed considerable measurement variance between both samples. These analyses supported the findings regarding the overall SEM reported above. The greatest differences between the samples were found in the measurement models of social support [MOS-SSS; 30], collectivism [HVS; 138], and help-seeking intentions [GHSQ; 110] which represent key variables of the postulated model. This indicated that the questionnaires used in the current survey did not assess the identical constructs in the Cuban versus German samples. Therefore, we should not compare the means, standard deviations, and other parameters on the level of latent variables nor the paths of the structural model between the samples. To rule out the possibility that the estimation difficulties were based on the multiple imputations of the Cuban data, we aimed to estimate the model using *Fully Information Maximum Likelihood* estimation as alternative for handling missing data [154]. Warnings given by the function *sem* of the lavaan package indicated comparable estimation difficulties as in our analyses before: The estimation did not end normally and no solution was found. Interestingly, the separated measurement models did not show the same difficulties in the estimation of the parameters like the overall SEM. This supported the idea that the overall model is too complex for the data collected in the Cuban and in the German samples. A reduction of the model or a division of the model into various smaller models to test our hypotheses was theoretically not recommended. Further, excluding single variables would not solve the problem of measurement variance of almost all measures.

Complexity of SEM and small sample sizes are well-known difficulties in applied research [155]. Therefore, Rosseel [156] suggested possible solutions for point estimations based on frequentist methods to solve this problem. To be able to estimate the structural models of both samples separately despite the computational difficulties described above, we aimed to combine two-step estimation with so-called plausible values. Plausible values are a multiple imputation-based approach to estimate factor scores in SEM for secondary analyses. Compared to traditional approaches like the factor score regression [156], plausible values offer less biased results since they account for the uncertainty of estimation [157]. Knowing about the measurement variance between the Cuban and the German sample, we applied all analyses separately to both samples. We applied the *cfa.mi*-function of the semTools package [149] to estimate the measurement model of the SEM. In both samples, the measurement model was too complex to be estimated which is why we eliminated the postulated subscales of social support [MOS-SSS; 30] and collectivism [HVS; 138] from the measurement models of both samples. Then, the measurement model could be estimated in the Cuban sample. Afterwards, we used the function *plausibleValues* of the semTools-Package to estimate the factor scores of the latent variables 15 times as suggested by the literature [157,158]. In the second step, we applied the function *sem.mi* of the semTools package to estimate the structural model using the 15 times estimated scores of the latent variables. In the current study, this resulted in 750 data sets on which the final analyses of the postulated structural model were applied. Standardized path estimations of the Cuban sample are presented in Figure 2. Overall fit-indices offered inconsistent information with some fit-indices indicating a good model fit and others not, $X^2(13) = 21.306$, $p = .067$, CFI = .843, TLI = .673, RMSEA = .043, $SRMR_{Bentler} = .059$. Yet, the $SRMR_{Bentler}$ indicated a good model fit. In the German sample, the measurement model did not converge after eliminating the subscales. The *cfa.mi*-function of the semTools-package informed that no solution could be found and that difficulties in the

estimation of the variables collectivism and well-being emerged. Since collectivism is not a representative German value, we decided to eliminate it from the model. Afterwards, the measurement model converged. We estimated plausible values 15 times to estimate the factor scores of the latent variables. In the second step, we estimated the reduced structural model using the 15 times estimated scores of the latent variables. Standardized path estimations of the German sample are presented in Figure 3. Not all degrees of freedom could be estimated without difficulties which is why significance of paths should be interpreted with caution in the German sample. Overall fit-indices indicated a poor model fit, $X^2(8) = 30.982$, $p < .001$, CFI = .894, TLI = .736, RMSEA = .092, $SRMR_{Bentler} = .055$. Interestingly, only the $SRMR_{Bentler}$ indicated a good model fit.

Fig 2. Structural equation model of well-being, cultural values, social support, and help-seeking intentions with standardized path-estimations in the Cuban sample. *Note.* N = 340. GHSQ = General Help-Seeking Questionnaire [10,110]; HVS = Human Values Scale [138]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].
* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$ (one-tailed in case of directed predictions and two-tailed in case of undirected hypotheses and associations).

Fig 3. Structural equation model of well-being, cultural values, social support, and help-seeking intentions with standardized path-estimations in the German sample. *Note.* N = 338. GHSQ = General Help-Seeking Questionnaire [10,110]; HVS = Human Values Scale [138]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

673 * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$ (one-tailed in case of directed predictions and two-tailed in
674 case of undirected hypotheses and associations).
675

676 Discussion

677 The current study aimed to investigate cultural and social determinants of help-seeking
678 in the Cuban and German cultural context. A model was theoretically derived from the litera-
679 ture and tested in both samples. Thereby, we expected social support to be a central factor in-
680 fluencing both informal and formal help-seeking intentions independently of the cultural con-
681 text. Our results showed considerable difficulties in the estimation of the model which limits
682 our conclusions. Therefore, we could not answer all of our hypotheses. Yet, the results indi-
683 cated clearly that almost all measures used did not equally measure the respective constructs
684 in both samples. Considering the samples separately on the level of the structural model, so-
685 cial support played a more positive role in the help-seeking process than expected. In the
686 course of the discussion, we will discuss our findings in the light of methodological limita-
687 tions and the cultural contexts.
688

689 Cultural and social determinants of help-seeking in Cuba and 690 Germany

691 Referring to the assumptions of the Cultural Determinants of Help-Seeking Model
692 [51], we expected that main paths in the help-seeking decision process might be similar irre-
693 spective of the cultural context. Yet, we expected the relative importance and manifestation of
694 the single factors to differ between Cuba and Germany due to difference in the overarching
695 cultural framework. Yet, the model indicated only in the Cuban sample a proper model-fit.
696 Further, we were not able to test the postulated baseline model due to estimation difficulties.

All other analyses indicated considerable measurement variance between the samples which impedes us from any comparisons between the samples [cf., 146,147]. Still, it is a useful information for future research that Cuban and German participants might differ in their conceptualization of mental health related measures [159]. This finding implies the need for rigorous validation studies and implementation of cross-culturally invariant measurements in this research area. Central concepts of the current study were affected by measurement variance, namely 'collectivism' operationalized by the HVS [138], 'social support' operationalized by the MOS-SSS [30], and 'help-seeking intentions' operationalized by the GHSQ [110] and defined as informal versus formal sources of help [39]. 'Collectivism' showed further difficulties in the structural model implemented in the German sample which is why we eliminated this construct from the SEM. Initially, we included the construct in both samples as a so-called *antecedent variable* which is supposed to facilitate the interpretation of potential cross-cultural differences [160]. In doing so, we aimed to account for differences in cultural values on individual-level which might influence the help-seeking process beyond the general cultural orientation of the nation [cf., 161,162]. However, our current findings rather indicated that collectivism did not relate to the other constructs included in the model and might therefore no play any role in the context of mental health help-seeking. This finding might support the mainly individualistic orientation of the German population where collectivism represents a theoretically known concept and no lived experience. Anyway, collectivism only predicted social support, but not familismo in the Cuban sample which might indicate a need for more sophisticated measures of collectivism for both cultural contexts to derive further conclusions [cf., 163].

Informal and formal help-seeking intentions were not equally measured between Cuba and Germany neither. We aimed to represent both informal and formal sources of help since those have been conceptualized as potentially competing [e.g., 7,8,13,41]. No consistent

definition of formal versus informal help has emerged so far in the context of mental health [38]. Therefore, we aimed to apply a definition which was supposedly not biased by culture categorizing them on the basis of a personal versus professional relationship between help-seeker and help-provider [cf., 38]. Obviously, this definition failed to measure informal and formal help cross-culturally. Hence, Cubans and Germans might perceive the relationship to help-providers differently. This might be based on the community- and family-approach guiding (mental) health care in Cuba where (mental) health professionals live next door to their patients and make domiciliary visits on a frequent basis [87,89]. Further, we included religious and spiritual leaders into the formal help-seeking factor. This might fail to represent the concept of formal sources of help in Germany where spiritual sources of help might not play a major role [cf., 7, and Table S2 in the supporting information]. On the other hand, the concept of informal sources of help might not match Cuban concepts of personal relationships. Due to the strong emphasize on the cultural value familismo, there might be a qualitative difference between intrafamilial relations and personal relations to friends, neighbors, or colleagues [cf., 64,66,72,82]. For this reason, Rickwood and Thomas [38] suggested to adapt the definition of (professional) help to the populations under study especially in the context of cross-cultural research. For instance, spiritual healers might be a main resource of mental health care in one context and of almost no importance in another [38,90] – as in the current study.

Another concept difficult to measure cross-culturally in the current study was ‘social support’. We used a questionnaire developed and mainly validated in the European context. Most of the items represented a concept of social support as the transaction of resources to solve individual problems. Taylor [26] argues that this might be a predominantly Western conceptualization of social support and therefore less applicable to non-Western cultures. Hence, the MOS-SSS [30] might not be able to measure social support equally because the underlying concepts might differ between Cuba and Germany and were not represented

appropriately by the items. Especially for the Cuban context a more explorative approach might be helpful to understand social support in a context of overall shortage of goods and high importance of generosity and solidarity [cf., 79,81]. To understand social support in the light of culture seems essential when considering its positive influence on help-seeking in both samples. As expected, social support predicted informal help-seeking intentions significantly in both samples [e.g., 42]. Simultaneously, social support was not negatively associated with formal help-seeking intentions indicating that social support did not act as barrier to formal help in the current samples. Quite the contrary, both models show a positive association between informal and formal help-seeking intentions. This finding fits into the argumentation that social support might contribute to adequate (formal) help-seeking of persons affected [21,44]. Future studies should investigate the possibly mediating role of informal help-seeking between social support and formal help-seeking. Correspondingly, social support predicted significantly higher well-being in both samples which underscores its potential for mental health and mental health care. A profound understanding of the interplay of well-being, social support, and forms of help-seeking might introduce a new field of potential interventions to help closing the mental health care gap and to provide adequate mental health care extensively. As stated before [e.g., 39], informal sources of help have been rarely exploited to target early stages or mild manifestations of mental illness.

In this sense, familismo needs also further consideration in future research. In the Cuban sample, familismo predicted significantly social support and informal help-seeking adding evidence to the alternative resource theory [45]. Familismo influenced informal help-seeking positively both directly and through social support. We did not find indications that familismo might act as a barrier to formal help contrary to the barrier theory [45,61]. Again, informal help-seeking might mediate the relation between familismo and formal help-seeking stressing the importance to deepen our understanding of the role of informal help in mental

health care. Interestingly, familismo did not predict informal help-seeking intentions in the German sample, but predicted formal help-seeking intentions negatively. Thus, high priority of the family might hamper Germans to seek professional help although familismo is not a core value of German culture [cf., 164]. This finding needs further investigation since the barrier theory does not explain this finding. Moreover, Germans indicated a preference for informal help-seeking [7]. In this case, informal help-seeking would not act as a precursor or facilitator for formal help, but might prevent it instead. This contradicts previous findings and theory [e.g., 21,44]. Yet, there are several potential explanations like mental health stigma [e.g., 84], anticipated *illness danger* [cf., 53], or *label avoidance* [cf., 166] which might explain our current finding. On the other hand, familismo predicted more social support strongly in the German sample. This might imply a mediating effect of social support on informal help-seeking which in turn is positively associated with formal help-seeking. Yet, this is only speculation and more research is needed to understand promoting versus preventing effects of different social sources of support on professional help-seeking. Conclusive, both social support and familismo have proven their impact on informal and formal help-seeking intentions in both samples. To benefit from informal sources of help and to reduce social barriers to formal sources of help, future studies should target a better understanding of the respective concepts and their interplay.

Regarding the remaining hypotheses, we were not able to answer all of them. Due to measurement variance between the samples, we will not answer hypotheses indicating cross-cultural comparisons. As expected, female gender was significantly associated with less well-being [27,78] and more perceived social support [27,78,102] in both samples. In the German sample, female gender was additionally associated with more distress as hypothesized. In both samples, distress predicted significantly less well-being as expected [15]. Less well-being predicted more formal help-seeking as we hypothesized only in the German sample. These

results are mostly according the literature and previous evidence indicating a basic reliability of the current findings.

Cultural distance in cross-cultural research

The current findings enabled us to learn more about cultural and social determinants of help-seeking in a Cuban and German sample separately. We identified considerable measurement variance hinting to distinct conceptualizations of several constructs under study. Many of our expectations regarding the modeled relations between cultural and social determinants and help-seeking intentions were supported by the findings. These findings inform our understanding of pathways to help and the influence the context might exert on them. The identified measurement variance precluded us from cross-cultural comparisons. Yet, when interpreting the findings reported above, one should also keep in mind the cultural distance between the Cuban and the German culture. Cultural distance determines the number of potentially competing explanations for differences between cultural groups. The larger the cultural difference the easier cross-cultural differences are identified [166]. Since randomization is not possible in cross-cultural research, samples almost always differ in their characteristics and in relevant background variables [159]. In the current case, Cuba and Germany differ in their economic situation, their political system, their global power, their language, their climate, their population, and core cultural values, to name only a few. For instance, the Cuban and the German samples differ significantly in their levels of education. Both nations also differ in their education systems [167,168] and before the so-called *Cuban Revolution* starting in 1959, illiteracy was prevalent in Cuba [169]. Thus, not only the samples, but the Cuban and German populations differ in their history and current state of education making it difficult to eliminate education as possible explanation of identified differences. The same holds true for civil status and living situation which might probably differ not only between the samples but also

between the nations [cf., 78,91,92,170]. Conclusive, current findings need to be interpreted cautiously and to be replicated in larger representative samples. Besides, the large cultural distance between Cuba and German requires further investigations *unpacking* cultural differences. Thereby, additional variables are included in the survey to support or preclude potentially rival explanations [171]. Respective studies are necessary in mental health research to support our current preliminary findings.

Limitations

Additionally to the cultural distance between Cuba and Germany, some more limitations of the current study need to be mentioned and considered when interpreting the current findings. The samples of the current study are not representative and comparable. As a result of opportunity sampling, the samples did not match in characteristics like age or gender neither. This fact further limits the validity and generalizability of the current findings. No further conclusions about the general Cuban and German populations can be drawn. Yet, at least some variables relevant in the field of mental health research did not differ between the samples: Cuban and German participants reported on average the same number of negative life events and previous professional help-seeking. Due to different sampling strategies, both samples are probably selective in their own way. We sampled general population in waiting areas of a huge hospital in Cuba. Thus, both patients and their companions probably showed a certain level of willingness to seek help for different health problems. We cannot generalize our findings to the Cuban general population and Cubans who might not be willing to seek medical help. In the German sample, online sampling required that participants actively pressed the link of the study. Therefore, we might have attracted Germans selectively and cannot generalize the findings to the German general population. Further, we collected data in Germany in two waves. The second subsample was recruited during the COVID-19 pandemic and

differed slightly from the subsample collected in 2018. We suppose that the differences in gender and age cannot be ascribed to the COVID-19 pandemic. Familismo as a value might or might not be influenced by the conditions of the COVID-19 pandemic while the reduced mean well-being found in the subsample of 2020 probably might be due to the COVID-19 pandemic. Still, effect sizes are small and although we could not test structural equation models separately for the subsamples, we do not expect strong differential effects.

Next, we used a paper-pencil versus online version of the questionnaires in the Cuban and German samples, respectively. This was supposed to improve ecological validity in both contexts and to reduce the impact of uneven stimulus familiarity between the samples. Yet, it might have acted as an additional source of variance between the samples and should be addressed in future unpacking studies. Lastly, sample sizes in both samples did not offer sufficient data to estimate the postulated model without difficulties. Future studies aiming to replicate the current findings should calculate sample size a priori. Although several methodological issues impact the validity and generalizability of the findings, the current study offers first insights into cultural and social determinants of help-seeking in the Cuban and the German context.

Conclusions

The current study identified social support and importance of family as important determinants of help-seeking intentions in a Cuban and German sample. These and other constructs differed in their measurement and meaning between the samples. Yet, they might represent significant factors influencing the help-seeking decision process of persons in need of help [cf., 51]. They might help to improve mental health care and to address the mental health care gap on an individual level. To use social resources and informal sources of help more

effectively might help to reduce suffering and to improve access to professional mental health care in the future [cf., 39]. More research is necessary to understand their interplay and differential effects in different cultural contexts to derive powerful interventions.

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Supporting information

S1 Fig. Intercepts and 95%-CIs of the weak invariance model in the Cuban and German samples.

S2 Fig. Residuals and 95%-CIs of the weak invariance model in the Cuban and German samples.

S3 Fig. Regression parameters and 95%-CIs of the weak invariance model in the Cuban and German samples.

S4 Fig. Factor invariances/ factor residuals and 95%-CIs of the weak invariance model in the Cuban and German samples.

S5 Fig. Residuals and 95%-CIs of the strong invariance model in the Cuban and German samples.

S6 Fig. Regression parameters and 95%-CIs of the strong invariance model in the Cuban and German samples.

S7 Fig. Factor invariances/ factor residuals and 95%-CIs of the strong invariance model in the Cuban and German samples.

S8 Fig. Regression parameters and 95%-CIs of the strict invariance model in the Cuban and German samples.

S9 Fig. Factor invariances/ factor residuals and 95%-CIs of the strict invariance model in the Cuban and German samples.

S1 Table. Absolute and relative frequencies of gender, level of education, civil status, living situation, and previous professional help-seeking in the Cuban and German samples. *Note:* n = size of subsample, n.s. = not significant; [1]Cuban data presented here is not multiply imputed. * $p \leq .002$ (two-tailed).

S2 Table. Mean and standard deviation of age and variables included in the SEM. *Note.* [1]Higher values indicate less collectivism. n = size of subsample; *SD* = standard deviation; GHSQ = General Help-Seeking Questionnaire [10,111]; HVS = Human Values Scale [138]; LEL = Life Events List [144]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

S3 Table. Estimates of the weak invariance model of the Cuban and German samples. *Note.* Loadings were restricted to be equal between groups. n = 2 were excluded from the German sample because of estimation difficulties. *CI* = confidence interval, *N* = sample size, *SE* = standard error; GHSQ = General Help-Seeking Questionnaire [10,111]; HVS = Human Values Scale [138]; LEL = Life Events List [144]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

S4 Table. Estimates of the strong invariance model of the Cuban and German samples. *Note.* Loadings and intercepts were restricted to be equal between groups. n = 2 were excluded from the German sample because of estimation difficulties. *CI* = confidence interval, *N* = sample size, *SE* = standard error; GHSQ = General Help-Seeking Questionnaire [10,111];

HVS = Human Values Scale [138]; LEL = Life Events List [144]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].

S5 Table. Estimates of the strict invariance model of the Cuban and German samples.

Note. Loadings, intercepts, and residuals were restricted to be equal between groups. $n = 2$ were excluded from the German sample because of estimation difficulties. *CI* = confidence interval, *N* = sample size, *SE* = standard error; GHSQ = General Help-Seeking Questionnaire [10,111]; HVS = Human Values Scale [139]; LEL = Life Events List [144]; MOS-SSS = Medical Outcome Study – Social Support Scale [30]; PHFS = Pan-Hispanic Familism Scale [66]; WHO-5 = WHO (Five) Well-Being Index [111].