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Avaliação de construtos da Psicologia Positiva em idosos clínicos e não-clínicos.

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de alguma forma contribuíram para
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“Não importa o que aconteça, continue a nadar.”

(WALTERS, GRAHAM; Procurando Nemo, 2003)

Resumo:

Prevenir e superar os problemas que surgem com o envelhecimento são grandes desafios a serem vencidos pelos idosos. Neste contexto, a Psicologia Positiva (PP) possibilita uma visão não patológica do envelhecimento, direcionada à identificação de forças e recursos destes indivíduos. Este estudo teve por objetivo caracterizar idosos em relação aos construtos autoestima (AE), bem-estar subjetivo (BES), bem-estar espiritual (BEE), esperança (ESP), otimismo (OT) e rede de apoio percebida (RAP), considerando quatro grupos amostrais (n total = 252 participantes), a saber: G1 - indivíduos saudáveis (n = 66), G2 - indivíduos com demência ou declínio cognitivo leve (n = 62), G3 - indivíduos com depressão (n = 62) e G4 - indivíduos institucionalizados (n = 62), totalizando 252 indivíduos. A idade da amostra variou entre 60 e 104 anos, sendo 64,5% dos participantes do sexo feminino. Os resultados do estudo são apresentados na presente tese, composta por três artigos. O primeiro comparou os construtos acima entre idosos com comprometimento cognitivo leve, demência leve, demência moderada e controles saudáveis. Nesse estudo, os escores diferiram significativamente entre os grupos, de modo que indivíduos com declínio cognitivo leve e com demência tiveram escores significativamente menores de bem-estar espiritual, apoio social, autoestima, satisfação de vida, afetos positivos, otimismo e esperança e significativamente maiores de afetos negativos em comparação aos controles. Os escores em todos os construtos típicos da PP investigados não diferiram entre idosos com demência moderada e o grupo controle, exceto em relação ao otimismo, que foi menor nos sujeitos com demência moderada ($p<0,001$). Foi possível concluir que, nas fases mais precoces da demência, foram encontrados os piores resultados em relação aos atributos positivos investigados, embora não tenha sido possível indicar a causalidade dessa relação, pela natureza do estudo. Nos indivíduos com maior comprometimento cognitivo, a anosognosia pode reduzir o impacto da doença sobre as medidas avaliadas. O segundo artigo comparou construtos positivos (AE, BES, BEE, ESP, OT e RAP) entre idosos com depressão mínima, leve, moderada, severa e controles saudáveis, a fim de investigar as possíveis relações diretas e mediadas entre construtos próprios da Psicologia Positiva e depressão. Nesse estudo, os escores dos construtos positivos diferiram significativamente entre o grupo controle e os graus de depressão ($p<0,001$). A análise de redes de associação parcial regularizada evidenciou que as relações da depressão com os construtos de

satisfação de vida, autoestima e apoio social são mediadas, enquanto os construtos de esperança disposicional, afetos positivos, bem-estar espiritual e otimismo têm relação não mediada com a depressão. Foi possível concluir que a depressão, em seus diferentes graus, está associada a uma redução nos escores de instrumentos que avaliam diferentes atributos positivos na população idosa, com uma tendência de redução dos escores à medida que a depressão é mais grave. O terceiro artigo comparou os escores de diversos atributos positivos (AE, BES, BEE, ESP, OT e RAP) entre idosos institucionalizados e controles saudáveis, bem como investigou possíveis relações não mediadas e mediadas entre indicadores de depressão e de declínio cognitivo e estes construtos. Neste estudo, apenas os escores dos construtos afetos negativos e otimismo não diferiram entre os grupos. A análise de redes de associação parcial regularizada evidenciou que existe uma relação inversa entre escores de sintomas depressivos mensurados por meio da *Geriatric Depression Scale* e os construtos autoestima e satisfação de vida. Resultados do escores de funções cognitivas medidos pelo Mini Exame do Estado Mental foram relacionados sem mediadores e inversamente com o construto otimismo e sem mediadores e diretamente com os construtos de esperança disposicional, apoio social, afetos positivos e afetos negativos. Os achados indicaram ainda que a institucionalização está associada com uma redução nos escores dos construtos bem-estar espiritual, satisfação de vida, afetos positivos apoio social, autoestima e esperança. A partir dos resultados apresentados nesta tese, concluiu-se que os escores de construtos da Psicologia Positiva estão relacionados também às situações de saúde e doença nas quais o idoso se encontra. Os escores são reduzidos em graus iniciais de demência, na depressão e institucionalização, sendo importante a consideração desses para o planejamento de futuras intervenções que visem a reduzir o sofrimento do idoso e à promoção de saúde e bem-estar na terceira idade.

Palavras-chave: Psicologia Positiva, Idoso, Demência, Depressão, Espiritualidade.

Abstract:

Preventing and overcoming the problems and geriatric situations that accompany the elderly are great challenges to be overcome by the elderly. In this context, Positive Psychology allows a non-pathological view of aging, directed to the identification of the forces and resources of these individuals. This study aimed to characterize the elderly in relation to the constructs of self-esteem (AE), subjective well-being (BES), spiritual wellbeing (BEE), hope (ESP), optimism (OT) and perceived support network (RAP). (n = 62), G3 - individuals with depression (n = 62), G2 - individuals with dementia or mild cognitive decline (n = 62) and G4 - institutionalized individuals (n = 62). The age of the sample ranged from 60 to 104 years, with 64.5% of female participants, a total of 252 individuals. The results of the study are presented in the present thesis, composed of three articles. The former compared the above constructs among the elderly with mild cognitive impairment, mild dementia, moderate dementia, and healthy controls. In this study, scores differed significantly between groups, so that individuals with mild cognitive decline and dementia had significantly lower scores for spiritual well-being, social support, self-esteem, life satisfaction, positive affects, optimism, and hope, and significantly higher scores of negative affects compared to controls. The scores in typical PP constructs investigated did not differ between the moderately dementia elderly and the control group, except for optimism, which was lower in subjects with moderate dementia ($p < 0.001$). It was possible to conclude that, in the early stages of dementia, the worst results were found in relation to the positive attributes investigated, although it was not possible to indicate the causal direction of this relationship, due to the nature of the study. In individuals with greater cognitive impairment, anosognosia seems to reduce the impact of the disease on the measures evaluated. The second article compared positive constructs (AE, BES, BEE, ESP, OT and RAP) among elderly with minimal, mild, moderate, and severe depression and healthy controls, in order to investigate the possible direct and mediated relationships between constructs specific to Positive Psychology and depression. In this study, positive construct scores differed significantly between the control group and the Depression in different levels of severity ($p < 0.001$). The analysis of normalized partial association networks has shown that the relations of depression with the constructs of life satisfaction, self-esteem and social support are mediated, while the constructs of dispositional hope, positive affections, spiritual well-being and optimism are unmediated related to depression. It was possible to conclude that

Depression in different levels of severity is associated with a reduction in the scores of instruments that evaluate different positive attributes in the elderly population. The third article compared the scores of several positive attributes (AE, BES, BEE, ESP, OT, and RAP) among institutionalized seniors and healthy controls, as well as investigated possible direct and mediated relationships between indicators of depression and cognitive decline and these constructs. In this study, only negative affect constructs scores and optimism did not differ between groups. The analysis of normalized partial association networks showed that there is an inverse relationship between depressive symptom scores measured by the GDS (Geriatric Depression Scale) scale and the self-esteem and life satisfaction constructs. Results of the cognitive function scores measured by the Mini Mental State Examination (MMSE) were without mediators and conversely related to the construct optimism and without mediators and directly with the constructs of dispositional hope, social support, positive affects and negative affects. It was concluded that institutionalization is associated with a reduction in construct scores of spiritual well-being, life satisfaction, positive affect, social support, self-esteem and hope. From the results presented in this thesis, it was concluded that the construct scores of Positive Psychology are also related to the health and illness situations in which the elderly are. Scores are reduced in early degrees of dementia, depression and institutionalization, being important the consideration of these for the planning of future interventions that aim at reduce the suffering of the elderly and the promotion of health and well-being in the third age.

Key words: Positive Psychology, Elderly, Dementia, Depression, Spirituality.

LISTA DE ABREVIATURAS

AE	Autoestima
AVD	Atividade de Vida Diária
BEE	Bem-Estar espiritual
BES	Bem-estar subjetivo
CDR	*Clinical Dementia Rating*
ESP	Esperança
GDS	*Geriatric Depression Scale*
IBGE	Instituto Brasileiro de Geografia e Estatísticas
ILPI	Instituição de Longa Permanência para Idosos
MEEM	Mini Exame do Estado Mental
OT	Otimismo
PP	Psicologia Positiva
RAP	Rede de apoio percebida
OMS	Organização Mundial de Saúde
TDM	Transtorno Depressivo Maior

SUMÁRIO

1 REVISÃO DE LITERATURA

1.1 O IDOSO

O Brasil passa atualmente por um processo de envelhecimento populacional. Possui cerca de 20,5 milhões de pessoas com 60 anos ou mais, o que representa mais de 10,8% da população brasileira, de acordo com o último Censo Brasileiro (IBGE, 2010). O envelhecimento compreende uma série de alterações degenerativas, que podem ser expressas como alterações morfológicas, fisiológicas, bioquímicas e psicológicas, determinantes para uma perda progressiva da capacidade de adaptação e da independência do idoso (NASS et al., 2016). Embora deva-se enfatizar que o envelhecimento não implica necessariamente morbidade, as alterações fisiológicas associadas ao envelhecimento típico tornam a pessoa idosa mais suscetível a condições patológicas agudas e crônicas, como os declínios cognitivos e os transtornos de humor (CHILDS et.al., 2015), que têm prevalência aumentada nesta idade (OOSTROM et.al., 2016). Além disso, é comum nessa etapa a perda de autonomia entre alguns idosos, sobretudo nos casos de idosos com demências ou sintomas psiquiátricos, o que demanda maior disponibilidade familiar e, em última instância, aumenta a chance de institucionalização entre os idosos (ZAGONEL et.al., 2017).

1.1.2 Demências

O declínio cognitivo e a demência estão dentre as alterações responsáveis por uma grande parcela das limitações do idoso, visto que a demência se caracteriza por sintomas cognitivos e comportamentais adquiridos, declínio em relação a níveis prévios de funcionamento e desempenho, que interferem na habilidade no trabalho ou em atividades usuais (NIA-AA, 2012).

Segundo a Organização Mundial da Saúde (OMS, 2017), a demência é uma síndrome resultante da doença do cérebro, em geral de natureza crônica ou progressiva, na qual se registram alterações de múltiplas funções nervosas superiores incluindo a memória, o pensamento, a orientação, a compreensão, o cálculo, a linguagem e o raciocínio. Normalmente, envolve dificuldades de comunicação, alterações de comportamento, memória, pensamento, orientação e linguagem, perdas de capacidade funcional, impossibilidade de autonomia e problemas motores que, em

conjunto, podem diminuir a capacidade de realizar as atividades de vida diária (AVD's) e influenciam na evolução do processo demencial (CONTADOR, 2017). As perdas demenciais podem variar conforme o comprometimento do indivíduo. Segundo a classificação do "*Clinical Dementia Rating*", esta variação inclui comprometimento cognitivo leve (CDR= 0,5), demência leve (CDR=1), demência moderada (CDR=2) e demência grave (CDR= 3) (HUGHES, 1984).

O curso progressivo de incapacitação leva à hipótese de que a demência causa um grande impacto psicológico sobre os indivíduos (OGAWA et.al., 2017). De fato, é amplamente descrito na literatura que os impactos neuropsicológicos da demência incluem a deterioração da qualidade de vida e alterações de humor e dos comportamentos que são associados às doenças neurodegenerativas. Estas alterações, quando estabelecidas em um estágio inicial da doença, associam-se a um prognóstico ruim de perdas cognitivas progressivas (ISMAIL et.al., 2017).

A literatura atual, sustentada pela necessidade de maior compreensão sobre o impacto das demências para o idoso, evidencia que se tem estudado cada vez mais o indivíduo com demência e as suas percepções sobre a doença, bem como padrões típicos de comportamento conforme as demências estabelecidas em termos diagnósticos (BALCONI et.al., 2015). O estudo de Fong e colaboradores (2017), por exemplo, aponta que os idosos com demência frontotemporal ou Alzheimer frequentemente demonstra perda de capacidade para tomada de decisões e para raciocínio de questões simples, bem como uma capacidade reduzida para o julgamento de perdas e reconhecimento de emoções. Nessa linha, o estudo de revisão sistemática e meta-análise desenvolvido por Bora e colaboradores (2016) comparou o reconhecimento de emoções de idosos com e sem demência. Os achados indicaram que idosos com demência apresentam reduzida capacidade de reconhecimento de diversas emoções negativas, especialmente a raiva (d=1,48) e o nojo (d=1,41), o que traz implicações relevantes para sua capacidade de estabelecer contato social cotidianamente de forma assertiva. Resultados semelhantes foram observados no estudo de Oliver e colaboradores (2015), que avaliou idosos com demência por meio de testes de empatia, concluindo então que os indivíduos com a doença tinham uma percepção reduzida de emoções negativas autorelatadas ($p<0,01$), mas percebiam emoções positivas de modo semelhante ao grupo controle ($p=0,11$). No entanto, a compreensão sobre a capacidade dos idosos com declínio cognitivo ou demências descrever suas emoções ou reconhecer emoções alheias

ainda é limitada frente à diversidade dos resultados publicados e requer ampliação dos estudos, sobretudo considerando situações atípicas, como o caso da institucionalização, e de comorbidades, como no caso de depressão, transtorno com alta prevalência comórbida aos quadros demenciais (OGAWA et.al., 2017).

1.1.3 Depressão

A depressão é uma das doenças crônicas que mais acomete o idoso no Brasil, sendo o mais comum entre eles o Transtorno Depressivo Maior - TDM (HELLWIG et al, 2016). Os critérios diagnósticos do TDM compreendem o humor deprimido, a perda de interesse e/ou prazer, as alterações de sono e/ou apetite, a agitação ou a lentidão, a fadiga, os sentimentos de inutilidade ou culpa, a redução da capacidade de pensar e niilismo (DSM–5, 2013). O TDM impacta de modo geral na qualidade de vida do idoso, aumentando índices de morbimortalidade e reduzindo a qualidade de vida, além de elevar riscos de dependência, vulnerabilidade social e suicídio (SIVERTSEN et.al., 2015). Dentre os principais riscos para o TDM no idoso, a literatura cita diversas alterações químicas, biológicas e sociais decorrentes do envelhecimento, além de eventos estressantes comuns à faixa etária, como a perda de autonomia e a presença de comorbidades (GALATZER-LEVY e BONANNO, 2014; MARQUE et.al., 2017).

O TDM, em sua definição, é descrito especialmente por emoções negativas vivenciadas pelos indivíduos (DSM–V, 2013.). De fato, as perdas da idade que se relacionam com este diagnóstico frequentemente compreendem a perda de participação social, o isolamento, a redução do valor econômico para a família e a sensação de estar aguardando o fim da vida. Contudo, o reconhecimento da depressão na população idosa pode ser mais difícil, levando clínicos e pacientes a encarar possíveis sintomas depressivos como consequências normais do processo de envelhecimento ou ainda como incapacidades que se instalam em decorrência das baixas expectativas relacionadas ao período pós-aposentadoria. A queixa de humor depressivo é menos comum, enquanto sintomas somáticos, como perda do apetite, irritabilidade, insônia, dores e perda da energia, são mais frequentes. Como resultado, a depressão em idosos é frequentemente subdiagnosticada *e* subtratada (DUC et.al., 2016). Desta maneira, a depressão configura entre idosos como a perturbação mais frequente à saúde, tornando-se, no fim da última década, a principal causa de incapacidade em todo o mundo (WHO, 2017) *e* um dos principais problemas de saúde

pública, sendo mais incidente em determinadas circunstâncias, como é caso da institucionalização entre idosos (FLUETTI et.al., 2018).

1.1.4 Institucionalização.

O aumento da idade e a incapacidade do idoso são fatores que se relacionam fortemente à institucionalização de idosos (ZAGONEL et.al., 2017). As limitações que restringem o idoso e causam dependência de cuidados ou isolamento são muitas vezes as mesmas que levam os familiares à busca de uma opção segura e confortável para eles e os seus idosos. Dentre os fatores decisivos para a institucionalização de um idoso, estão o número de filhos do mesmo, a capacidade de auto-gestão e autocuidados, as comorbidades e a baixa renda (FAGUNDES et.al., 2017). As chamadas Instituições de Longa Permanência para Idosos (ILPI's) garantem um acesso do morador a equipes de saúde especializadas e tratamentos adequados às suas necessidades (BUTARELO et.al., 2017). No entanto, a mudança de rotina repentina, a sensação de abandono pelos familiares e a solidão podem estar presentes e serem prejudiciais ao idoso que vivencia morar em uma instituição (ARAUJO et.al., 2015).

A gestão do bem-estar do indivíduo institucionalizado é uma preocupação dos familiares e dos profissionais da saúde e intervenções direcionadas a este grupo buscam reduzir possíveis níveis de depressão (POORNESELVAN et.al., 2018). Verificar a associação de possíveis fatores controláveis na institucionalização, como a depressão no idoso, pode auxiliar e direcionar a atuação do profissional de saúde, reduzindo assim gastos futuros com o idoso e problemas de saúde diversos (BUTARELO et.al., 2017). Nessa perspectiva, a Psicologia Positiva tem proposto uma mudança de ênfase nos estudos que avaliam a saúde e bem-estar humano.

1.2 PSICOLOGIA POSITIVA.

A Psicologia Positiva (PP) é uma ciência emergente que visa a romper com o viés "negativo" e reducionista tradicionalmente adotado para o estudo de indivíduos, grupos ou comunidades. Ela focaliza potencialidades e qualidades humanas e exige tanto esforço, reflexão e seriedade conceitual, teórica e metodológica, quanto o estudo de distúrbios e desordens humanas (NIEMEC et.al., 2017). PP vem a ser um termo amplo, que abraça estudos científicos dos temas relacionados com um viver com mais qualidade e sentido (BROEKAERT et.al., 2017). Essa perspectiva surgiu com o

objetivo de focar a interação nas características benéficas e construtivas que as pessoas possuem, valorizando o positivo e superando uma visão patológica. Por meio de construtos positivos, aborda qualidades humanas que moderam o desenvolvimento saudável e o enfrentamento de situações adversas, envolvendo a investigação de atributos como coragem, perseverança, otimismo, ética, bem-estar, entre outros (SNYDER e LOPEZ, 2009). As evidências disponíveis sugerem que a Psicologia Positiva pode ser vista como uma oportunidade de redução de percepção do impacto dos fatores estressantes presentes no processo de envelhecimento típico do indivíduo idoso (MACHADO et.al., 2017), evitando as reações em cadeia negativas deste por meio do desenvolvimento de tarefas bem-sucedidas e ações, pensamentos, sentimentos e comportamentos diários positivos (PETERSON, 2013). A Psicologia Positiva visa a reduzir as diferenças entre os problemas do dia a dia e a habilidade de enfrentamento destes problemas, trabalhando ao lado do indivíduo na equação para desenvolver um potencial positivo, que influencia nas interações de sucessos no contexto vivenciado (PETERS et.al., 2017). Nessa perspectiva, atributos positivos, como autoestima e autoeficácia, são considerados fatores de proteção para diversos riscos e são avaliados na intenção de se verificar o quanto uma pessoa tem características positivas potencializadas (PETERSON, 2013).

É notável o crescimento da área nas últimas duas décadas, em especial em relação aos estudos envolvendo promoção de saúde e bem-estar. Avaliações realizadas sob esta ótica junto a pacientes em acompanhamento clínico, indivíduos idosos e seus familiares potencialmente contribuem para um melhor conhecimento das dificuldades e enfrentamentos destes indivíduos e podem ser consideradas ao se planejar intervenções que tenham como propósito a melhoria da qualidade de vida de indivíduos em declínio cognitivo e/ou pacientes acometidos por problemas crônicos de saúde (SCHIAVON et.al., 2017).

No caso de idosos, algumas evidências indicam que, no curso do envelhecimento, a saúde mental pode ser afetada negativamente e implicar diminuição do bem-estar e da qualidade de vida (KHONDOKER et.al., 2017). No entanto, os estudos sobre o tema são controversos (GAWRONSKI et.al., 2016). Compreender esse quadro, bem como os construtos que se mostram mais influentes sobre medidas de bem-estar em idosos, pode auxiliar no desenvolvimento de intervenções mais efetivas. (GREENAWALT et.al., 2018). Alguns dos construtos que

tem sido estudados nessa perspectiva são apoio social, esperança, otimismo, auto estima e bem-estar espiritual.

1.2.1 Estudos em Psicologia Positiva Envolvendo Idosos.

Espiritualidade

Dentre os construtos da Psicologia Positiva que são descritos em literatura com idosos, a espiritualidade é de grande relevância. Ela pode ser compreendida como algo que dá sentido à vida e que é capaz de estimular sentimentos positivos relacionados à busca pelo sentido do viver; não necessariamente está vinculada a um ser superior ou a práticas religiosas (KU et.al., 2017). A importância deste construto é expressa em diversos estudos, como é o exemplo da revisão sistemática de Agli e colaboradores (2015), que, por meio de 11 estudos que avaliaram idosos em declínio cognitivo, concluiu que a espiritualidade parece retardar o mesmo e ajudar o idoso a usar estratégias de enfrentamento para lidar com a doença, melhorando inclusive a qualidade de vida.

A espiritualidade foi apresentada como um atenuante do sofrimento psíquico de idosos depressivos no estudo transversal de Abu-Raya e colaboradores (2016), que incluiu 2140 indivíduos em sua amostra, verificando que aqueles indivíduos com maior espiritualidade apresentaram menores escores de depressão. A mesma relação foi evidenciada por Bashir e colaboradores (2016), que estudou 100 idosos depressivos, verificando que os menores escores depressivos eram evidentes em indivíduos com maior bem-estar espiritual relatado (r=0,28). Além da depressão, a espiritualidade é um construto relacionado a maiores índices de bem-estar geral em idosos, conforme relatado no estudo de Chen e colaboradores (2017) por meio de uma amostra de 377 idosos institucionalizados. Os autores realizaram o estudo de modo transversal e verificaram que maiores níveis de espiritualidade eram evidentes em idosos com menores índices de depressão, bem como entre aqueles com maior percepção de apoio social percebido.

Apoio Social

O apoio social é outro construto que é relacionado na literatura ao bem-estar do idoso. As redes de apoio podem ser definidas como um conjunto de sistemas e pessoas que compõe os relacionamentos existentes e percebidos pelo indivíduo, disponibilizando apoio social e/ou afetivo, emocional ou financeiro ao indivíduo (GUEDES et.al., 2017). O apoio social e as relações favoráveis podem desempenhar

um papel importante na manutenção da saúde e na prevenção da demência, conforme aponta o estudo de Khondoker e colaboradores (2017), que acompanhou 10.055 idosos ao longo de 10 anos. O estudo relatou que o apoio social estava associado, em seus achados, a menores níveis de ocorrência de demência ao decorrer dos anos. Apesar do estudo indicar a necessidade de melhor compreensão deste mecanismo, o apoio social foi destacado pelos autores como um fator de proteção para o idoso. Esse dado vem ao encontro de outro estudo que trata o apoio social como um construto capaz de reduzir sensação de solidão (Dangel & Webb, 2017). O estudo, realizado com a finalidade de relacionar a espiritualidade com maiores níveis de apoio social, refere que uma a participação do idoso em grupos de comum religião tende a reduzir a sensação de depressão e, consequentemente, a depressão (DANGEL & WEBB, 2017).

De fato, a solidão é vista como um dos problemas mais preocupantes na institucionalização, visto a relação entre sentir-se sozinho e a depressão no idoso institucionalizado (PRIETO-FLORES, 2011). No entanto, o estudo de Araújo e colaboradores (2016) avaliou 138 idosos em instituições de longa permanência e verificou que o apoio social, principalmente de familiares, é positivamente relacionado à qualidade de vida e a menores escores de depressão neste grupo, favorecendo uma vivência sem perdas na instituição.

Autoestima

Outro fator que pode estar associado à solidão e à depressão é a autoestima. A autoestima pode ser definida como um conjunto de sentimentos e pensamentos do indivíduo sobre seu próprio valor, competência e adequação, que se reflete em uma atitude positiva (autoaprovação) ou negativa (depreciação) em relação a si mesmo, influenciando na forma como o indivíduo elege suas metas, aceita a si mesmo, valoriza e projeta as suas expectativas para o futuro (KERNIS, 2005). A autoestima foi avaliada no estudo de Diesfeldt (2007), que incluiu 245 idosos com demência em uma instituição de longa permanência. O estudo verificou que maiores índices de autoestima dos moradores estava negativamente relacionada aos níveis de depressão, fadiga e solidão, mas não ao nível de comprometimento cognitivo do paciente. No entanto, esse resultado vai de encontro ao estudo de Yang e colaboradores (2017), que investigou a autoestima de indivíduos idosos com demência. O estudo incluiu 57 idosos com demência e identificou, por meio de uma

regressão linear múltipla hierárquica, que a autoestima é um preditor de qualidade de vida para este grupo.

Satisfação de Vida e Afetos

Além da autoestima, outras variáveis positivas consideradas nos estudos com pacientes com demência são a satisfação com a vida e os afetos vivenciados diariamente. A satisfação de Vida (SV) é definida como o nível de contentamento que alguém percebe quando pensa na sua vida de modo geral (SNYDER e LOPEZ, 2009). A SV é um construto muito explorado entre os idosos, pois expressa de modo sucinto como o indivíduo relaciona-se com a experiência de vida em relação às diversas condições de sua existência, sendo um fenômeno complexo e subjetivo, muitas vezes difícil de analisar (LUCAS et.al., 2018).

A SV, componente cognitivo do bem-estar subjetivo, é relacionada a menores índices de demência, como no caso do estudo de Peitsch e colaboradores (2016). Neste, 1751 idosos foram acompanhados em um período de 5 anos e realizou-se um modelo de regressão logística ajustado por idade, gênero, educação e comorbidades. Neste, a incidência de demência foi prevista pela satisfação de vida (OR=0,70, IC=95%).

Os afetos, componente emocional do bem-estar subjetivo, também são relacionados ao risco de demência, conforme relata o estudo de Korthauer e colaboradores (2017). O estudo apresentado pelos autores avaliou afetos em 2.137 mulheres idosas sem sintomas depressivos que foram acompanhadas por 11 anos e concluiu que os afetos negativos são associados ao maior declínio cognitivo mesmo quando ajustadas covariáveis de idade, educação, estilo de vida, fatores sociodemográficos, cognição global, risco cardiovascular e terapia hormonal.

Em idosos com depressão, a SV foi amplamente estudada por Sutipan e colaboradores (2017), que reuniram diversos estudos em uma revisão sistemática. A análise dos estudos permitiu concluir que maiores índices de SV estão relacionados a menores escores depressivos. Em indivíduos institucionalizados, os níveis de satisfação de vida reduzidos podem também estar associados a outros fatores comuns a este grupo, conforme estudado por Andrew e Meeks (2016), que avaliou um total de 65 idosos institucionalizados e encontrou significativa relação entre baixa satisfação de vida e sensação de solidão e dependência.

Esperança

A solidão e a dependência são fatores que contribuem para um declínio da esperança no idoso, que geralmente acontece devido às diversas síndromes geriátricas e mudanças que acompanham a degeneração dos sistemas no idoso (Bahmani et.al., 2016). A esperança pode ser definida como o pensamento direcionado a objetivos, sendo um construto disposicional no qual a pessoa usa o pensamento baseada na sua capacidade percebida de encontrar rotas que levam aos objetivos desejados ou em motivações necessárias para usar estas rotas (SNYDER e LOPEZ, 2009).

A esperança é tida como um preditor de declínio cognitivo no idoso, conforme aponta o estudo de Hakanson e colaboradores (2015). No mesmo, a esperança foi associada à cognição por meio da avaliação de 2000 idosos em um intervalo de 21 anos. Neste período, ficou claro que a desesperança acarretou implicações a longo prazo no prejuízo cognitivo. Quanto à depressão, a falta de esperança é incluída como critério diagnóstico de depressão no DSM-V (2013) e, em vista disso, é evidente que a mesma tem um impacto na vida e saúde das pessoas.

Otimismo

Assim como a esperança, o otimismo é apontado como um construto importante a ser abordado com idosos, conforme expressa o estudo de Schiavon e colaboradores (2017), que reuniu, por meio de uma revisão sistemática, informações de que a esperança e o otimismo são benéficos ao tratamento do indivíduo idoso com doenças crônicas. O otimismo é definido por Scheier e colaboradores (1994) como expectativas positivas generalizadas sobre eventos futuros, que faz com que o otimista espere que boas coisas aconteçam com elas. No contexto do idoso, ser otimista auxilia na conservação da saúde do indivíduo ao longo dos anos, explicando a conservação da saúde em 64,9% dos casos, conforme o estudo de Sung e colaboradores (2017).

Quanto à depressão, o otimismo é um preditor de melhores prognósticos no indivíduo depressivo, conforme estudo recente de Ji e colaboradores (2017). O estudo relata os resultados de 7 meses de acompanhamento de idosos depressivos e seus controles, descrevendo como as estratégias que aumentam o otimismo podem reduzir níveis de depressão.

Frente ao conjunto de evidências que relacionam atributos positivos a indicadores de saúde entre idosos, observa-se que a Psicologia Positiva pode, de fato, contribuir compreensão dos fatores que influenciam a saúde física e emocional de

idosos. Contudo, possibilitar que intervenções em Psicologia Positiva possam auxiliar os indivíduos idosos no enfrentamento das diferentes situações geriátricas é algo que ainda depende de mais estudos acerca das percepções destes sobre os aspectos positivos presentes em suas vidas (WOLVERSON, CLARKE e MONIZ-COOK, 2010). Nesse sentido, a presente tese foi elaborada, apresentando uma proposta de estudo inédita na área. Este estudo teve por objetivo caracterizar e comparar os indivíduos de quatro grupos distintos: idosos saudáveis, idoso com declínio cognitivo ou demência, idosos depressivos e idosos institucionalizados por meio dos construtos da Psicologia Positiva de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida, investigando as relações estabelecidas, de modo direto ou indireto, entre os construtos estudos. Esses achados podem contribuir para o planejamento de futuras intervenções, pautadas pela perspectiva da psicologia Positiva, a serem implementadas junto a idosos em diferentes condições de saúde e de vida em geral.

2. OBJETIVOS

2.1 OBJETIVO GERAL

a) Caracterizar e comparar os indivíduos de quatro grupos distintos: idosos saudáveis, idoso com declínio cognitivo ou demência, idosos depressivos e idosos institucionalizados com relação aos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida.

2.2 OBJETIVOS ESPECÍFICOS

a) Descrever as características demográficas e clínicas dos idosos dos quatro grupos estudados.
b) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos com declínio cognitivo.
c) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos depressivos.
d) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis não-institucionalizados com os escores de indivíduos institucionalizados.
e) Verificar quais dos construtos investigados estão associados ao maior grau de declínio cognitivo na CDR em indivíduos com declínio cognitivo ou demência.
f) Verificar quais dos construtos investigados estão associados a indicador de declínio cognitivo no Mini Exame do Estado Mental (MEEM) em indivíduos hígidos e institucionalizados.
g) Verificar quais dos construtos investigados estão associados ao maior escore na Escala de Depressão Geriátrica Abreviada (EDG) em indivíduos idosos hígidos e institucionalizados.
h) Verificar quais dos construtos investigados estão associados ao maior escore no Inventário de Depressão de Beck – BDI-II em indivíduos depressivos.

i) Verificar quais as relações diretas e mediadas entre os construtos investigados nos diferentes grupos estudados.

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4. ARTIGOS CIENTÍFICOS:

4.1 ARTIGO 1:

frontiers in Psychology

ORIGINAL RESEARCH
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Association of Lower Spiritual Well-Being, Social Support, Self-Esteem, Subjective Well-Being, Optimism and Hope Scores With Mild Cognitive Impairment and Mild Dementia

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Introduction: Positive psychology (PP) constructs contribute significantly to a better quality of life for people with various diseases. There are still few studies that have evaluated the evolution of these aspects during the progression of dementia.

Objective: To compare the scores for self-esteem, life satisfaction, affect, spirituality, hope, optimism and perceived support network between elderly people with mild cognitive impairment (MCI), mild dementia and moderate dementia and control group.

Methods: Cross-sectional study. The sample consisted of 66 healthy controls, 15 elderly people with MCI, 25 with mild dementia and 22 with moderate dementia matched by age, gender, and schooling. The instruments used were: Spirituality Self Rating Scale (SSRS), Rosenberg Self-Esteem Scale, Medical Outcomes Study's Social Support Scale, Life Satisfaction Scale (LSS), Positive and Negative Affect Schedule (PANAS), Revised Life Orientation Test (LOT-R), and Adult Dispositional Hope Scale (ADHS).

Results: The scores for spiritual well-being, social support, self-esteem, life satisfaction, positive affect, optimism, negative affect, and hope differed significantly between the groups ($p < 0.05$). The individuals with MCI and mild dementia had lower spiritual well-being, social support, self-esteem, life satisfaction, positive affect, optimism and hope scores, and higher negative affect scores compared with the controls. The scores for PP constructs did not differ between the group of people with moderate dementia and the control group.

Conclusion: Dementia was found to impact several PP constructs in the early stages of the disease. For individuals with greater cognitive impairment, anosognosia appears to suppress the disease's impact on these constructs.

Keywords: aged, dementia, cognitive decline, well-being, positive psychology, optimism, hope, social support

INTRODUCTION

The maintenance of the well-being of elderly people with cognitive impairment is relevant to promote the independence and autonomy of these individuals. One of the demands on health professionals is to prevent or even delay the brain degeneration process, thus contributing to productive aging through the promotion of social engagement and significant interpersonal relationships (Agli et al., 2015; Casemiro et al., 2016). Elderly people exhibit different levels of cognitive impairment. A clinical picture of mild cognitive impairment (MCI) in one or more cognitive domains was recently described in which there was no significant impact on daily living activities. This diagnosis has been incorporated into important classification systems such as APA (American Psychiatric Association, 2014) and National Institute on Aging–Alzheimer's Association (NIA–AA) (Hyman et al., 2012), which have called it Mild Neurocognitive Disorder and MCI, respectively. This diagnosis is important in that signals a higher likelihood of progression to dementia (Roberts et al., 2014). On the other hand, dementia is a syndrome characterized by acquired cognitive and behavioral symptoms and a decline from previous functioning and performance levels, which interferes with one's ability to work and engage in usual activities (Hyman et al., 2012). The progressive loss of independence and functionality gives rise to the hypothesis that dementia has a major psychological impact to the subject (Ogawa et al., 2017).

Current studies on emotions have pointed out that individuals with dementia exhibit a lack of recognition, assessment, and even the ability to feel negative emotions (Balconi et al., 2015; Oliver et al., 2015; Bora et al., 2016) and preserve the ability to recognize positive emotions (Goodking et al., 2015; St Jacques et al., 2015). These altered perceptions may be related to the loss of their cognitive ability to understand their disease, known as anosognosia, which impairs their perceptions throughout the course of the dementia, but is associated with an improvement in their quality of life (Conde-Sala et al., 2013, 2014). In order to understand the individual attributes that improve one's quality of life, Positive psychology (PP) has been consolidated as a field of study interested in promoting well-being and developing individual strengths. PP proposes a change of focus from pathology and the remediation of suffering to positive individual potentials and characteristics (Seligmann and Lopes, 2011).

Positive psychology is the study of the conditions and processes that contribute to the flourishing and optimal functioning of people, groups, and institutions (Gable and Haidt, 2005). The following are the main PP constructs investigated in older people (Snyder and Lopez, 2009): Spirituality: a personal dimension of understanding questions about life, meaning and one's relationship to the sacred or transcendent (Gonçalves and Pillon, 2009); Social Support: resources made available by a group of people with whom an individual maintains contact and that correspond to certain functions, such as emotional, material, and affective support (Griep et al., 2005); Self-esteem: a visual aspect of self-conception that consists of a set of thoughts and feelings about oneself (Hutz and Zanon, 2011); Optimism: a stable personality trait that gives rise to positive expectations about future events (Scheier et al., 1994); Well-being: a three-part structure in which the first part refers to a cognitive judgment about the degree of satisfaction a person feels about his/her life and the latter two relate to affective components that specify how often a person experiences positive or negative affects (Diener et al., 2004); and Hope: thinking directed to objectives and composed of pathways and agency (Snyder and Lopez, 2009).

Regarding the PP construct approach in dementia, a systematic review that included 11 articles on religion and spirituality in patients with dementia concluded that intervening in these constructs appears to delay cognitive decline and helps them to cope with their disease (Agli et al., 2015). This finding was corroborated by a study by Wu and Koo (2016). These authors conducted a clinical trial with 103 patients with dementia and showed that spiritual interventions improved their hope, life satisfaction, and spiritual well-being. It has been suggested that the social support and sense of belonging that individuals share by being part of the same religious group are the factors that mediate the positive effect of spirituality on patients with dementia (Brewer et al., 2015). Furthermore, Kuiper et al. (2015) reviewed 19 longitudinal cohort studies investigating the association between social relationship and dementia. They concluded that individuals with poor social interaction had a faster decline into dementia. The effect of poor social interaction was similar to that of other well-established risk factors such as limited schooling, physical inactivity, and depression. This result was in line with the work done by Khondoker et al. (2017) in a cohort study that followed 10,055 participants over 10 years to investigate the relationship between dementia and social relationships. The authors concluded that dementia severity showed a significant and negative relationship with the number of bonds the subjects maintained as well as the quality of the social relationships they established. In addition, a systematic review evaluating the effectiveness of social support group interventions for individuals with dementia and MCI suggested that support groups can be psychologically beneficial to people with dementia by lessening their depression and increasing their quality of life (Leung et al., 2015).

Self-esteem in subjects with dementia has also been related to a better quality of life. Higher self-esteem scores predicted a better quality of life in a sample of 95 individuals with dementia and this association was partially mediated by depression and anxiety (Clare et al., 2013). Similar results were observed by Young et al. (2017), who evaluated 57 patient-caregiver dyads in a cross-sectional study and found that self-esteem predicted a higher quality of life for the individuals with dementia.

In addition to self-esteem, other positive variables investigated in patients with dementia are life satisfaction and daily experienced affection. Life satisfaction predicted dementia in a sample of 1.751 elderly people without cognitive impairment at baseline who were followed for 5 years (adjusted OR = 0.70, CI = 0.51–0.96; Peitsch et al., 2016). This dementia risk is also related to negative affects according to a study conducted by Korthauer et al. (2017). The authors assessed affects in 2,137 elderly women without depressive symptoms who were followed for 11 years and concluded that negative affects were associated with greater cognitive decline, even when adjusting for the

covariates of age, education, lifestyle, sociodemographic factors, global cognition, cardiovascular risk, and hormone therapy.

The incidence of cognitive impairment was also associated with optimism in a study by Gawronski et al. (2016). These authors evaluated 4,624 elderly people over a period of 4 years and concluded that high optimism was a protective factor for incident cognitive impairment, playing an important role in maintaining cognitive functioning. Likewise, higher levels of hopelessness in midlife were associated with cognitive impairment in a 21-year follow-up with a sample of 200 subjects (Hakanson et al., 2015). Similarly, a systematic review concluded that optimism and hope were beneficial to the treatment of individuals with chronic diseases (Schiavon et al., 2017).

The studies cited above demonstrate that there is great interest in the field of PP in older individuals with cognitive impairment, as they stress the role of many PP constructs as risk factors for this condition and/or the beneficial effects of interventions focusing on these PP constructs on some outcomes, such as quality of life in dementia. Nevertheless, few studies have investigated PP constructs at different levels of cognitive impairment. One investigation described a significant reduction in self-esteem as dementia progressed (Diesfeldt, 2007). Thus, the progression of PP aspects during the course of the disease is still unknown (Wolverson et al., 2009). In view of this, the present study aimed to compare self-esteem, life satisfaction, affect, spirituality, hope, optimism, and perceived support network scores among healthy elderly individuals and subjects with MCI and mild and moderate dementia.

Considering the literature described above, this study's first hypothesis was that there is a decreasing gradient in all PP constructs among healthy subjects and individuals with MCI and dementia–i.e., better cognitive performance is associated with higher scores for PP constructs. On the other hand, we predicted that individuals with MCI would present lower scores for PP constructs than those with dementia due the latter group's greater anosognosia–i.e., that the dementia group's greater cognitive impairment would reduce the individual's ability to perceive his/her daily limitations, thus affecting the PP constructs.

MATERIALS AND METHODS

This is a cross-sectional study. "Cases" were considered those individuals who had some type of cognitive change and "controls" were considered those who were healthy and undergoing a normal aging process. The sample characteristics and inclusion criteria are described below.

Participants

The sample size was previously calculated in the WinPepi program, version 11.43, based on the studies of Hernandez et al. (2009) and Moreno et al. (2010) resulting in a minimum number of at least 60 demented individuals and 62 healthy controls. The final sample was composed of 128 individuals with a minimum age of 60.

The clinical group (individuals with MCI and dementia) consisted of 62 outpatients who were being treated at a dementia clinic located in a southern Brazilian capital city. Their ages ranged from 60 to 89 (Mean = 72,52; Standard Deviation = 7,92). Dementia diagnoses were made by dementia experts according to the NIA–AA (Hyman et al., 2012), and Brazilian Academy of Neurology criteria (Frota et al., 2011; McKahan et al., 2011). Dementia severity was assessed by the Clinical Dementia Rating (CDR) (Morris, 1993; Chaves et al., 2007). Patients who scored 1 on CDR had mild dementia and who scored 2 presented moderate dementia. Individuals who had a CDR score of 3 (severe dementia) were excluded from the study, as the severity of their impairment would make it impossible for them to understand the questions posed by the instruments that evaluated PP aspects. MCI diagnosis was made by a comprehensive clinical evaluation, which included a clinical history and neuropsychological and functional assessments. Those patients who showed impairment in any cognitive domain and no functional impairment fulfilled the MCI criteria. A CDR score of 0.5 was also used to corroborate a MCI diagnosis. Patients with a current clinical diagnosis of major depression were also excluded. Doctors with clinical experience in evaluating depression and dementia carried out all of the assessments.

The control group consisted of 66 individuals aged 60–88 (Mean = 72,95; Standard Deviation = 7,63) who were selected from a group of elderly people who engaged in physical activities in an active aging group in a capital city in southern Brazil. The controls were chosen after clinical group was selected so that their age, gender, schooling, and social class would be similar to those of the individuals in the clinical group, aiming to match the groups. Depression and cognitive impairment were exclusion criteria for this group. The 15-item Geriatric Depression Scale (GDS) (Sheikh and Yesavage, 1986; Paradela et al., 2005) and the mini mental state examination (MMSE) (Folstein et al., 1975; Bertolucci et al., 1994) were applied to screen for these conditions. Subjects who tested positive for these conditions were not included. All of the subjects were able to perform their day-to-day activities independently.

Positive Psychology Instruments

The researchers were trained beforehand to apply the PP scales. The following instruments were used to evaluate the PP constructs.

- The Brazilian Portuguese Adaptation of the Spirituality Self Rating Scale (SSRS) (Galanter et al., 2007; Gonçalves and Pillon, 2009). This is a Likert scale composed of six items that assess an individual's spirituality–i.e., the importance of his/her spiritual dimension and how he/she applies it in his/her life. It is based on three factors: peace, meaning, and faith, and presented adequate internal consistency, with a Cronbach's alpha of 0.83 (Gonçalves and Pillon, 2009).
- The Brazilian Portuguese Adaptation of the Social Outcomes Study Scale (MOS) (Sherbourne and Stewart, 1991; Griep et al., 2005). This instrument covers five social support dimensions: material, affective, positive social interaction, emotional, and information. It's a Likert-type scale and presented a Cronbach's alpha equal to or greater than 0.8 (Griep et al., 2005).

- The Brazilian Version of the Rosenberg Self-Esteem Scale (Rosemberg, 1989; Hutz and Zanon, 2011). This unifactorial instrument consists of ten statements related to a set of feelings of self-esteem and self-acceptance and assesses global self-esteem. It presented a Cronbach's alpha of 0.90. The items are answered on a 4-point Likert scale, including the following responses: totally agree, agree, disagree, and totally disagree (Hutz and Zanon, 2011).
- The Brazilian Portuguese Version of the Life Satisfaction Scale (LSS) (Diener et al., 1985; Zanon et al., 2014). The LSS scale presented a Cronbach's alpha of 0.81 and is composed of 5 self-report items arranged on a 7-point Likert scale in which people agree or disagree with the statements to varying degrees (Zanon et al., 2014).
- The Brazilian Version of the Positive and Negative Affect Schedule (PANAS) (Watson and Clark, 1994; Zanon et al., 2013). The Brazilian version of the positive and negative affect schedule presented a Cronbach's alpha of 0.83 for positive affects and 0.77 for negative affects. It is a self-report scale composed of 10 items that evaluate positive affects and 10 items that evaluate negative affects. The items are adjectives with the answer keys for a Likert five-point scale that correspond to the frequency at which the person experiences the emotion described by the adjective (Zanon et al., 2013).
- The Revised Life Orientation Test (LOT-R) by Scheier et al. (1994) in Its Brazilian Version (Bastianello et al., 2014). Used to evaluate optimism, this scale is composed of a 10-item measure of optimism versus pessimism. Of the 10 items, 3 items measure optimism, 3 items measure pessimism, and 4 items serve as fillers. Respondents rate each item on a 5-point Likert scale with varying degrees of agreement or disagreement. The Cronbach's alpha of the LOT-R Scale is 0.68 (Bastianello et al., 2014).
- The Brazilian Version of the Adult Dispositional Hope Scale (ADHS) (Snyder et al., 1991; Pacico et al., 2013). The Brazilian version of the adult dispositional hope scale is used to evaluate hope and presented a Cronbach's alpha of 0.80. This instrument consists of 12 items. Four of these refer to the agency dimension, four refer to the pathway dimension, and four serve as distractors. The items are answered on a 5-point Likert type scale in which 1 is "totally false" and 5 is "totally true" (Pacico et al., 2013).

Social Class Assessment

Social class was established according to the Economic Classification of the Brazilian Economic Classification Criteria developed by Associação Brasileira de Empresas de Pesquisa [ABEP] (2016), taking into account the population's purchasing power. This instrument's final score results in the categories A, B, C, D, and E. Category A includes individuals with an average income of R$ 20,888.00 (Brazilian reals); Category B includes individuals with average incomes between R$ 4,852.00 and R$ 9,254.00; Category C includes individuals with average incomes between R$ 1,625.00 and R$ 2,705.00; and categories D and E include individuals with an average income of R$ 768.00. These amounts are expressed in Brazilian currency, as set forth in the National Household Sample Survey of 2014.

All of the instruments were used in their validated versions for application in Brazil and have good validity and reliability indicators.

Procedures

Data were initially collected from the individuals in the clinical group. Based on their characteristics (gender, age, schooling, and social class) they were paired with members of the control group when its participants were selected, aiming to match the groups. The elderly people who met the inclusion criteria were invited to participate in the study through an approach carried out in different places, according to the group to be studied. After the informed consent form was explained and signed in a silent and private room, the subjects were evaluated. The PP questionnaires were applied in random order to avoid response bias.

Ethical Issues

This study was carried out in accordance with the ethical recommendations for clinical research laid out in Resolution 446/12, with written informed consent from all subjects. It was previously approved by the UFCSPA Research Ethics Committee (Protocol No. 1,046,803). All subjects provided informed written consent in accordance with the Helsinki Declaration.

Statistical Analysis

The data were stored in an SPSS 22.0 database and analyzed using this statistical program. Variable distribution was assessed using the Shapiro–Wilk normality test and variance homogeneity was evaluated with the Levene test. The Student's *t*-test was used to compare age between the case and control groups; the Chi-square association test was used to compare the other demographic data between the groups. Since the normality and homogeneity tests did not present statistically significant values, parametric tests were applied. To compare the scales between the groups, we applied the one-way analysis of variance (ANOVA) complemented by Tukey's test. The significance level was set at 5% ($p < 0.05$).

RESULTS

In total, 128 subjects aged 60–89 (Mean = 72,74; Standard Deviation = 7,50) were included in the study. **Table 1** shows the comparison of the demographic data, presence of cognitive complaints and antidepressant use between the healthy individuals (controls) and those with MCI, mild dementia and moderate dementia (cases). The demographic data (age, schooling, and social class) did not differ between the groups. The MCI and dementia groups presented cognitive complaints. Such complaints became increasingly frequent the higher the level of cognitive impairment and dementia severity. Although major depression was one of the exclusion criteria, some individuals reported that they currently used antidepressants for minor anxiety or depression symptoms. Such use was significantly higher in the control group.

TABLE 1 | Comparison of demographic data and complaints of cognitive difficulties between the group of healthy individuals (controls) and the group of people mild cognitive impairment (MCI) and mild/moderate dementia (cases).

		Controls *N* = 66	MCI+ *N* = 15	Mild dementia *N* = 25	Moderate dementia *N* = 22	*P*
Age*		72.95 (7.63)	73.27 (6.78)	70.36 (7.39)	74.45 (7.67)	0.316
Gender**	*F*	54 (81.8)	11 (73.3)	17 (68.0)	16 (72.7)	0.512
	M	12 (18.1)	4 (26.6)	8 (32.0)	6 (27.2)	
Schooling**	None	0 (0)	0 (0)	2 (8)	2 (9.1)	0.199
	Primary school education	53 (80.3)	13 (86.7)	16 (64)	17 (77.3)	
	High school education	7 (10.6)	2 (13.3)	5 (20)	3 (13.6)	
	College and/or graduate school	(9.1)	0 (0)	2 (8)	0 (0)	
Social Class**	*A*	4 (6.1)	0 (0)	0 (0)	0 (0)	0.522
	B	20 (30.3)	3 (20)	5 (20)	5 (22.7)	
	C	39 (59.1)	12 (80)	19 (76)	17 (77.3)	
	D	3 (4.5)	0 (0)	1 (4)	0 (0)	
Complaint of cognitive difficulty**	Yes	24 (36.3)	9 (60.0)	20 (80.0)	20 (90.9)	<0.001
	No	42 (63.6)	6 (40.0)	5 (20.0)	2 (9.0)	
Antidepressant use**	Yes	7 (10.6)	3 (20.0)	3 (12.0)	2 (9.0)	0.748
	No	59 (89.3)	12 (80.0)	22 (88.0)	20 (90.9)	

*MCI+, Mild Cognitive Impairment. *ANOVA – results presented as mean and standard deviation. **Chi-square – results presented as n (%).*

Table 2 presents a comparison of the scores on the spiritual well-being, social support, self-esteem, life satisfaction, positive affect, negative affect, optimism and hope scales among the healthy elderly people and those with MCI and mild and moderate dementia. There was a significant difference in all of the PP constructs between the groups.

The multiple comparisons using Tukey's test showed significantly lower scores for the majority of the PP constructs in individuals with MCI and mild dementia than in the healthy elderly individuals and those with moderate dementia. There was no difference in the total spiritual well-being score between the MCI and mild dementia groups, while individuals with MCI presented significantly lower scores for this construct than the healthy subjects and the individuals with moderate dementia. Multiple comparisons using Tukey's test also showed that the total social support scores were similar between the MCI and mild dementia groups and that both groups presented lower scores for this construct than the moderate dementia group and the healthy control group. Individuals with MCI showed lower scores in all of this construct's subgroups than those observed in the healthy group and the moderate dementia group, while the mild dementia group showed lower scores than the moderate dementia group only for the affective, information and positive social interaction sub-scales of social support. Scores for the self-esteem, life satisfaction, positive affect, and hope constructs did not differ between the MCI and mild dementia groups. These constructs were also similar between the moderate dementia group and the healthy individuals. On the other hand, the scores for these constructs were significantly lower in the MCI and mild dementia groups compared with the moderate dementia group and the healthy control group. The healthy controls showed the highest optimism scores among all the groups. The optimism scores did not differ between the mild dementia group and the MCI group and both presented lower levels of optimism than the healthy control group and the moderate dementia group. Negative affect scores were significantly higher in the MCI and mild dementia groups than in the healthy control group, while negative affect levels did not differ between these groups.

DISCUSSION

The present study evaluated self-perception in several PP constructs in elderly individuals with MCI and different degrees of dementia compared with that in healthy individuals. The study showed two main results: (a) Groups with MCI and mild stages of dementia had worse scores for all constructs, and (b) The scores of patients with moderate-stage dementia did not differ from those of the control group. Therefore, our first hypothesis that better cognitive performance would be associated with higher scores in the PP constructs was refuted. The second hypothesis that cognitive impairment would be associated with better scores in all of the PP constructs was validated.

It is worth discussing some points about the first result (worse scores in the early stages of dementia). It is known that the neuropsychological impacts of dementia include the deterioration of life quality, perception, mood, and behaviors that are associated with neurodegenerative diseases. These changes are mainly perceived at an early stage of the disease and are associated with a poor prognosis of progressive cognitive loss (Ismail et al., 2017). This may explain the first result described. The results of the present study are in partial agreement with those demonstrated by Diesfeldt (2007). This author verified a significant reduction in self-esteem with the progression of dementia. Our results were similar for milder degrees. However, the present study's assessment found no difference between

TABLE 2 | Comparison of mean and standard deviation in spiritual well-being, social support, self-esteem, life satisfaction, positive affect and negative affect, optimism and hope scores among healthy individuals with mild cognitive impairment and mild/moderate dementia.

	Control Group	Clinical group				
	N = 66	Mild cognitive impairment *N* = 15	Mild dementia *N* = 25	Moderate dementia *N* = 22	*P*	$F_{(dfB;dfW)}$
Spiritual well-being	39.06 (5.62)^{c}	28.00 (6.92)^{a}	31.28 (6.42)^{a,b}	35.50 (7.89)^{b,c}	<0.001	$17.46_{(3;124)}$
Peace	12.89 (2.12)^{c}	8.6 (2.74)^{a}	9.72 (2.33)^{a,b}	11.41 (2.55)^{b}	<0.001	$20.70_{(3;124)}$
Meaning	13.18 (1.92)^{c}	8.73 (2.63)^{a}	10.60 (2.02)^{b}	11.95 (2.69)^{b,c}	<0.001	$21.16_{(3;124)}$
Faith	13.13 (2.25)^{b}	10.67 (3.88)^{a}	10.96 (3.90)^{a}	12.27 (3.16)^{a,b}	0.003	$4.85_{(3;124)}$
Social support	94.74 (11.98)^{b}	73.46 (27.02)^{a}	74.39 (30.12)^{a}	91.18 (18.68)^{b}	<0.001	$9.35_{(3;124)}$
Material	95.30 (14.43)^{b}	82.66 (22.58)^{a}	88.20 (17.13)^{a,b}	94.09 (15.93)^{a,b}	0.029	$3.09_{(3;124)}$
Affective	96.63 (10.92)^{b}	80 (27.25)^{a}	82.12 (22.67)^{a}	92.40 (19.00)^{a,b}	<0.001	$6.43_{(3;124)}$
Emotional	94.16 (14.89)^{b}	74.33 (28.77)^{a}	76.8 (26.17)^{a,b}	91.59 (19.11)^{b}	<0.001	$7.19_{(3;124)}$
Information	93.78 (14.54)^{b}	68.33 (30.09)^{a}	73.2 (28.60)^{a}	90.45 (21.03)^{b}	<0.001	$9.86_{(3;124)}$
Positive social interaction	95.22 (13.34)^{b}	63.05 (38.62)^{a}	67.43 (33.81)^{a}	90.00 (20.23)^{b}	<0.001	$13.51_{(3;124)}$
Self-esteem	38.10 (2.68)^{b}	28.53 (7.92)^{a}	30.96 (6.99)^{a}	35.95 (4.70)^{b}	<0.001	$23.32_{(3;124)}$
Life Satisfaction	30.93 (3.73)^{b}	25.53 (6.86)^{a}	23.24 (5.81)^{a}	29.27 (3.79)^{b}	<0.001	$18.96_{(3;124)}$
Positive Affect	37.65 (4.88)^{b}	28.27 (9.78)^{a}	27.00 (7.63)^{a}	33.41 (7.95)^{b}	<0.001	$19.11_{(3;124)}$
Negative Affect	12.62 (4.60)^{a}	25.27 (7.94)^{b}	22.24 (7.71)^{b}	14.41 (5.47)^{a}	<0.001	$29.30_{(3;124)}$
Optimism	24.10 (4.58)^{c}	13.87 (6.78)^{a}	14.60 (3.96)^{a}	20.32 (4.01)^{b}	<0.001	$36.22_{(3;124)}$
Hope	36.93 (3.54)^{b}	28.40 (7.97)^{a}	28.32 (6.01)^{a}	34.00 (5.10)^{b}	<0.001	$24.34_{(3;124)}$

^{a,b,c}Different letters indicate significant differences (Tukey test at 5% significance); dfB, degrees of freedom between groups; dfW, degrees of freedom within groups.

the controls and the individuals with moderate dementia. This discrepancy may be due to differences in the methods each study used to assess dementia severity.

The reduction of the constructs studied in the earlier stages of dementia can also be understood as resulting from the impacts that the disease generates, posing itself as a threat to existence, the meaning of life and social context, since believing that the rest of one's life may be unpleasant overwhelms the individual, threatening his/her identity and lowering his/her self-esteem (Cheston et al., 2015). Regarding the wide range of emotions that elderly people with dementia can experience, positive and negative affects are present in varying degrees of intensity in day-to-day life, and it is the relationship between the frequencies with which they are experienced that leads to a greater or lesser feeling of well-being (Diener et al., 2004). In the literature, negative emotions are associated with subsequent dementia. However, since the disease has a long preclinical stage, is difficult to determine whether dementia causes such negative feelings or results from them (Hakanson et al., 2015). What a demented person feels and how he/she feels about the disease is something that has not yet been studied and needs more attention (Schiavon et al., 2017). It is important to point out that even patients with MCI (i.e., whose cognitive impairments do not cause disability) have scores equal to those with mild dementia (worse than the controls' scores). This could be attributed to their expectation of having an unfavorable progression toward an irreversible and incapacitating disease (Ogawa et al., 2017).

To deal with these disabilities, the literature suggests that dementia interventions in the various positive psychology constructs studied may help the elderly to cope with their disease. Recent studies have investigated the benefits of interventions in positive psychology for individuals with dementia (Coin et al., 2010; Agli et al., 2015; Hakanson et al., 2015; Kuiper et al., 2015; Wu and Koo, 2016; Khondoker et al., 2017). These studies suggest that spirituality in individuals with dementia tends to alleviate or stabilize cognitive disorders (Coin et al., 2010; Agli et al., 2015; Chen et al., 2017) and assists in the development of coping strategies to accept dementia, maintain their relationships, sustain hope, and find meaning in their lives (Jolley et al., 2010; Dalby et al., 2012; MacKinlay, 2012; Agli et al., 2015). Self-esteem interventions are indicated to reduce depressive symptoms and improve life quality (Lee and Park, 2007). Social support and positive relationships can play an important role in maintaining health and preventing dementia (Khondoker et al., 2017), as well as reducing depression (Logsdon et al., 2010; Leung et al., 2015). However, studies are still needed to assess self-esteem, life satisfaction, affect, spirituality, hope, optimism, and support networks in dementia and what effect the disease's progression has on these aspects.

Our investigation also found that the PP constructs did not differ between the patients with moderate dementia and the healthy controls–i.e., as their dementia severity worsened, the elderly patients' responses became more positive. This finding is similar to that of a study by Midorikawa et al. (2016) in which family members reported that individuals with mild and moderate dementia displayed more positive behaviors and emotions in their day-to-day lives. Considering the present study's results, it is hypothesized that this is due to the patient's perception. Among the constructs evaluated, only optimism continued to show a significant difference between the control group and the group with moderate dementia. A systematic review by Schiavon et al. (2017) emphasized the need for more studies on optimism and hope in people with chronic

diseases, highlighting the importance of these constructs in disease prognosis, life satisfaction, and life quality. Regarding emotions, impairment of left-hemisphere emotion regulators (including the left ventrolateral prefrontal cortex, orbitofrontal cortex, and anterior striatal insula) may impair one's ability to suppress positive emotions such as happiness, thus making individuals more inclined to positive affect (Conde-Sala et al., 2014; Sturm et al., 2015). In advanced stages, there is a functional reduction in these regions as a whole as well as a smaller volume of gray matter in regions of the prefrontal gyrus associated with the recognition of emotions (Stock et al., 2015). This reduction provides a hypothesis for this study's findings, which indicate that there is no difference in any of the constructs except optimism between the control group and the group with moderate dementia.

As the disease progresses, the perception of its initial impact may not be perceived as a threat, since the disease's own effects can lead to an inability to judge and understand the losses it causes, as well as to better responses in many domains, such as emotions and empathy (Fong et al., 2016). A patient's lack of concern about the losses caused by the disease is related to frontal and ventromedial cortical atrophy, which leads him/her to overestimate his/her individual and emotional abilities (Hornberger et al., 2014). Although these losses compromise an individual's ability to respond to his/her emotions, a qualitative study by Kaufmann and Engel (2016) found that, even with communication challenges, individuals with dementia have the ability to assess their own well-being and affect. The study also pointed to the need for specific methods to evaluate elderly dementia patients to see if they have an adequate understanding of the disease's impact on their lives. The present study found more frequent complaints of cognitive difficulty in the cases (79%) than in the controls (36.4%). This data suggests that, even if there is a difficulty in understanding the disease, the recognition of cognitive impairment is preserved. Even so, we cannot discard the hypothesis that the greater cognitive impairment of the moderate stage affects judgment and even the comprehension of the existing scales used to evaluate elderly people without dementia. This could also explain the lack of difference in the PP constructs between controls and patients with moderate dementia, in which increased cognitive deficit, anosognosia, and poor understanding of complex issues exert great influence (Poveda et al., 2017).

Greater impairment of an individual's ability to perceive his/her own limitations with the progression of dementia determines his/her awareness of the pathology's severity or even of being ill (known as anosognosia), which was mentioned earlier in this study (Conde-Sala et al., 2014; Martyr and Clare, 2017). Studies on anosognosia point to regions of the brain that may be related to this disorder (Perrotin et al., 2015; Arroyo-Anllo et al., 2017). Anosognosia, or the loss of the ability to perceive a disease, makes an individual incapable of responding clearly to his/her emotions or even of perceiving and/or feeling the difficulties experienced in his/her routine. This reduced perception is associated with a serious deficit in the processing and recognition of emotions, which also impairs an individual's perspective on his/her emotional responses (Poveda et al., 2017). In the literature, anosognosia is associated with the perception of better life quality in advanced stages of dementia (Conde-Sala et al., 2013) and may affect not only cognitive deficits and day-to-day functioning, but also affective symptoms ("affective anosognosia") described in previous studies (Conde-Sala et al., 2013; Munro et al., 2016). The present study's findings lead us to believe that anosognosia has a strong influence on an individual's perception in advanced degrees of dementia, as well as on PP construct scores, highlighting the need for further research in this field in order to better understand the relationships between dementia and emotions.

The scarcity of research on PP and the associations between its constructs and dementia is still evident in current literature (Machado et al., 2017). Considering the results found in the present study, the importance of performing specific evaluations to understand what happens in the various PP constructs during the course of dementia is reinforced.

Study Strengths

One of the present study's strengths is that it investigates several PP domains at different stages of dementia, including the earliest stages, such as MCI. It is original in that it provides a view of the differences that exist in PP constructs in terms of the degrees of dementia impairment and performs a broad analysis of the findings, aiming to improve the psychosocial conditions of elderly people.

Study Limitations

An important limitation of the study is that there is limited literature available in the field of PP, mainly due to the novelty of studies on PP in dementia. Important gaps still exist (Reppold et al., 2015; Freitas et al., 2016). This problem, especially when related to demented individuals and the different stages of dementia, occurs due to the difficulty of evaluating individuals with advanced dementia with existing instruments, since the responses obtained are usually non-specific, non-objective, and strongly influenced by the fluctuations in attention and difficulty in retaining information caused by cognitive impairment (Kaufmann and Engel, 2016).

For future studies, a longitudinal design is suggested with dementia patients in the assessment of the progression of losses in PP, since this may help in understanding the progression of the constructs studied. The impressions of caregivers would be an interesting topic for future studies. Potential causality, selection and measuring biases, and confounding effects are related to the study's design.

CONCLUSION

Mild cognitive impairment and mild dementia result in lower scores for the constructs of self-esteem, spirituality, social support, affect, life satisfaction, optimism, and hope. However, as dementia severity increases, the construct scores more closely resemble those of individuals in the control group, leading to the

hypothesis that factors such as anosognosia, a reduction in the suppression of positive emotions and a reduction in emotional self-perception and understanding of the disease gain influence with the progression of dementia.

AUTHOR CONTRIBUTIONS

SdS was the lead author in conceptualizing the study and writing the manuscript. GR, AdP, LF, and CR contributed to all stages of the research and then critically reviewed and revised the manuscript. CR was a doctoral advisor for this research. LF and AdP were co-advisors for this research. All authors were accountable for the final version of the manuscript.

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4.2 ARTIGO 2:

Positive attributes in elderly people with different degrees of depression: a study based on network analysis.

Running Head: Positive Psychology in Depression.

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ABSTRACT:

Introduction: Depression in aging may lead to loss of autonomy and worsening of comorbidities. Understanding how positive attributes contribute to healthier and happier aging has been one of the purposes of Positive Psychology. However, the literature still have lacks in studies that evaluate how depression in the elderly is related to constructs considered positive.

Goal: The present study aimed comparing scores of constructs of spiritual well-being, social support, self-esteem, life satisfaction, affection, optimism and hope in the elderly with minimal, mild, moderate and severe depression and healthy controls in order to investigate possible direct and mediated relationships between positive constructs and depression.

Methods: A cross-sectional study with elderly people with 62 subjects diagnosed with different severity of Major Depression (DSM-V) (minimum, mild, moderate and severe according to the Beck Depression Inventory – BDI-II) and 66 healthy controls subjects matched by age, gender, and schooling. The instruments used were adapted and validated versions of the Spirituality Self Rating Scale, the Rosenberg Self-Esteem Scale, the Medical Outcomes Social Scale of Support, the Life Satisfaction Scale, the Positive and Negative Affect Schedule, the Revised Life Orientation Test and the Adult Dispositional Hope Scale. After comparing the means of scores between groups, an analysis of normalized partial association networks was performed to investigate the direct and mediated relationships between depression and other evaluated constructs.

Results: Scores of spiritual well-being, social support, self-esteem, life satisfaction, positive affect, optimism, negative affects and hope differed significantly between the control group and the degrees of depression ($p < 0.001$). The analysis of normalized partial association networks has shown the relations of depression with the constructs of life satisfaction, self-esteem and social support are mediated, while the constructs of dispositional hope, positive affections,

spiritual well-being and optimism are directly related to depression. The social class was also positively related to depression.

Conclusion: Depression in different levels of severity is associated with a reduction in the scores of instruments that evaluate positive attributes. The constructs directly associated with depression are spiritual well-being, optimism, positive affects, and dispositional hope. The others had mediated relationship. These results may contribute to the planning of future interventions for the prevention of depression among the elderly.

Key words: aging, depression, well-being, Positive Psychology, network analysis.

INTRODUCTION:

Nearly half of the elderly people in Brazil (48.9%) presents more than one chronic disease and one of the most serious is depression (Hellwig et al, 2016). A NSHS (National Sample Household Survey) study (2010) indicated that 9.2% of the Brazilian elderly population is described as depressive. One of the most common mood disorders, especially among the aged, is Major Depressive Disorder - MDD (Hellwig et al, 2016). The main diagnostic criteria are depressed mood and loss of interest and / or pleasure as well as changes in sleep and / or appetite, agitation or slowness, fatigue, feelings of worthlessness or guilt, reduced thinking, and nihilism (DSM–5, 2013). Stressful events, chemical, biological and social changes due to aging imply changes that are risks for MDD and this can lead to a reduction in quality of life, loss of autonomy, and aggravation of previous comorbidities (Galatzer-Levy e Bonnano, 2014; Marques et.al., 2017).

Studies conducted with the elderly population commonly investigate risk factors and impairments associated with diseases. However, Positive Psychology is an area that seeks to address the personal positive characteristics for health and well-being, expanding the focus of previous studies often focused on suffering, clinical losses and pathologies (Seligman, 2011). Some of the constructs most commonly investigated in Positive Psychology, including in clinical trials, are spirituality, social support, self-esteem, life satisfaction along with affections in subjective well-being, optimism, and hope (Snyder et.al., 2011).

International researches conducted with the elderly population indicate that there are evidences of an inverse and significant relationship between depression and spirituality (Abu-Raya et al., 2016; Bamonti et al., 2014; Bashir et al., 2016), self esteem (Orth et al., 2016), positive affects (Proyer et al., 2014), optimism (Niklasson et al. 2017; Ho et al., 2014), hope (Mirbagher et al., 2016, Mazooni et.al., 2017), social support (Dangel e Webb, 2017) and life satisfaction (Adams et al., 2015).

However, in Brazil, such research projects are still scarce. In addition, there are a few international studies that explore the differences in Positive Psychology construct scores in elderly individuals with different degrees of depression. Considering this, the objective of the present research is compare constructs scores of spiritual well-being, social support, self-esteem, life satisfaction, affection, optimism, and hope in the elderly with minimal, mild and moderate depression and healthy controls, order to investigate possible direct and mediated relationships between positive constructs and depression.

METHODS:

This study was conducted as a cross-sectional study study. The subjects were matched by age , gender and sex. The sample was previously calculated in the program WinPepi (Programs for Epidemiologists) version 11.43, based on the studies of Moreno et al (2010) and Hernandez et. al. (2009), resulting in at least 60 subjects with Major Depression (MD) and 62 healthy subjects in a control group, considering a level of significance of 5%, power of 90% and a minimum correlation coefficient of 0.4 between the scales. The participants were included for convenience in this study resulting in a total of 128 subjects being 66 in the control group. The research was carried out following the ethical recommendations of research (National Health Council, resolution 466/12) ensuring the anonymity of the data and was previously approved by a Research Ethics Committee under opinion of number 1.046.803.

In the clinical group, 62 subjects who were being followed up in a mental health outpatient clinic of a hospital in a capital of southern Brazil were included. The inclusion criteria for this group were the diagnosis of MDD according to DSM-V criteria (DSM-5, 2013). The Beck Depression Inventory II (BDI-II) was used to assess the severity of the depressive episode (Gorenstein et.al., 2011), considering the following categories: 0 to 13 points - minimum depression; 14-19 points - mild depression; 20 to 28 points - moderate depression; 29-63 points - severe depression. Patients with dementia or diagnosis of another mental disorder were

excluded from this group. These selection criteria was evaluated by doctors with clinical experience in evaluation of mental disorders. The selection of the participants in the control group was among the elderly people who performed physical activity in an active aging group of a capital of the South of Brazil. The inclusion criteria for the control group were over 60 years old, healthy and functionally independent. The GDS (Geriatric Depression Scale) (Sheikh e Yesavage, 1986; Paradela, Lourenço e Veras, 2005) and the Mini Mental State Exam (MMSE) (Folstein et al, 1975; Bertolucci et al., 1994) were applied to rule out suspected cases of depression and cognitive impairment, respectively.

In order to evaluate the constructs of Positive Psychology in both groups, the following instruments were used: the Spirituality Self Rating Scale - SSRS to evaluate spirituality in its adaptation to Brazilian Portuguese developed by Gonçalves e Pillon (2009); the Medical Outcomes Study Social Support Scale - MOS in adapted version to the Brazilian Portuguese (Griep et.al. 2005) to evaluate social support; the Rosenberg Self-Esteem Scale - RSS to assess self-esteem in its Brazilian version by Hutz e Zanon (2011); the Life Satisfaction Scale - LSE in validated version for Brazilian Portuguese (Zanon et.al., 2014) to evaluate life satisfaction; the PANAS - Positive and Negative Affect Schedule - in its Brazilian version (Zanon et.al., 2013) to evaluate affections; the Revised Life Orientation Test (LOT-R) to evaluate the optimism in the Brazilian version (Bastianello et.al., 2014) and the Adult Dispositional Hope Scale (ADHS) to evaluate hope in the Brazilian version (Pacico et.al., 2013). All instruments have been validated in versions for use in Brazil and have good indicators of validity and reliability. The order of application of the tests was random, in order to avoid bias in the responses. The collection was performed for approximately one hour with each participant. Those individuals who did not meet the inclusion criteria were excluded from the study, totaling 5 individuals.

Statistical analysis:

Quantitative data processing was performed using SPSS software, version 22.0. After obtaining the total scores of the dimensions were verified the assumptions of normality, homoscedasticity and sphericity. The Mann-Whitney U test was used to compare age between the case and control groups, the chi-square association test was used to compare the other demographic data between the groups. The Kruskall-Wallis and Wilcoxon-Mann-Whitney tests (test U) with significance adjusted by the Bonferroni test were applied to compare the scores of the PP scales between the depressed and healthy control groups. The level of significance was set at 5% ($p \leq 0.05$).

Subsequently, regularized partial regression network analyzes (Lauritzen, 1996) were conducted through the qgraph (Epskamp et.al., 2012) package of statistical software R. The regularized partial correlation analyzes aim to investigate the conditioned relations between depression and PP construct scores.

In this technique, each pair of variables are regressed, controlling the effect of the other variables analyzed. In order to avoid over-adjustment of the model to the data, a penalty hyperparameter is used by means of the Graphical Least Absolutes Shrinkage and Selection Operator (GeLasso) method (Friedman, Hastie & Tibshirani, 2010) that zeroes edges with magnitudes close to zero. The choice of the best model is given by the Extended Bayesian Criterion (EBIC) index to generate the least residual graph (Foygel & Drton, 2010). Finally, the shortest pathways between the investigated variables were estimated in order to determine if they have direct or mediated relations in the model (Opsahl, Agneessens e Skvoretz, 2010). Regularized partial correlations can be interpreted as regression betas, with normalized partial correlation coefficients being standardized and having cut-off points of 0.1 for weak, 0.3 for moderate and 0.5 for strong correlation between variables. These values are due to the rigid control of the influences between variables in the association between them (Cohen, 1968; Hoyt et.al., 2003).

In order to represent the regularized partial correlations, a graph indicating the partial correlations (or Markov Random Field; Lauritzen, 1996), that is, pairwise associations after the statistical control of the other variables of the model (i.e. conditionals) was generated. In this technique an adjacency matrix (i.e. regularized partial correlation matrix) is represented by means of a graphic object. In this graph the variables are represented by vertices (or circles) and the relations between the variables as edges (or lines). The intensity of the edges of the graph represents the magnitude of these associations while their color, red or green, represent the direction (negative or positive, respectively) of the associations. The graph also has the application of a positioning algorithm (Fruchterman & Reingold, 1991), in which variables are approximated or expelled according to their association. The variables represented in the center of the graph have a greater number of associations (Machado, Vicossi & Epskamp, 2015). In this analysis, the "negative affects" construct was excluded from the analysis of correlation, association, network and centrality due to its proximity to depression.

RESULTS:

Table 1 presents the comparison of demographic data between the groups of healthy subjects (controls) and the group with mild, moderate, and severe degrees of depression. The analysis of these data in the table indicates the pairing of groups by age, gender and schooling.

<Table 1>

Comparison of scores on the scales of spiritual well-being, social support. self-esteem, life satisfaction, positive affects, negative affects, optimism, and hope among healthy elderly subjects with mild, moderate and severe degree of depression were demonstrated in Table 2. There was a significant difference in the comparison of the scores of all PP constructs between the groups. Multiple comparisons made possible an analysis between groups, as described below.

<Table 2>

Spiritual well-being construct is evaluated in three different factors: “peace”, “meaning” and “faith”. In the overall spiritual well-being score, multiple comparisons between the evaluated groups showed higher scores in the control group compared to all degrees of depression. The group with indicators of minimal depression had scores higher than the group of moderate depression and the group of severe depression, and the latter presented reduced scores in comparison to all the other groups. When peace, sense and faith were evaluated in isolation, the control group also showed higher scores than the other groups. In relation to faith, the scores of moderate depression did not differ from the severe one. The minimal depression differed from the mild only in "peace".

Regarding the evaluation of the overall social support construct score, the results indicated that the control and minimal depression groups did not differ, but the control differed from the other clinical groups. When assessing isolation factors was observed that the same occurred in relation to the dimensions of social emotional support and information. In the dimensions of positive social interaction, affective and material support, the control group presented the highest scores, differing from all other groups. Regarding the self-esteem construct, the results indicated that the control group had a significantly higher mean score than the other groups. The comparison of the clinical groups showed differences between them, except between the mild and moderate depression groups, and the group with severe depression had lower mean scores than all the others. In the life satisfaction scores, the control group had averages higher than the others. The means of the minimal depression group differed from the moderate depression and severe depression groups, but did not differ from the mild depression group, and the latter group also differed from the severely depressed group.

The affections had positive and negative affect scores added separately and the averages were distributed as follow: Positive affections had higher mean values in the control and minimal depression groups compared to the other clinical groups, but the control and minimal

depression groups did not differ. On the other hand, negative affects had lower scores in the control group and minimal depression in relation to the other clinical groups, and the severe depression group presented the highest averages in relation to the means of the control, minimal depression and mild depression groups. Optimism and hope presented higher means in the control and minimal depression groups compared to the moderate and severe depression groups, and control and minimal did not differ between each other. Also, there was no difference between minimal and mild depression groups. The severe depression group had smaller scores than the other groups.

<figure 1>

In Figure 1, the network of partial correlations is represented by the network analysis, that means, the paired relations after controlled the effects of the other investigated variables. In comparison with the bivariate correlations, it was observed that this network maintains only those relations less dependent and more stable in this system. It was possible to emphasize that the variables social class, optimism and spiritual well-being had greater association with depression. Still, the variables social-support, self-esteem, life satisfaction and dispositional hope had associations mediated by other constructs with depression. Life satisfaction was related with depression mediated by optimism, while social support had its relation to depression mediated by life satisfaction and optimism. Self-esteem was associated with depression mediated by spiritual well-being, just like the dispositional hope. Depression also had a direct and weak association with positive affect. In addition, the strong influence of the social level on the intensity of depression is highlighted.

<table 3>

The partial correlations pointed to significant negative relationships between depression and spiritual well-being, as well as between depression and optimism. There was also a weaker negative relationship between depression and dispositional hope, positive affects, life

satisfaction, and social support. Also, correlations pointed to positive and significant relationships between depression and social class (Table 3). The shortest path model expressed in Table 3 below the dotted line indicates that the variables social class, spiritual well-being, positive affect, optimism, and dispositional hope had a direct link to depression, while variables social support, self-esteem and life satisfaction had mediated, i.e., indirect relationships with the outcome investigated (Table 3).

<figure 2>

The analysis of the “closeness” variable represented the variables optimism, spiritual well-being and depression followed with greater influence in the system, presenting the highest weighted number of connections. These constructs produce or are more sensitive to changes in the status of other system variables and their levels are more likely to radiate changes in a greater number of variables. The "strength" variable indicated that the depression variable has the highest magnitude relationships in the investigated system, followed by the variables of dispositional hope and self-esteem, in order to indicate that changes in the status of this variable have a strong impact on neighboring variables.

DISCUSSION:

The results indicated that healthy elderly people with different depression degrees differ significantly in severity of the evaluated constructs. Subjects with depressed mood not only had increased negative emotions scores, but also a reduction of positive construct scores, especially in the severity degree of the disease. On spiritual well-being, spirituality scores decreased progressively with the severity of the disease. This negative correlation was also evidenced in the analysis of correlation and networks of this study, this association being directly existent, that is, without mediating other factors, evidencing the great importance of spiritual well-being in depression. Viewed as a closeness factor, spiritual well-being has great influence and

generates changes in other constructs and in depression with a greater probability of intervention.

The association of spirituality and depression was previously explored in clinical trials, which found a benefit and a protective association of spirituality in aging, as well as a better quality of life and reduction of depression scores (Abu-Raiya et.al., 2016; Elham et.al., 2015), which is in agreement with the findings of the present study, in which the degrees of depression are lower in individuals with greater spirituality. This association in relation to degrees of depression was previously envisaged in the study by Bamonti et al. (2014), whose results showed a significant relationship between depression and spirituality, even citing it as a factor to be taken into consideration in therapy of these elderly individuals for an improvement of the sense of life and, consequently, reduction of the levels of depression (Bamonti et.al., 2014). The study by Bashir et al. (2016) found a negative association between depression and spiritual well-being through the same instruments used in the present study. However, mediating factors have not been previously explored and the relationship of how the constructs influence depression or between them is unheard of in this study. Regardless of nationality, the elderly use spirituality as a resilience strategy (Reis & Menezes, 2017). Considering the network analysis, the strength of the association between spirituality and depression in the present study and the benefits observed in previous studies suggest that spirituality is central in the life of the elderly and a promising construct when approached with the elderly with MDD (Kleiman et.al., 2013; Kim et.al, 2013).

Another issue considered central in the life of the elderly people is social support, which also presented a negative relation to depression but with indirect relationship and mediated by spiritual well-being, self-esteem, life satisfaction and optimism. It did not present a position of great importance in the analysis of networks or of centrality, which leads one to believe that it plays a non-central role for the depressive individual. Corroborating with the findings described

on this construct, studies suggest that the impact of stress on depression can be reduced in individuals with greater social support, avoiding the feeling of loneliness (Wang et.al., 2014, Faramarzi et.al., 2015). However, because of depressive moods, individuals do not benefit from the available social support while remaining lonely. Previous studies found difficult to establish the causality of this relationship and some authors had previously indicated that this association may be indirect, mediated by cognitive and social factors (Wang et.al., 2014, Wicke et.al., 2014, Liu et.al., 2016), corroborating with findings of the present study. The study by Dangel and Webb (2017) found a mediated association of social support with psychological distress, while spirituality had a direct relationship. The Gallardo-Peralta study (2017) also provides evidence that religiosity directly influences social support in the elderly people through support from the congregation and satisfaction with the social relations resulting from this experience. The same was evident in the study by Bailly et al. (2018), who followed older people for 5 years and observed higher levels of social support when they had higher levels of spirituality. The various causal mediations of the relationship of social support to depression often reduce the possible relationship between them, thus creating a different impact for each individual (Smith et al., 2015).

As well as social support, self-esteem presented an association with depression in the present study and a correlation mediated by spiritual well-being. Although there is a relationship between self-esteem and depression. The longitudinal study by Ghana et al. (2015) observed reciprocal effects between self-esteem and depression and concluded that both follow parallel trajectories during aging but there is no relationship between them over the years, that is, one does not influence the other. It also states that self-esteem is a persistent individual trait with more stability than depressive mood and one is neither necessary nor sufficient for the existence of the other (Ghana et al., 2015). Self-esteem related with spirituality has been previously studied by Papazisis et al. (2013), that a strong religious belief is related to increased self-esteem

as well as reduced stress and depression. The study, however, is not with the elderly and large studies with the elderly have not been found in the literature for investigation of this relationship.

Other factors are taken in consideration during association between self-esteem and depression. Among them, the presence of other emotional deregulators as an aggravating factor, such as the absence of social support (Marroquín, 2011) and the reduction in full attention (Bajaj et.al., 2016), suggest a decrease in self-esteem and an increase in depression. Depression and self-esteem are genetically related (Franz et al., 2012), mainly by the oxytocin receptor gene, which is linked to the domains of self-esteem, optimism and depression. Physiological and neural factors such as hippocampal volume, asymmetry of the prefrontal cortex and cortisol reactivity are also studied as variables that influence both self-esteem and depression (Gana et.al., 2015).

Depression is associated with worse life satisfaction, however, mediated by optimism. The association between life satisfaction and depression was reported in a previous study. However, this association was mediated by higher levels of disability and greater number of medical comorbidities (Subramaniam et.al., 2016). In the literature, life satisfaction in the elderly is especially related to geriatric syndromes, which often result in reduced life satisfaction, self-esteem and increased depression (Yang et al, 2015), corroborating the present study. Life satisfaction is not directly related to depression, but rather to mediators that result in an increase in depression scores. Social support was mediated by life satisfaction and mediated by optimism and spiritual well-being in its relation to depression. The study by Adams et al. (2015) presented these different relationships and points to social support as mediator of the relationship between life satisfaction and depression. The study by Roh et al. (2013) evidenced a mediation of spirituality in the relationship between life satisfaction and depression, corroborating the findings of the present study. Relationships are still little

explored, but life satisfaction is indeed influenced by other constructs in its relation to depression, and more studies are needed to better understand these relationships.

Already with an association with depression, but without any mediation, positive affects also present averages negatively related to depression. With regard to well-being and affections, research shows benefits for the elderly in targeted interventions, aiding in the improvement of depressive symptomatology (Proyer et.al., 2014; Friedman et.al., 2017; Sutipan et.al, 2017). The association between increased scores of positive affects and reduction of negative affects with depression was previously observed in the study by Hu and Gruber (2009). Degrees of depression have not been previously studied, but this change in affections in depression is expected, since depression itself has, in its definition, negative affects, such as guilt and worthlessness (DSM-5).

Another factor commonly associated with the diagnosis of depression is the loss of optimism, which in the present study has shown a strong and direct negative association with depression, as is spiritual well-being. Optimism and degrees of depression were not reported in earlier studies, but in cross-sectional studies low optimism scores were associated with depression, including the risk of long-term depression (Giardini et.al, 2017, Niklasson et.al., 2017). Optimism is also studied as a predictor of better prognosis in depression (Ji et al., 2017), and the efficacy of interventions in previous clinical trials has been demonstrated (Ho et.al, 2014; Gitlin et.al., 2017). Optimism also appears as a measure of centrality in the present study, as well as a variable that can be predictor of outcomes as a mediator of relationships among other constructs and depression, with many possible influences in relation to depression. The only variable that seems to be a partial mediator of the relationship between optimism and depression is social class, which, even though it was not a construct of Positive Psychology, was kept in the analysis by directly influencing the relationships between depression and the constructs.

As in optimism, the association between depression and hope finds support in the literature. Clinical trials with elderly people carried out interventions addressing hope and pointed to an improvement in life satisfaction and a significant reduction of the elderly's depression (Clegg et.al., 2014; Mirbagher et.al, 2016; Mozooni et.al, 2017). In aging, the loss of hope often occurs due to several geriatric syndromes, in addition to the limitations and changes that the body presents and hope is what leads the elderly to find and have self-care, taken advantage of life with a better vision of future (Bahmani et.al., 2016). The hope helps in the conservation of the health of the elderly in a vulnerable situation, explaining 64.9% of health conservation according to the study of Sung and colleagues (2017). In the present study, hope had a direct negative relationship with depression and a relationship mediated also by spiritual well-being. It still has connections with several other constructs and seems to mediate many relationships, influencing with greater strength in self-esteem.

Knowledge of the relationship of hope to depression is not new. Lack of hope is included as a diagnostic criterion for depression in DSM-V (2013) and, as a result, the relationship found in the present study was expected. Fehring and colleagues (1997) research indicated significantly high levels of hope and positive mood existed in elderly patients with high levels of intrinsic religiosity and spiritual well-being, with negative relationships with depression in the elderly with cancer. However, the possible mediations between them are not described in the literature and the direct relation is still more accepted.

In addition to the studied constructs, it is important to note that among the demographic variables evaluated, the network analysis indicates that social class showed positive correlations with depression, indicating that higher incomes are associated with higher depressive indexes. Network analysis finds a direct negative relationship between social class, optimism, and spiritual well-being with degree of depression. No studies have been found in the literature that relate high social class with higher risk of depression. The studies generally present the

opposite, that is, greater risks of depression in individuals with lower purchasing power (Kim et.al., 2014, Gero et.al., 2017).

Depression in the aging of the individual with higher social class can be seen as the expression of the abrupt decrease of social participation and social and cultural activities experienced by a senior of the upper classes throughout his life. The elderly low-class people do not feel as much reduction in their activities because they have not experienced such great opportunities for social activities as movies, theater and travel. The report by Batistoni and Neri (2007) describes that loss of prestige and loss of roles have the potential to moderate feelings of dissatisfaction stemming from the perception that a process of downward social mobility is occurring. The social devaluation of the elderly in Brazil has a role in this context, since the social role of aging is also lost (Porto, 2005).

STRENGTHS OF THE STUDY:

The present study is inedited when comparing different degrees of depression and controls in several constructs of Positive Psychology. It allows a comparison of the association between the constructs and the degrees of depression, facilitating the choice of effective approaches to intervene with this population. It also presents an unique view of network analysis and possible mediation relationships in the relationships between depression and the studied constructs. In addition, the study was carried out using instruments validated for the study population.

LIMITATIONS OF THE STUDY:

The study design also does not allow a cause-and-effect relationship between the constructs studied and depression, and it is limited to explore the associations between them. Individuals were not compared by length of antidepressant usage or time of follow-up in the

outpatient setting, but only by the severity/degree of the disease. This study has potential selection bias, considering that it was not a random sample. It also did not control for potential confounders, since no information on other health conditions - multimorbity - that is very frequent in this population or use of medications, that has diverse effects and can interfere in the results, was asked.

In addition, possible selection biases of the control group can be considered, since it was selected among participants of physical activity groups and are active. Reverse causality is also a limiting factor in this study, since it is not possible to say whether it is the condition of the elderly that causes a reduction in Positive Psychology scores or whether reduced scores can lead to the current condition. This is mainly due to the design of the study.

CONCLUSION:

Severe depression are associated with an increase in negative affects and a decrease in positive affects, as well as a decrease in construct scores of spiritual well-being, social support, self-esteem, life satisfaction, positive affect, optimism, and hope. The relationships between depression and life satisfaction are mediated by optimism. Spiritual well-being, optimism, and depression had greater influence on a network of regular correlations between constructs. Depression presented a higher magnitude relationship in this network, followed by the constructs of dispositional hope and self-esteem, indicating that the three had a stronger impact on the network of constructs. Social class had a positive association with depression, which was unpublished in the literature consulted. The constructs that are strongly and directly related to depression are optimism, spiritual well-being, positive affects, and dispositional hope. The findings of this study aim to direct the scientific community in the search for interventions that will be more effective for the depressive patient and for the prevention of this psychopathology in the elderly population. Strategies for therapeutic intervention for the elderly with MDD

should focus on spiritual well-being, dispositional hope, affection and optimism, because that greater chances of achieving a direct improvement in depression scores.

CONTRIBUTIONS OF THE AUTHORS:

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Sabrina was the main author in the conceptualization of the research and writing of the manuscript. Analyzes, Liana, Wagner and Caroline contributed to all stages of the research and reviewed and critically reviewed the manuscript. The final version of the manuscript is the responsibility of all authors. Caroline is the doctoral advisor in this research. Liana and Analuiza are co-leaders of this research.

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Table 1 - Characteristics of depressive population in comparison to controls.

		Controls N= 66	Depression N=62	P
Age*		72,95 (7,63)[a]	71,91 (8,14)[b]	0,345
Genre**	F	54 (81,8)	48 (75,8)	0,405
Educational level**	Without education	0 (0)	6 (9,7)	0,076
	Until first degree	53 (80,3)	45 (72,6)	
	Up to second degree	7 (10,6)	5 (8,1)	
	Higher and / or postgraduate	6 (9,1)	6 (9,7)	
Social class**	A	4 (6,1)	0 (0)	<0,001
	B	20 (30,3)	1 (20)	
	C	39 (59,1)	43 (69,4)	
	D	3 (4,5)	15 (24,2)	
	E	0 (0)	3 (4,8)	
Use of antidepressants **	Sim	7 (10,6)	54 (87,1)	<0,001

* Mann-Whitney U test - results presented as mean and standard deviation. ** Chi-square - results presented in n (%).

Table 2 - Comparison of scores on the spiritual well-being, social support. self-esteem, life satisfaction, positive affects, negative affects, optimism and hope between individuals with different degrees of depression (BDI-II) and the control group.

	Controls N= 66	Minimum (0-13) N=11	Light (14-19) N=8	Moderated (20-28) N=16	Severe (29-63) N= 27	P	H
Spiritual Well-Being	38,0 (16-48)[a]	33,5 (15-38)[b]	24,5 (17-31)[bc]	17,0 (11-33)[c]	13,0 (1-27)[d]	<0,001	93,97
Peace	13,0 (5-16)[a]	10,5 (3-14) [b]	7,5 (6-9) [c]	5,0 (3-11) [c]	3,0 (0-8) [d]	<0,001	92,59
Sense	13,0 (8-16)[a]	11,0 (4-13) [b]	6,5 (5-10) [bc]	6,0 (4-11) [c]	4,0 (0-9) [d]	<0,001	95,4
Faith	13,0 (3-16)[a]	12,0 (7-12) [b]	9,5 (6-13) [bc]	7,0 (2-12) [c]	6,0 (0-12) [c]	<0,001	76,37
Social support	100 (41-100)[a]	76 (33-100) [ab]	54 (20-100) [bc]	40 (20-100) [bc]	44 (20-100) [ec]	<0,001	76,93
Material	100 (20-100)[a]	80 (20-100) [b]	70 (20-100) [bc]	60 (20-100) [cd]	60 (20-100) [bcd]	<0,001	56,76
Affective	100 (46-100)[a]	90 (40-100) [b]	60 (20-100) [bc]	40 (20-100) [c]	40 (20-100) [c]	<0,001	86,03
Emotional	100 (40-100)[a]	90 (25-100) [ab]	45 (20-100) [bc]	40 (20-100) [bc]	40 (20-100) [c]	<0,001	78,06
Information	100 (40-100)[a]	90 (20-100) [ab]	40 (20-100) [bc]	40 (20-100) [bc]	40 (20-100) [c]	<0,001	78,41
Positive Social Interaction	100 (40-100)[a]	60 (40-100) [b]	40 (20-100) [bc]	40 (20-100) [bc]	20 (20-100) [c]	<0,001	83,59
Self esteem	39 (30-40)[a]	36,5 (17-40) [b]	22 (16-31) [c]	20 (13-33) [c]	14 (10-26) [d]	<0,001	95,97
Life satisfaction	32 (12-35)[a]	28 (14-32) [b]	23 (19-28) [bc]	20 (9-29) [cd]	15 (5-24) [d]	<0,001	87,82
Positive Affects	38 (27-48)[a]	31 (19-47) [a]	17 (11-28) [b]	15 (10-30) [bc]	13 (10-24) [bc]	<0,001	92,88
Negative affects	11 (10-41)[a]	14 (10-24) [ab]	18,5 (16-24) [bc]	20 (13-35) [bcd]	26 (15-35) [d]	<0,001	75,93
Optimism	24 (9-30)[a]	24 (10-27) [ab]	17 (7-24) [bc]	11 (3-20) [c]	6 (0-15) [d]	<0,001	83,47
Hope	38 (24-40)[a]	34,5 (14-39) [ab]	24 (20-31) [bc]	20 (12-29) [c]	16 (8-23) [d]	<0,001	94,25

* [a,b.c.d] Different letters indicate significant difference (Kruskall Wallis with post hoc U of Mann Witney with Bonferroni significance correction).
**Values presented in median and amplitude - m (min-max).

Table 3 - Correlated Partial Correlations above the dotted line and Minimum Paths below the dotted line between depression, social class. spiritual well-being, social support, self-esteem, life satisfaction, positive affects, optimism, and dispositional hope.

	SC	Depression	SWB	SS	SE	LS	PA	OP	DH
SC	-	0,46	0,05	0,00	0,02	0,04	0,00	0,26	0,00
Depression	2, 1	-	-0,28	0,00	-0,05	-0,09	-0,17	-0,30	-0,14
SWB	3, 2, 1	3, 2	-	0,00	0,17	0,20	0,18	0,00	0,14
SS	4, 6, 8, 1	4, 6, 8, 2	4, 6, 3	-	0,20	0,25	0,02	0,05	0,17
SE	5, 8, 1	5, 3, 2	5, 3	5, 4	-	0,11	0,22	0,15	0,26
LS	6, 8, 1	6, 8, 2	6, 3	6, 4	6, 4, 5	-	0,05	0,19	0,10
PA	7, 2, 1	7, 2	7, 3	7, 5, 4	7, 5	7, 3, 6	-	0,00	0,18
OP	8, 1	l8, 2	8, 2, 3	8, 6, 4	l8, 5	8, 6	8, 2, 7	-	0,14
HD	(9, 2, 1	9, 2	9, 3	9, 4	9, 5	9, 6	9, 7	9, 8	-

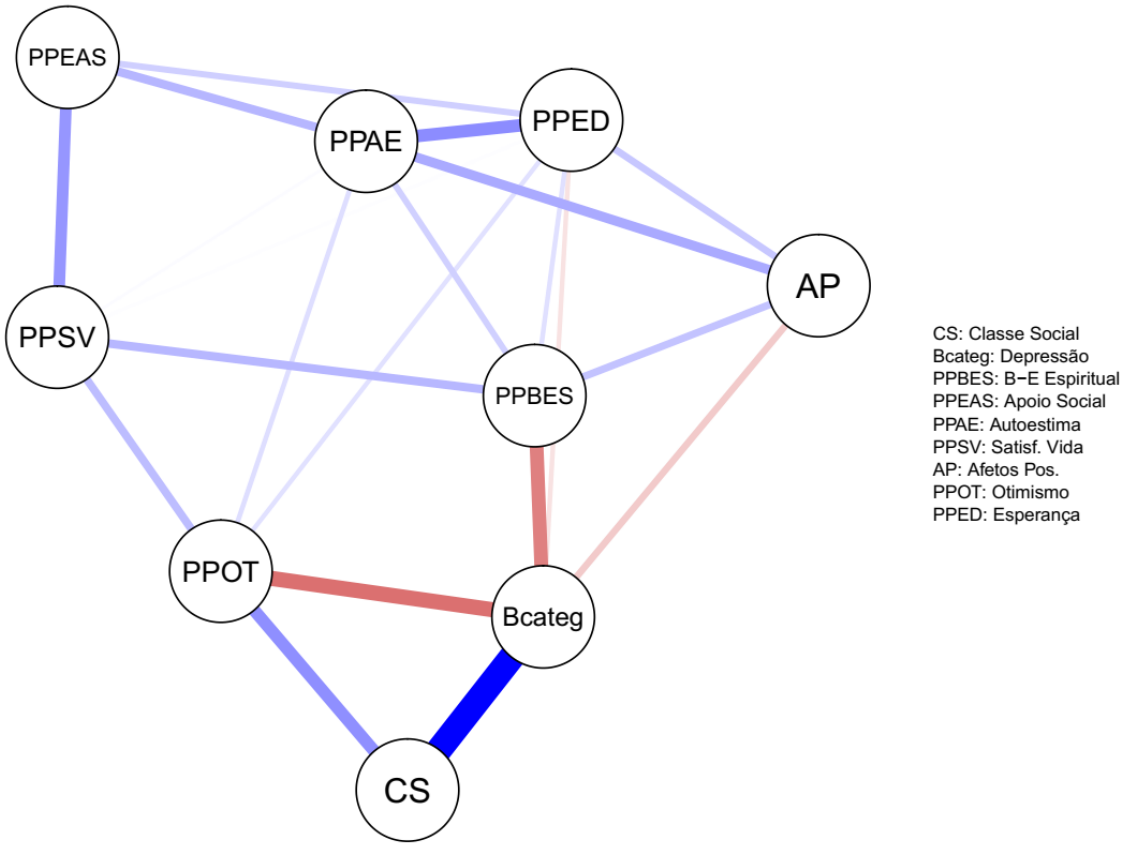

Figure 1 - Regularized partial network - Glasso Method between Positive Psychology constructs and indicators of depression. CS: Social Class; Bcateg: Depression Scores; PPBES: spiritual well-being; PPEAS: social support; PPAE: self-esteem; PPSV: life satisfaction; AP: positive affects; PPOT: optimism; PPED: Disposicional Hope.

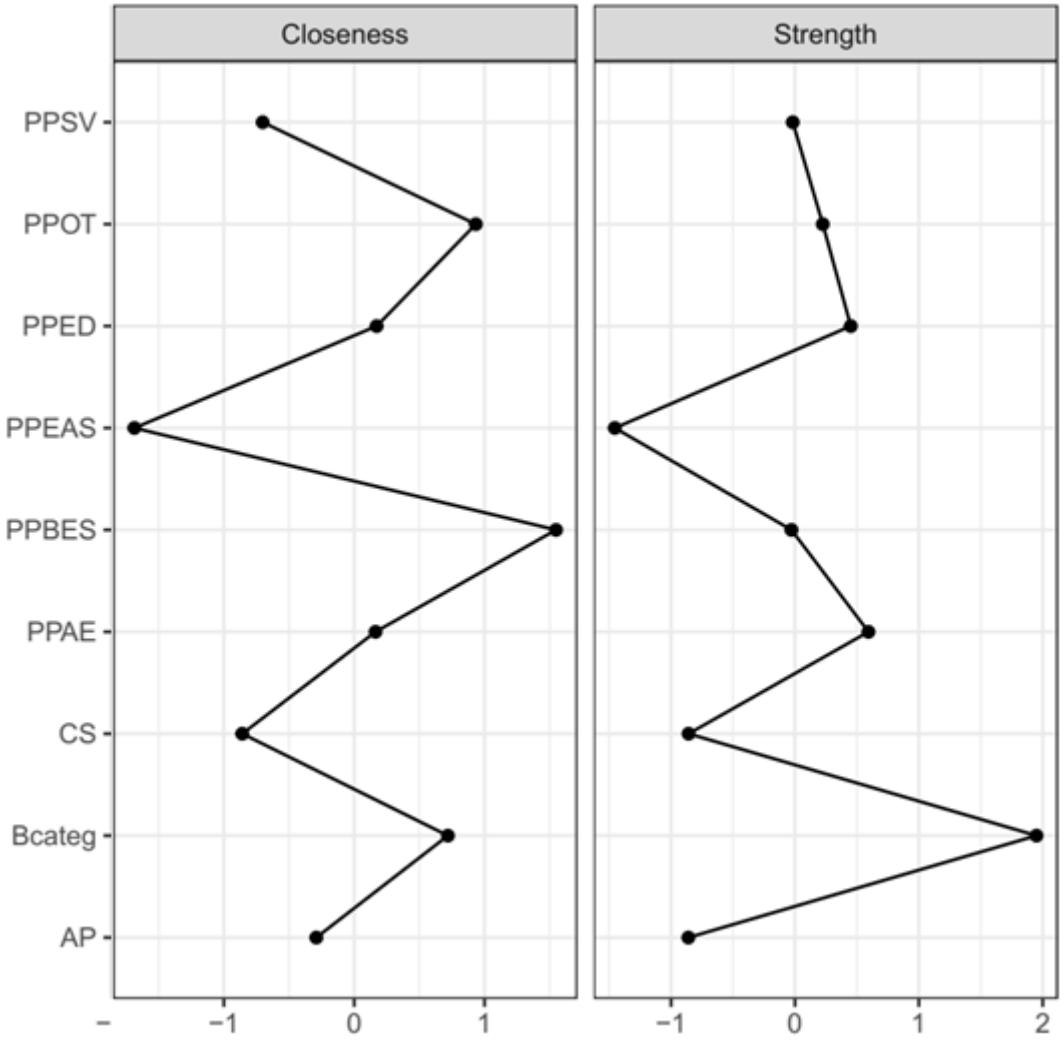

Figure 2 - Measures of Centrality between the constructs of Positive Psychology and the indicators of depression. Legend: Measures of values standardized with zero mean, "closeness" represents the variables with the highest number of weighted connections and "expectedinfluence" represents the variables with the greatest positive influence over the others.

4.3 ARTIGO 3:

Positive attributes in institutionalized elderly: a study based on network analysis.

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ABSTRACT:

Introduction: The institutionalization of elderly people is often necessary and is a moment of transition for individuals and their families. Positive Psychology (PP) addresses the study of positive characteristics of the individual, for health and well-being, that can have an impact on the adjustment to new circumstances. However, studies considering the Brazilian elderly population are still incipient, especially for the institutionalized.

Objective: The present study aimed to compare scores of the constructs of spiritual well-being, social support, self-esteem, life satisfaction, affection, optimism and hope among institutionalized elderly and elderly healthy controls, as well as investigate possible direct and mediated correlations between the indicators of depression, cognitive decline and the positive constructs investigated.

Methods: Cross-sectional study with elderly people, 62 institutionalized subjects and 66 healthy controls. The instruments used were: Spirituality Self Rating Scale, Rosenberg Self-esteem Scale, Social Satisfaction Scale of the Medical Outcomes Study, Positive and Negative Affect Schedule, Revised Life Orientation Test, Adult Dispositional Hope Scale, Abbreviated Geriatric Depression Scale (GDS) and the Mini Mental State Exam (MMSE). For data analysis, descriptive and inferential evaluations were conducted to compare the means of scores between groups and an analysis of normalized partial association networks. The Wilcoxon-Mann-Whitney test (Kruskall-Wallis test) was applied, with a Bonferroni significance score, to compare the scores of Positive Psychology scales between groups and regularized partial regression network analyzes were carried out using the Qgraph Package.

Results: Scores of spiritual well-being ($p<0,001$), life satisfaction ($p<0,001$), positive affect ($p<0,001$), social support ($p<0,001$), self-esteem ($p=0,004$), and hope ($p<0,001$) differed significantly between the control group and the institutionalized elderly group. Negative affects ($p=0,167$) and optimism ($p=0,572$) did not differ between groups. The analysis of

normalized partial association networks showed that there is a negative relationship between depressive symptom scores measured by the GDS (Geriatric Depression Scale) and the self-esteem (-0,378) and life satisfaction (-0,182) constructs. Results of the cognitive function scores measured by the Mini Mental State Exam (MMSE) were directly and negatively related to the construct optimism (-0,317) and directly and positively with the constructs of dispositional hope (0,137), social support (0,183), positive affects (0,262) and negative affects (0,174). It is also possible to verify that the relationship between life satisfaction and cognitive decline is not direct but rather mediated and this mediation is mainly due to positive affects and dispositional hope. The indicators of depression were directly associated with life satisfaction. However, the most significant correlation of the depression variable in the studied population was with self-esteem (-0,378).

Conclusion: Institutionalization is associated with a reduction in the construct scores of spiritual well-being, life satisfaction, positive affects, social support, self-esteem, and hope. The regularized partial correlation network allows us to explore the relationships between indicators of depression and cognitive decline with the various constructs and to plan interventions aimed at prevention and health promotion in the institutionalized elderly.

Key words: aging, institutionalization, well-being, Positive Psychology, network analysis.

INTRODUCTION:

The process of aging consists in a sequence of degenerative modifications in an organism, characterized by morphological, physiological, biochemical and psychological changes, which are determined by the progressive loss of the individual's ability to adapt to the environment (Nass et al., 2016). In certain cases, such damages lead to impairment in the autonomy and social relations of the elderly, imposing difficulties in their access to subsistence and security. Those losses often overwhelm the family environment and the best option when the family is unable to meet the needs of the elderly is institutionalization, especially in circumstances that pathologies or risk of falling are present (Zagonel et.al., 2017). Long-stay Institutions for the Elderly (LSIE) are establishments for complete institutional residential care, whose target audience are persons 60 years of age or older, dependent or independent in activities of daily living, who do not have conditions to stay with their family or in their residence (Fagundes et.al., 2017). Among the factors that are commonly associated with institutionalization are cognitive impairment and limitation for activities of daily living (Lini et.al., 2016).

Studies conducted with the institutionalized elderly population frequently investigate the damages associated with this situation and are mostly focused on the suffering, clinical losses and pathologies, commonly associating institutionalization with depression or dementia in the elderly (Araújo et.al., 2015; Luque-Reca et.al., 2016). Under this perspective, Roosmalen and Marcoen (2007) emphasize that the loss of autonomy, commonly found among institutionalized individuals, reduces the well-being of the elderly, even among healthy people. Alternatively, the Positive Psychology (PP) includes the study of positive characteristics of the individual in favor of health and well-being, approaching constructs that help the elderly to obtain resources for resilience in a new environment (Seligmann, 2011), since the change of their home to an LSIE is a transition phase in their lives and relatives (Lillo-Crespo e Riquelme, 2018). Therefore, the approach of PP is to

evaluate the impact of these constructs on the adjustment of the elderly people to this new situation. Some of the constructs most commonly investigated in Positive Psychology, including in clinical trials, are spirituality, social support, self-esteem, life satisfaction along with affections in subjective well-being, optimism, and hope (Snyder et.al., 2011).

International researches in elderly population indicate that there are already evidences indicating a significant relationship between institutionalization and spirituality (Chen et al, 2017, Araujo et.al., 2016, Vitorino et.al., 2016), self-esteem (Chen et al, 2017), hope (Sung et.al., 2017, Oliveira and Rozendo, 2014, Sarin et.al. (2016), social support (Araújo et.al., 2016) and life satisfaction (Haugan et.al, 2015, Andrew and Meeks, 2016). Intervention studies based on precepts and typical constructs of Positive Psychology reinforce this evidence by clarifying the benefits of such programs to the institutionalized elderly, especially considering the results of interventions focused on the development of optimism and well-being in this population (Sung et.al., 2017; Tsai et al, 2010; Wang et al, 2011).

Understanding the positive experiences of the elderly residing in an institution allows the professional to expand knowledge regarded to clinical evaluations, diagnoses or interventions in order to provide safety and improvement in their quality of life (Fagundes et.al., 2017). Although the studies are increasing in this area, there is still scarce research comparing criteria groups and control groups, especially in the elderly population. This study aims to compare scores of the constructs spiritual well-being, social support, self-esteem, life satisfaction, affection, optimism and hope among institutionalized and healthy elderly controls, as well as investigate possible direct and mediated relationships between indicators of depression, cognitive decline, and positive constructs.

METHODS:

This study was conducted as a cross-sectional study. The institutionalized elderly people and healthy controls were matched by age and sex. The sample was previously calculated in the program WinPepi version 11.43, based on the studies of Moreno et al (2010) and Hernandez et. al. (2009), resulting in a calculation of at least 62 elderly institutionalized people and 60 healthy elderly people, organized in a control group, considering a level of significance of 5%, power of 90% and a minimum correlation coefficient of 0.4 between the scales. The research was carried out following the ethical recommendations of research (National Health Council, resolution 466/12), guaranteeing the anonymity of the data collected and was previously approved by a Committee of Ethics in Research under opinion of number 1,046,803.

In the institutionalized group, 61 subjects were included in a long-stay institution for the elderly in Porto Alegre. The inclusion criteria for the clinical group were to reside in the institution, to be more than 60 years old and to agree to participate in the study. The selection of the participants in the control group was among the elderly people who performed physical activity in an active aging group of a capital of the South of Brazil. The inclusion criteria for the control group were over 60 years old, healthy and functionally independent, and agree to participate in the study. The GDS (Geriatric Depression Scale) (Sheikh e Yesavage, 1986; Paradela, Lourenço e Veras, 2005) and the Mini Mental State Exam (MMSE) (Folstein et al, 1975; Bertolucci et al., 1994) were applied to rule out suspected cases of depression and cognitive impairment, respectively.

In order to evaluate the typical constructs of Positive Psychology in both groups, the following instruments were used: the Spirituality Self Rating Scale - SSRS to evaluate spirituality, in its validated version for Brazilian Portuguese, developed by Gonçalves e Pillon (2009); the Social Support Scale of Medical Outcomes Study – MOS, in the validated version for Brazilian Portuguese (Griep et.al., 2005), to evaluate social support; the

Rosenberg Self-Esteem Scale - EAR, in its version validated by Hutz and Zanon (2011) to assess self-esteem; the Life Satisfaction Scale - ESV, in its validated version for Brazilian Portuguese (Zanon et.al., 2014), to evaluate life satisfaction; the PANAS - Positive and Negative Affect Schedule, in its validated version (Zanon et al., 2013), to evaluate affections; the Revised Life Orientation Test (LOT-R), in its validated version (Bastianello et al., 2014), to evaluate optimism and the Adult Dispositional Hope Scale (ADHS) in its validated version (Pacico et al., 2013) , to evaluate dispositional hope. All instruments were used in their validated versions for the application of Brazil and have good indicators of validity and reliability. The order of administration of the tests was random, in order to avoid bias to the responses. The collection was performed for approximately one hour with each participant. Those individuals who did not meet the inclusion criteria were excluded from the study, totaling 8 individuals.

Statistical analysis:

Quantitative data processing was performed using SPSS software, version 22.0. After obtaining the total dimensions scores, the assumptions of normality, homoscedasticity and sphericity were verified. The Mann-Whitney U Test was used to compare continuous variables between the case and control groups and the Chi-square Association Test was used to compare the other demographic data between the groups. The Wilcoxon-Mann-Whitney test (Kruskall-Wallis test) was applied, with a Bonferroni significance score, to compare the scores of Positive Psychology scales between groups. The level of significance was set at 5% ($p \leq 0.05$).

Subsequently, regularized partial regression network analyzes (Lauritzen, 1996) were carried out using the Qgraph Package (Epskamp et al., 2012) of the statistical software R. The regularized partial correlation analyzes aim to investigate the conditioned relations between MMSE, GDS and positive construct scores. In this technique, each pair of variables are regressed among themselves, controlling the effect of the other analyzed variables and

adjusting for the differences. In order to avoid over-adjustment of the model to the data, a penalty hyperparameter is used by means of the Graphical Least Absolutes Shrinkage and Selection Operator (GeLasso) method (Friedman, Hastie & Tibshirani, 2010) that zeroes edges with magnitudes close to zero. The choice of the best model is given by the Extended Bayesian Criterion (EBIC) index to generate the least residual graph (Foygel & Drton, 2010). Finally, the shortest paths of the investigated variables were estimated in order to determine if they have direct or mediated relations in the model (Opsahl, Agneessens, & Skvoretz, 2010). Regularized partial correlations can be interpreted as regression betas, with normalized partial correlation coefficients being standardized and having cut-off points of 0.1 for weak, 0.3 for moderate and 0.5 for strong correlation between variables. These values are due to the rigid control of influences between variables in the association between them (Cohen, 1968; Hoyt et al., 2003).

In order to represent the regularized partial correlations, a graph indicating the partial correlations (or Markov Random Field; Lauritzen, 1996), that is, pairwise associations after the statistical control of the other variables of the model (i.e. conditionals) was generated. In this technique, an adjacency matrix (i.e. regularized partial correlation matrix) is represented by means of a graphic object. In this graph, the variables are represented by vertices (or circles) and the association between the variables as edges (or rows). The intensity of the edges of the graph represents the magnitude of these associations while their color, red or blue, represent the direction (negative or positive, respectively) of the associations. The graph also has the application of a positioning algorithm (Fruchterman and Reingold, 1991), in which the variables are approximated or expelled according to their association. The variables represented in the center of the graph have a greater number of associations (Machado, Vicossi, & Epskamp, 2015).

RESULTS:

The results of this study will be presented in tables and graphs for a better understanding of them. Table 1 presents the comparison of the demographic data between the healthy individuals (controls) and the institutionalized group. The analysis of these data indicates the differences between active and institutionalized elderly individuals, with the groups differing in age, cognitive performance scores assessed by MMSE, number of children, education, medical history and antidepressant usage.

<Table 1>

Comparison of scores on the scales of spiritual well-being, social support, self-esteem, life satisfaction, positive affects, negative affects, optimism and hope between healthy and institutionalized elderly subjects are demonstrated in Table 2. A significant difference was found in the scores comparison of most studied constructs, except for material social support, negative affections and optimism.

<Table 2>

Spiritual well-being is a construct evaluated in three different categories: peace, meaning and faith. In the total spiritual well-being score, the multiple comparisons between the evaluated groups showed higher scores in the control group compared to the institutionalized elderly. As well as spiritual well-being, social support is assessed through a variety of factors: material, affective, emotional, information, and positive social interaction. The results indicated that the control group differed from the institutionalized group, except for material social support.

Regarding the constructs of self-esteem, life satisfaction, affections and hope the results indicated that the control group had a significantly higher mean score than the institutionalized group. Negative affects and hope did not differ between groups. Multiple comparisons made possible an analysis among the constructs, as described in Figure 1.

<Figure 1>

In Figure 1, the partial correlations network is represented by the network analysis, meaning the paired correlations after controlling the effects of the other variables investigated. In comparison with the bivariate correlations, it was observed that this network maintains only the least dependent and more stable correlations in this system. It is noticeable that the variables strongest and more directly associated to satisfaction of life are the spiritual well-being, social support and positive affections, as well as directly and negatively the negative affects. It is also possible to verify that the association between life satisfaction and cognitive decline is not direct but rather mediated and this mediation is mainly due to positive affects and dispositional hope. As for the indicators of depression, they are directly associated with life satisfaction. However, the strongest relation of the depression variable in the studied population was with self-esteem. The other relations can be seen in Figure 1. In addition to this analysis, it is possible to observe in Table 3 the model that expresses the positive and negative relations between the constructs and which are the shortest paths of association between the two constructs.

<Table 3>

Several constructs have mediated correlations, as seen between spiritual well-being and the other factors studied, whereas this construct is directly related only to the satisfaction of life. Following the other constructs, well-being has a association mediated by the effects of life satisfaction.

<Figure 2>

In the analysis of the centrality measures, the closeness variable showed that the variables life satisfaction, dispositional hope, social support and indicators of cognitive decline (MMSE) followed with greater influence in the system, presenting the highest number of weighted connections. These constructs either produce or are more sensitive to changes in the status of other system variables and their levels are more likely to radiate changes in a greater number of variables. On the opposite side, the "expected influence"

measure indicated that the variables dispositional hope, positive affects and social support respectively have a greater impact on the network. By differentiating positive and negative relations, the analysis allows to highlight those constructs that influence the network positively, in which variations in values can propagate the impact in the whole network, significantly changing the association between the other variables and multiplying their effectiveness.

DISCUSSION:

Initially, the present study verified the variables related to the institutionalization. The results showed that age, cognitive performance and education differed among the groups investigated. On these results, current literature reveals that there is a association between increasing age and disability (Duca et al., 2012; Nass et al., 2016; Zagonel et al., 2017; Fagundes et.al., 2017), which is related to the findings of this study. Among the reasons for relatives to host their elderly in long-term institutions, the most common is the need for care and limitation (Zagonel et.al., 2017, Fagundes et.al., 2017). This line includes the condition experienced by the elderly with cognitive decline, evaluated in this study by the MMSE. The impact of cognitive decline often means limiting the activities and abilities of the elderly and tends to be a crucial factor for institutionalization. Another predictor of institutionalization is the number of children, provided that the absence of a home caregiver for the elderly is a determinant described in the literature (Fagundes et.al., 2017). Another determinant of institutionalization is low income (Fagundes et al., 2017), a condition associated in the present study with low education level.

In the institutionalized group, more individuals with daily life-limiting comorbidities (ADLs) were observed than in the control group. This difference might be related to the fact that the control sample of this study consisted of individuals who practiced physical activities in an active group. However, previous studies also associate morbidities with a greater

chance of being institutionalized and relate this factor to higher physical limitation (Freitas et.al., 2018; Fagundes et.al, 2017).

The use of antidepressants was higher in the institutionalized elderly group, which, despite not having high scores on the measured depression risk factors scale, may have already been under treatment. The rates of depression in institutionalization are high, however it is important to emphasize that the institutionalized elderly have more access to health professionals and evaluations since the institutions have specialized medical staff and can conduct treatments more precisely, reducing future expenses with health problems (Butarelo et.al., 2017).

Regarding spiritual well-being, the findings of this study indicate that the construct, in its three evaluated factors (peace, meaning and faith), presents reduced scores in the institutionalized individual in comparison to the controls. This was also observed in the research by Soriano et al. (2016), which points to a direct negative effect of institutionalization on social and leisure relations and an indirect negative effect on spirituality and quality of life, emphasizing the need of care programs focusing on individualized geriatric health care for the institutionalized elderly.

In the network analysis, spirituality presented a direct association only with life satisfaction in the present study. This correlation was also cited by Haugan (2015), which validated the use of the FACIT scale for the evaluation of spirituality with institutionalized elders. In his study, the author highlights that spirituality is a predictor of general health of the institutionalized elderly. Furthermore, the study by Vitorino and collaborators (2016) shows that spiritual coping is positively and significantly associated with quality of life in institutionalized elderly, and the association of life satisfaction is a mediator of this correlation. It is noticeable that in the correlational analyzes of the present study, spiritual well-being showed the highest correlations with the scores of life satisfaction, dispositional hope, positive affections, social support positively, and depression in a negative manner.

Evidence in this sense has also been described by Chen et al. (2017) in a study of 377 institutionalized Chinese elderly, who further states that functional disability affects social relations and has an indirect effect on spiritual well-being. depression and social support. However, the study by Chen et al. (2017) did not evaluate life satisfaction, preventing the evaluation of its mediating influence in these correlations.

In the present study, the perception of social support was lower in the institutionalized group, being this variable strongly linked to life satisfaction in network analysis. In correlational analyzes, the variables that demonstrated higher correlations with social support were life satisfaction and hope. In the literature, social support presenting reduced scores on institutionalization is justified, hypothetically, by an increased sense of loneliness, which happens when the elderly leave their home and move to an environment far from their relatives and close to many unknowns (Araújo et al., 2015), provided that the prior family environment was not hostile (Cardona-Arango et al., 2010). This hypothesis is empirically confirmed by Prieto-Flores (2011) study, in which he correlated institutionalization with solitude, leading to depression. In this perspective, studies indicate that the impact of stress on depression is reduced in individuals with greater perception of social support, and, consequently, less reporting of loneliness (Wang et al., 2014, Faramazi et al., 2015, Araujo et.al., 2015).

Social support also presented a large number of weighted correlations and a large and positive impact across the network according to the analysis of centrality measures. This points to social support as one of the most prominent variables for intervention in institutionalized individuals, provided that an increase in social support scores could have a positive impact on all other scores and better effectiveness for the elderly. This impact is described in the literature, for instance, in programs that promote social support in the institutionalized elderly. The literature indicates that these programs can have a significant positive impact on health and well-being, whether they are implemented face-to-face or

virtual. One of those programs consists of intervention in which institutionalized seniors establish five minutes per week of video-conference interaction with family members over three months. The research by Tsai et al. (2010) evaluated the effectiveness of this program through an almost experimental study conducted with 57 aged residents of a long-term institution and verified that, in improving social support, the experimental group presented several benefits, such as the reduction of loneliness and depression, which have remained in the segment studies. One of the perspectives adopted in some of these programs is the promotion of gerotranscendence. In the experimental study by Wang et al. (2011), an eight-weeks intervention program based on this perspective was performed with 76 institutionalized subjects, and the findings revealed that the intervention was effective in increasing social support, life satisfaction, and reduction of indicators of depression among the elderly, improving their quality of life. Wang's study also found that in the intervention group, healthy aging was associated especially with social support, life satisfaction, life purpose, and spirituality. These results reinforce the findings of Bailly (2018), who followed the elderly for 5 years, and concluded that social support rates were higher in individuals with higher scores of spirituality. In the present study, the association between spirituality and social support exists, but mediated by the satisfaction of life.

Self-esteem differed between the groups, and the institutionalized group presented worse scores in this variable. In this population, the reduction of self-esteem is related in the literature to several factors, such as the difficulty of self-hygiene, reduction of personal care, urinary incontinence, limitation and reduced access to consumer goods and social isolation (Roig et.al., 2015; Lysenko et.al., 2017). In the present study, self-esteem was still associated with greater strength to indicators of depression, evaluated through GDS. Dispositional and social explanations may justify this fact. If, on the one hand, depression and self-esteem are genetically related (Franz et al., 2012), on the other hand they influence in this relation the existence of emotional dysregulators present in cases of depression, such as the reduction of

perceived social support (Marroquín, 2011; et.al., 2015) and the reduction in care (Bajaj et.al., 2016). The Poorneselvan et al. (2018) study describes, through a clinical trial, the reduction of depression scores after interventions directed at the self-esteem of institutionalized elderly people, reinforcing their associations. In the present study, the self-esteem presented moderate correlations with the construct dispositional hope and weak correlations with the constructs of positive affections, optimism and negative affections, being, therefore, an important variable to be considered in intervention programs that seek to extend the well-being in institutionalized elderly people.

In this perspective, it is noteworthy that the construct with the highest number of weighted correlations compared with other constructs was life satisfaction. This finding points to life satisfaction as a construct that produces or is more sensitive to changes in the other variables of the presented network. Life satisfaction scores were reduced in the institutionalized group in relation to the control. This finding may also be associated with the experience of solitude that institutionalization may induce. This is what the cross-sectional study by Andrew and Meeks (2016), performed with 65 institutionalized elderly subjects reveals. The study by Guzman and collaborators (2015) points to the influence of social support, chronic diseases and depression on the life satisfaction scores of institutionalized elderly people. In fact, several factors may influence the life satisfaction of the institutionalized individuals, such as the risk factors for institutionalization themselves, which are mostly negative (Fagundes et.al., 2017). In the present study, the analysis of networks indicated that this construct has a central role, as well as its interference on the variables self-esteem, spiritual well-being, hope and affects in life satisfaction. The strongest negative direct relation of life satisfaction was with negative affects and the strongest positive direct relation was with social support. This association between social support and life satisfaction is evident in several studies (Guzman et al., 2015, Wang et al., 2011), as discussed above.

The findings also indicated a weak correlation between GDS (geriatric depression scale) and life satisfaction. This association corroborates with previous studies and may be justified, among other factors, by medical comorbidities and geriatric syndromes that compromise the elderly with depressed mood (Roh et. Al., 2013; Subramaniam et.al., 2016; Yang et al, 2015). The only variables that showed moderate (negative) correlations with depression scores were self-esteem and life satisfaction; all others presented weak and significant correlations. In turn, the correlations established between the MMSE score and the investigated variables were all weak, except for the constructs optimism and positive affects, whose correlations were strong for the first and moderate for the second. It should be noted that optimism did not differ between the control group and the institutionalized group before regularized partial corrections. It is worth mentioning that these associations observed in the network analysis refer to the residual values, after considering the covariables. This demonstrates that there may have been a suppressive effect among the variables, which compromised the analysis of the observed effects between groups.

In turn, the mean of the positive affects score was lower in the institutionalized group. Network analysis has shown that affection scores, both positive and negative, decrease at more severe levels of cognitive impairment and increase with better cognition. In an earlier study (Santos et al., 2018), the associations between the constructs of Positive Psychology and dementia are described, detailing how perceived affection can be impaired in individuals with reduced cognitive capacity. Studies also point out that affective interventions may reduce depressive symptomatology (Proyer et al., 2014; Friedman et al., 2017; Sutipan et al., 2017). However, this association in the present study is mediated by life satisfaction; thus, positive affects are dependent on a better life satisfaction so that they have greater effect on depression in that case. On the other hand, the analysis of centrality measures points to positive affects as one of the most influential constructs in the whole network, so that an

intervention that increases positive affect scores would also be influencing positively in several other variables, being promising for a targeted intervention.

As well as the positive affects, hope is another central construct in the analysis of networks of the present study, with many weighted connections with the others and an influence of great positive impact throughout the network. The "expected influence" measure allows us to infer that an increase in the hope scores would be multiplied to the other variables investigated, either directly, as is the case of self-esteem, life satisfaction, positive affects and social support, as well as variables related to these. Since hope scores were significantly worse in institutionalized subjects, this data highlights the importance of considering this construct in future interventions to be developed with these groups.

There is evidence that interventions that promote hope may be effective in increasing life satisfaction and significantly reducing depression among the elderly people (Mirko et al., 2014; Mozooni et al., 2017). Increasing the hope of the elderly people is also a resource for their physical health, since this construct explains the 64.9% variance in health-related behaviors in the elderly (Sung et al., 2017).

STRENGTHS OF THE STUDY:

The present study is inedited in comparing, in relation to positive attributes, the elderly people institutionalized to the controls through network analysis, adjusting the possible values of confusion and identifying the strong and direct relations between the constructs, as well as the mediation in the relations between indicators of cognitive decline or depression and the studied constructs. In addition, the study was carried out using instruments validated for the study population.

LIMITATIONS OF THE STUDY:

The absence of a pairing of groups by educational level and by indicators of depression or cognitive decline limits a direct unbiased comparison of the constructs studied between the groups, limiting the study to the exposure of the findings. Network analysis was performed with the objective of reducing the influence of the differences between the groups and relating the data to each other.

In addition, possible selection biases of the control group can be considered, since it was selected among participants of physical activity groups and are active. Reverse causality is also a limiting factor in this study, since it is not possible to say whether it is the condition of the elderly that causes a reduction in Positive Psychology scores or whether reduced scores can lead to the current condition. This is mainly due to the design of the study.

CONCLUSION:

Institutionalization is associated with worse scores of spiritual well-being, social support (other than material), self-esteem, life satisfaction, positive affect and hope, and is not associated with worse scores of negative affect and optimism. In this population, the relationship is direct between depression and life satisfaction. However, the relationship between cognitive decline and life satisfaction has mediation of positive affect, hope, and social support. The constructs of hope and life satisfaction are more influential in the network of regular correlations between constructs. The indicator of depression found negative associations with self-esteem, life satisfaction and indicators of cognitive decline. The latter was negatively related only to optimism and positively related to hope, social support, positive and negative affects. The findings of the study aim to direct the scientific community in the search for interventions that will be more effective to the institutionalized elderly people.

AUTHOR CONTRIBUTIONS:

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Sabrina was the lead author in conceptualizing the research and writing the manuscript. Analuiza, Liana, Wagner and Caroline contributed to all steps of the research and then critically reviewed and revised the manuscript. All authors accountability for the final version of the manuscript. Caroline is a doctoral advisor on this research. Liana and Analuiza are co-advisors on this research.

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Table 1 - Comparison of characteristics between the institutionalized elderly population and the controls.

		Controles N= 66	Institucionalizados N=61	P
Age*		73 (60-88)	84 (65-97)	0,000
Gender**	F	54 (81,8)	48 (78,7)	0,826
GDS*		0 (0-3)	0 (0-9)	0,069
MEEM*		28 (24-30)	25 (4-30)	<0,001
Number of children*		2 (1-4)	2 (0-4)	0,009
Educational level**	Without education	0 (0)	16 (26,2)	<0,001
	Until first degree	53 (80,3)	40 (65,6)	
	Up to second degree	7 (10,6)	2 (3,3)	
	Higher and / or postgraduate	6 (9,1)	3 (4,9)	
Medical Story **	Absence of comorbidities	18 (27,3)	20 (32,8)	0,002
	Non-limiting comorbidities	41 (62,1)	21 (34,4)	
	Limitations of DLA	7 (10,6)	20 (32,8)	
Use of antidepressants **	Yes	7 (10,6)	25 (41,0)	<0,001
Retired**	Yes	53 (80,3)	52 (85,2)	0,617
Cognitive Difficulty Complaint**	Yes	24 (36,4)	20 (32,8)	0,813

* Mann-Whitney U test - results presented as mean and standard deviation. ** Chi-square - results presented in n (%). DLA - Daily Life Activities.

Table 2 - Comparison of the scores on the spiritual well-being, social support, self-esteem, life satisfaction, positive affects, negative affects, optimism and hope scores among institutionalized elders and the control group.

	Controls N= 66	Institutionalized N=61	P	Z
Spiritual Well-Being	38,0 (16-48)	37 (21-47)	<0,001	-3,931
Peace	13 (5-16)	12 (6-16)	<0,001	-3,997
Sense	13 (8-16)	13 (5-15)	0,002	-3,137
Faith	13 (3-16)	12 (7-16)	0,001	-3,310
Social support	100 (41-100)	95,7 (38-100)	<0,001	-3,859
Material	100 (20-100)	100 (55-100)	0,846	-0,194
Affective	100 (46-100)	100 (20-100)	<0,001	-4,293
Emotional	100 (40-100)	100 (20-100)	<0,001	-3,911
Information	100 (40-100)	100 (20-100)	<0,001	-3,771
Positive Social Interaction	100 (40-100)	100 (20-100)	<0,001	-4,493
Self esteem	39 (30-40)	37 (18-40)	0,004	-2,871
Life satisfaction	32 (12-35)	26 (14-35)	<0,001	-6,103
Positive Affects	38 (27-48)	30 (14-47)	<0,001	-5,747
Negative affects	11 (10-41)	12 (9-27)	0,167	-1,383
Optimism	24 (9-30)	24 (4-33)	0,572	-0,565
Hope	38 (24-40)	32 (14-40)	<0,001	-6,257

*Kruskal Wallis with post-hoc U of Mann Whitney with Bonferroni significance correction. Values presented in median and amplitude - m (min-max).

Table 3 - Correlated Partial Correlations above the dotted line and Minimum Pathways below the dotted line between indicators of depression (GDS) and cognitive decline (MEEM), social class, spiritual well-being, social support, self-esteem, life satisfaction, positive affects, optimism and dispositional hope .

	1 MEEM	2 GDS	3 SS	4 SE	5 LS	6 PA	7 NA	8 OP	9 DH	10 SWB
1 MEEM	-	-0,158	0,183	0	0	0,262	0,174	-0,317	0,137	0
2 GDS	2, 1	-	0	-0,378	-0,182	0	0	0	0	0
3 SS	3, 1	3, 5, 2	-	0	0,287	0	0	0	0,207	0
4 SE	4, 2, 1	4, 2	4, 9, 3	-	0	0,123	-0,157	0,157	0,290	0
5 LS	5, 6, 1	5, 2	5, 3	5, 2, 4	-	0,229	-0,314	0	0,155	0,224
6 PA	6, 1	6, 5, 2	6, 5, 3	6, 4	6, 5	-	0	0	0,178	0
7 NA	7, 1	7, 5, 2	7, 5, 3	7, 4	7, 5	7, 5, 6	-	0	0	0
8 OP	8, 1	8, 4, 2	8, 1, 3	8, 4	8, 1, 6, 5	8, 1, 6	8, 1, 7	1	0,198	0
9 DH	9, 1	9, 4, 2	9, 3	9, 4	9, 5	9, 6	9, 5, 7	9, 8	-	0
10 SWB	10, 5, 6, 1	10, 5, 2	10, 5, 3	10, 5, 2, 4	10, 5	10, 5, 6	10, 5, 7	10, 5, 6, 1, 8	10, 5, 9	-

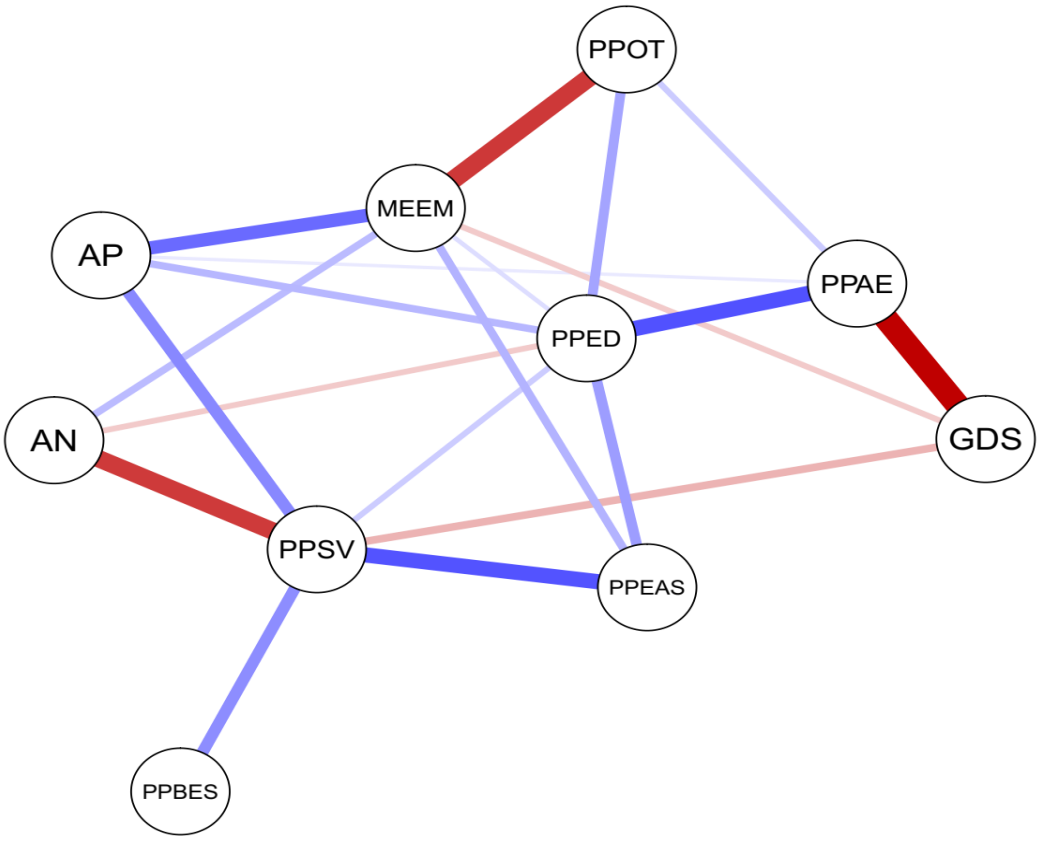

Figure 1 - Correlated partial network - Glasso Method between Positive Psychology constructs and indicators of depression or cognitive decline. PPOT - optimism; PPAE- self-esteem; PPED - dispositional hope; PPSV- life satisfaction; PPEAS - Social Support; PPBES - Spiritual Well-Being; AP - Positive affections; AN- Negative Affects. GDS - Depression scale score; MMSE - Cognitive decline scale score.

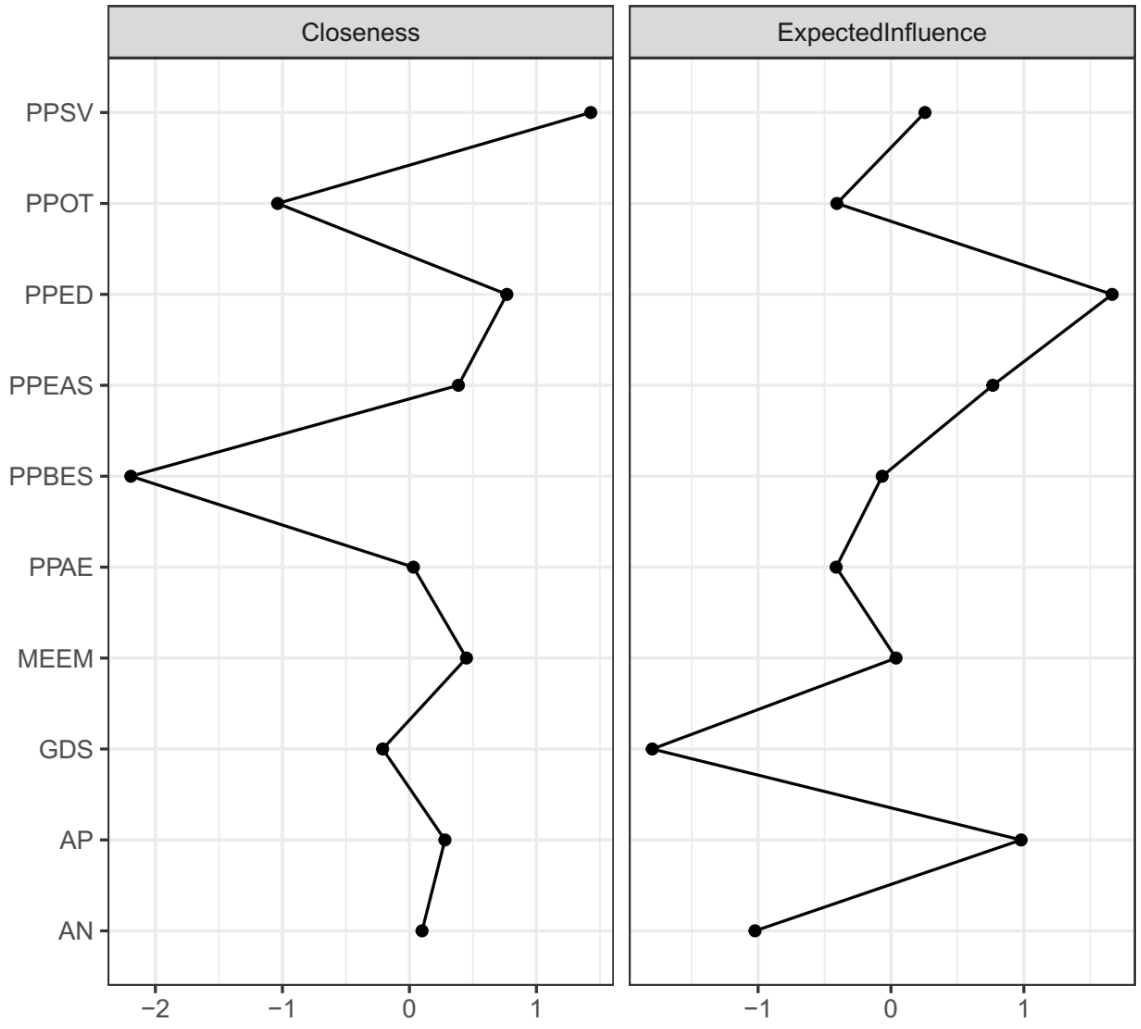

Figure 2 - Measures of Centrality between the constructs of Positive Psychology and the indicators of depression and cognitive decline. Legend: Measures of values standardized with zero mean, "closeness" represents the variables with the highest number of weighted connections and "expectedinfluence" represents the variables with the greatest positive influence over the others.

5. CONCLUSÃO:

A presente tese cumpriu seus objetivos e resultou na produção de três artigos. Destaca-se como uma produção relevante, em termos científicos e sociais, e inédito em relação aos conteúdos abordados e à forma de analisá-los.

No estudo comparando idosos saudáveis com o grupo de idosos com declínio cognitivo/demência, constatou-se que o grupo com comprometimento cognitivo leve e demência leve apresentou média de escores significativamente mais baixos de bem-estar espiritual, apoio social, autoestima, satisfação de vida, afetos positivos, otimismo e esperança e significativamente maiores de afetos negativos em comparação aos controles saudáveis. No entanto, no caso da demência moderada, a média dos escores não diferiram dos controles, sendo possível concluir que, nas fases mais precoces da demência, é maior o efeito da doença sobre o bem-estar dos idosos e maior o prejuízo em relação a apoio social, otimismo, esperança e autoestima. Já entre indivíduos idosos com maior comprometimento cognitivo, a anosognosia parece reduzir o impacto da doença em relação a tais construtos. Os resultados evidenciaram que nas fases mais precoces da demência existe um impacto da doença nos diversos construtos da PP. Indivíduos com declínio cognitivo leve e demência leve tiveram escores significativamente menores de bem-estar espiritual, apoio social autoestima, satisfação de vida, afetos positivos, otimismo e esperança e significativamente maiores de afetos negativos em comparação aos controles. Já para indivíduos com maior comprometimento cognitivo a anosognosia parece suprimir o impacto da doença na maior parte destes itens. Os escores em todos estes construtos da PP não diferiram entre idosos com demência moderada e o grupo controle, exceto no otimismo que também foi menor nos sujeitos com demência moderada.

No estudo comparando idosos saudáveis com o grupo de idosos depressivos, constatou-se que o grupo critério apresentou, em relação aos atributos positivos, média de escores progressivamente menores nos graus de depressão severa, moderada, leve e mínima, e significativamente diferente em comparação a controles saudáveis. A relação entre a depressão e construtos de satisfação de vida, autoestima e apoio social foram mediadas, enquanto que a relação entre depressão e os construtos esperança disposicional, afetos positivos, bem-estar espiritual e otimismo foi de ordem direta. Dentre os principais resultados ficaram evidentes diferenças significativas entre o grupo

controle e os graus de depressão nos escores de bem-estar espiritual, apoio social, autoestima, satisfação de vida, afetos positivos, otimismo, afetos negativos e esperança. A análise de redes parciais regularizadas permitiu inferir que os construtos que têm associação direta com a depressão são o bem-estar espiritual, o otimismo, afetos positivos e a esperança disposicional. Os demais apresentaram relações mediadas.

No estudo comparando idosos saudáveis com o grupo de idosos institucionalizados, constatou-se que o grupo institucionalizado apresentou média de escores mais baixos nos construtos bem-estar espiritual, apoio social autoestima, satisfação de vida, afetos positivos e esperança em relação aos controles saudáveis. É possível verificar neste grupo uma relação direta e negativa entre o indicador de depressão (GDS) e os construtos de autoestima e satisfação de vida. Já o indicador de declínio cognitivo (MEEM) relacionou-se direta e negativamente com o otimismo e direta e positivamente com os construtos de esperança disposicional, apoio social, afetos positivos e afetos negativos. Entre institucionalizados e seus controles, os escores de bem-estar espiritual, satisfação de vida, afetos positivos apoio social, autoestima e esperança diferiram significativamente. Afetos negativos e otimismo não diferiram entre os grupos. Na análise de redes de associação parcial regularizada ficou evidente uma relação negativa entre escores de sintomas depressivos mensurados e os construtos autoestima e satisfação de vida neste grupo. Já os resultados do escores de funções cognitivas foram relacionados direta e negativamente com o construto otimismo e direta e positivamente com os construtos de esperança disposicional, apoio social, afetos positivos e afetos negativos.

Dentre as limitações do estudo, é possível destacar que o delineamento utilizado não permite uma relação de causa e efeito entre as características específicas dos grupos estudados e os construtos de Psicologia Positiva, limitando-se a explorar as associações entre estes. A seleção dos indivíduos não foi randomizada, podendo existir viés de seleção. Medicamentos, tais como os antidepressivos e outros que poderiam afetar os desfechos, não foram controlados neste estudo e podem ser considerados fatores de confusão, bem como condições de multimorbidades que são muito frequentes nesta população.

A partir dos resultados apresentados nesta tese, concluiu-se que os escores de construtos da Psicologia Positiva estão relacionados também às

situações de saúde e doença nas quais o idoso se encontra. Os escores são reduzidos em graus iniciais de demência, na depressão e institucionalização, sendo importante a consideração desses para o planejamento de futuras intervenções que visem a reduzir o sofrimento do idoso e à promoção de saúde e bem-estar na terceira idade. Esse é um desafio premente nos tempos atuais, sobretudo considerando o crescimento da população de idosos no Brasil e no mundo.

O presente estudo se destaca por ser inovador no seu tema, que é atual e inédito, e recursos estatísticos utilizados para abordá-lo, a saber, a Análise de Redes, um paradigma matemático, baseado em dados empíricos, que permite combinar diferentes algoritmos e técnicas gráficas a fim de melhor compreender a complexidade das relações investigadas. Acredita-se que trabalhos futuros poderão aprofundar a compreensão das redes estudadas nessa tese em amostras de idosos clinicos e não-clínicos, trazendo à prática maiores subsídios para que o indivíduo possa superar os desafios do envelhecer. O trabalho alcançou os seus objetivos e resultou na divulgação de evidências científicas acerca da importância clínica de temas como a espiritualidade, o otimismo e a esperança, construtos promissores para intervenções com o idoso. Os achados desta tese são descritos em três artigos científicos a serem divulgados em revistas de impacto à área, sendo um deles já publicado na *Frontiers in Psychology* e os demais em vias de publicação. Com isso, considera-se que o estudo ampliou os conhecimentos científicos acerca da Psicologia Positiva, em especial no que tange à caracterização dos construtos que lhe são típicos (bem-estar espiritual, bem-estar subjetivo, otimismo, esperança, autoestima e redes de apoio) em idosos clínicos e não-clínicos, fundamentando futuras intervenções que tenham como objetivo o desenvolvimento de uma vida mais saudável, próspera e feliz.

APÊNDICE A: Ficha de Dados Sociodemográficos e Culturais.

Aspectos sócio-culturais:

Sigla_____Idade_____Sexo _____
Local da avaliação_____
Data_____
Local de nascimento_____
Locais que morou (períodos) _____
_____
Moradia atual_____
Casa própria ( ); casa alugada ( ); outro_____
Escolaridade do participante_____
1- ENSINO FUND INCOMPL, 2- EF COMPL, 3- EM INCOMPL, 4- EM COMPL 5- SUP INCOMPL
Local de escolaridade_____
Escolaridade dos filhos_____
Línguas faladas_____
Trabalho (períodos)_____
_____
Está aposentado ( ) sim; ( ) não Há quanto tempo_____

Experiência em:
Investimentos ( ) Sim ( ) Não Quais:_____
Economia doméstica ( ) Sim ( ) Não Quais:_____

Antecedentes Médicos
Doenças neurológicas_____
Doenças psiquiátricas_____
Doenças cardíacas_____
Outras doenças_____
Dificuldade de visão_____
Dificuldade de audição_____
Dificuldade motora_____
Alcoolismo_____

Uso de drogas psicotrópicas_____
Cirurgias e outros_____

Aspectos sócio-econômicos

Item	Não tem	1	2	3	4	5	6 ou mais
TV	0	2	4	6	8	10	12
Aparelho de som	0	1	2	3	4	5	6
Banheiro	0	2	4	6	8	10	12
Carro	0	4	8	1	16	16	16
Empregada	0	6	12	18	24	24	24
Telefone	0	5	5	5	5	5	5
Geladeira	0	2	2	2	2	2	2

Instrução do *'chefe'* da família	Pontos
Analfabeto/Primario incompleto	0
Primário comleto/Ginasial incomleto	1
Ginasial completo/Colegial incompleto	3
Colegial completo/Superior incompleto	5
Superior completo	10

	CLASSE	PONTOS
5	A	35 OU MAIS
4	B	21 A 34
3	C	10 A 20
2	D	5 A 9
1	E	0 A 4

Cálculo	Pontuação
TV	
Aparelho de som	
Banheiro	
Carro	
Empregados	
Telefone	
Geladeira	
Instrução	
TOTAL	

Hábitos

Leitura **Freqüência**
( ) jornais _____
( ) revistas _____
( ) livros _____
( ) outros _____

Escrita **Freqüência**
( ) recados _____
( ) cartas _____
( ) e-mails _____
( ) textos _____
( ) outros _____

Jogos **Freqüência**
( ) cartas _____
( ) damas _____
( ) xadrez _____
( ) outros _____

Atividades (assinalar a freqüência)
Participa de atividades religiosas (missas, cultos, etc.)?

Participa de atividades sociais (amigos, etc.)?

Participa de atividades esportivas (caminhadas, academia, etc.)?

Participa de atividades educacionais (palestras, cursos, simpósios, etc.)?

Participa de atividades culturais (teatro, cinema, etc.)?

Queixa(s) de dificuldades cognitivas?

APÊNDICE B - Termo de Consentimento Livre e Esclarecido:

Você está sendo convidado a participar como voluntário do projeto de pesquisa "Avaliação de construtos da Psicologia Positiva em diferentes situações Geriátricas." (24/03/15), que tem por objetivo conhecer as diferentes características psicológicas de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e cuidado no envelhecimento. O conhecimento sobre este assunto ainda é limitado e este estudo é importante porque seus resultados fornecerão informações para que se ampliem os conhecimentos acerca dos benefícios da aplicação da Psicologia Positiva (lado positivos das experiências vivenciadas) na prevenção e promoção da saúde.

Caso você aceite participar deste estudo, você precisará será entrevistado pela pesquisadora numa sala reservada, com a duração de 30 minutos aproximadamente. Durante a entrevista serão perguntadas informações pessoais e realizado um questionário, que terá duração aproximada de 30 minutos. Todas as informações por você fornecidas serão mantidas em anonimato e só serão utilizados para obter conclusões sobre as questões estudadas, nunca citando o seu nome ou quaisquer informações pessoais. Os dados obtidos serão utilizados para este estudo, podendo ser aproveitados para comparação de dados em estudos futuros, sendo os mesmos armazenados pela pesquisadora principal durante 5 (cinco) anos e após totalmente destruídos.

Os riscos em participar desta pesquisa são mínimos. Poderá ocorrer um desconforto emocional em responder algumas das perguntas previstas no questionário. Porém, caso ocorra necessidade, o participante poderá entrar em contato com a pesquisadora principal para posterior encaminhamento para clínicas de atendimento psicológico conveniadas com a UFCSPA ou para o serviço escola de Psicologia da UFCSPA, se necessário. O benefício relacionado à sua participação será de aumentar o conhecimento para a área científica, podendo gerar resultados positivos em prevenção e promoção da saúde.

Sua participação é voluntária, isto é, a qualquer momento você pode se recusar a responder as perguntas ou desistir de participar, ou mesmo retirar seu consentimento. Sua recusa não trará nenhum prejuízo no seu atendimento na unidade médica, não interferindo no seu tratamento. O(a) Sr(a) ou seu familiar não terão nenhum custo ou quaisquer compensações financeiras.

_____ _____

Participante ou responsável legal Pesquisador(a) responsável

O(a) Sr(a) ou seu familiar receberão uma cópia deste termo, sendo que a pesquisadora responsável é a Profa. Caroline Tozzi Reppold, telefone de contato: 51-33038854 ou celular 51- 91022673, e-mail: reppold@ufcspa.edu.br, com a qual você pode tirar as suas dúvidas sobre o projeto e da sua participação, agora ou a qualquer momento. Para saber sobre os meus direitos como participante de pesquisa pode também entrar em contato com os Comitês de Ética abaixo. Desde já agradecemos!

Eu, _____ fui informado de todos os objetivos e da importância desta pesquisa de forma clara,

tive minhas dúvidas esclarecidas e concordo em participar do estudo voluntariamente. Sei que se houverem dúvidas quanto a questões éticas, poderei entrar em contato com os Comitês de Ética listados neste termo de consentimento. Declaro que recebi cópia deste Termo de Consentimento Livre e Esclarecido, ficando outra via com a pesquisadora.

Porto Alegre ,_____de_____de 2014

Participante ou responsável legal

Pesquisador(a) responsável

Telefone:33038854

Nome Pesquisador(a): Caroline Tozzi Reppold

Instituição: Universidade Federal de Ciências da Saúde de Porto Alegre.

Endereço: Rua Sarmento Leite, 245. Porto Alegre, RS. Brasil. Cep. 90050-170

Comitês de Ética em Pesquisa:

Comitê de Ética em Pesquisa da UFCSPA, telefone (51) 33038804. Com Vanessa Mattevi e Adriana Vial Roehe. das 8h às 12h e das 13:30h as 17h. Endereço: Rua Sarmento Leite, 245, Centro, Porto Alegre, RS.

Comitê de Ética em Pesquisa da Santa Casa de Misericórdia de Porto Alegre, telefone (51) 32148571 com Catiane Zanin Cabral. Das 8h às 11:30h e das 13:30h as 16:30h. Endereço: Rua Prof. Annes Dias, 295, Centro, Porto Alegre, RS.

Comitê de Ética em Pesquisa do Hospital Materno- Infantil Presidente Vargas, com Cláudia Fernandes da Costa Zanini das 8h às 18h, telefone: (51) 32893357. Endereço: Av. Independência, 661 - Independência, Porto Alegre, RS

Comitê de Ética em Pesquisa da PUCRS, telefone (51) 33203345. Com Profa. Dr. Rochele Paz Fonseca de seg. a sex. das 8h30min às 12h e das 13h30min às 17h. Endereço: Av. Ipiranga, 6681, Prédio 40, sala 505, Porto Alegre, RS.

ANEXO A – Escala de Bem-estar Espiritual (FACIT SP-12)

Por favor, faça um círculo em torno do número que melhor corresponda ao seu estado durante os últimos 7 dias.

Preocupações Adicionais:	Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo
Sinto -me em paz	0	1	2	3	4
Tenho uma razão para viver	0	1	2	3	4
A minha vida tem sido produtiva	0	1	2	3	4
Custa -me sentir paz de espírito	0	1	2	3	4
Sinto que a minha vida tem um propósito	0	1	2	3	4
Sou capaz de encontrar conforto dentro de mim mesmo(a)	0	1	2	3	4
Sinto -me em harmonia comigo mesmo(a)	0	1	2	3	4
Falta sentido e propósito em minha vida	0	1	2	3	4
Encontro conforto na minha fé ou crenças espirituais	0	1	2	3	4
A minha fé ou crenças espirituais dão -me força	0	1	2	3	4
A minha doença tem fortalecido a minha fé ou crenças espirituais	0	1	2	3	4
Independentemente do que acontecer com a minha doença, tudo acabará em bem	0	1	2	3	4

ANEXO B - Escala de apoio social do Medical Outcomes Study adaptada para o português no Estudo Pró-Saúde:

Se você precisar, com frequência conta com alguém...	*Nunca*	*Raramente*	*As Vezes*	*Quase Sempre*	*Sempre*
1. Que o ajude, se ficar de cama?					
2. Para levá-lo ao médico?					
3. Para ajudá-lo nas tarefas diárias, se ficar doente?					
4. Para preparar as suas refeições, se você não puder prepará-las?					
5.Que demonstre amor e afeto por você?					
6. Que lhe dê um abraço?					
7. Que você ame e que faça você se sentir querido?					
8. Para ouvi-lo quando você precisa falar?					
9. Em quem confiar ou para falar de você ou sobre os seus problemas?					
10. Para compartilhar as suas preocupações e medos mais íntimos?					
11. Que compreenda os seus problemas?					
12. Para dar bons conselhos em situações de crise?					
13. Para dar informações que o ajude a compreender determinada situação?					
14. De quem você realmente quer conselhos?					
15. Para dar sugestões de como lidar com um problema pessoal?					
16. Com quem fazer coisas agradáveis?					
17. Com quem distrair a cabeça?					
18. Com quem relaxar?					
19. Para se divertir junto?					

ANEXO C - Escala de Autoestima de Rosemberg

Leia cada frase com atenção e faça um círculo em torno da opção mais adequada:
(1) Discordo Totalmente (2) Discordo (3) Concordo (4) Concordo Totalmente
1. Eu sinto que sou uma pessoa de valor, no mínimo, tanto quanto as outras pessoas. (1)(2)(3)(4)
2. Eu acho que eu tenho várias boas qualidades. (1)(2)(3)(4)
3. Levando tudo em conta, eu penso que eu sou um fracasso. (1)(2)(3)(4)
4. Eu acho que sou capaz de fazer as coisas tão bemquanto a maioria das pessoas. (1)(2)(3)(4)
5. Eu acho que eu não tenho muito do que me orgulhar. (1)(2)(3)(4)
6. Eu tenho uma atitude positiva com relação a mim mesmo. (1)(2)(3)(4)
7. No conjunto, eu estou satisfeito comigo. (1)(2)(3)(4)
8. Eu gostaria de poder ter mais respeito por mim mesmo. (1)(2)(3)(4)
9. Às vezes eu me sinto inútil. (1)(2)(3)(4)
10. Às vezes eu acho que não presto para nada. (1)(2)(3)(4)

ANEXO D - Escalas de Satisfação de Vida e Afetos.

4.1 Escala de Satisfação de Vida:

Abaixo você encontrará cinco afirmativas. Assinale na escala abaixo de cada afirmativa o quanto ela descreve a sua situação pessoal. Não há respostas certas ou erradas, mas é importante você marcar com sinceridade como você se sente com relação a cada uma dessas afirmativas:

1. A minha vida está próxima do meu ideal.
Discordo plenamente __1__2__3__4__5__6__7__Concordo plenamente.

2. Minhas condições de vida são excelentes.
Discordo plenamente __1__2__3__4__5__6__7__Concordo plenamente.

3. Eu estou satisfeito com a minha vida.
Discordo plenamente __1__2__3__4__5__6__7__Concordo plenamente.

4. Até agora eu tenho conseguido as coisas importantes que eu quero na vida.
Discordo plenamente __1__2__3__4__5__6__7__Concordo plenamente.

5. Se eu puder viver a minha vida de novo eu não mudaria quase nada.
Discordo plenamente __1__2__3__4__5__6__7__Concordo plenamente.

4.2. Afetos

Esta escala consiste em um número de palavras que descrevem diferentes sentimentos e emoções. Leia cada item e depois marque a resposta adequada no espaço ao lado da palavra. Indique até que ponto você têm se sentido desta forma ultimamente.

	Nem um pouco	Um pouco	Moderadamente	Bastante	Extremamente
1. AFLITO					
2. AMAVEL					
3. AMEDRONTADO					
4. ANGUSTIADO					
5. ANIMADO					
6. APAIXONADO					
7. DETERMINADO					
8. DINÂMICO					
9. ENTUSIASMADO					
10. FORTE					
11. HUMILHADO					
12. INCOMODADO					
13. INQUIETO					
14. INSPIRADO					
15. IRRITADO					
16. NERVOSO					
17. ORGULHOSO					
18. PERTURBADO					
19. RANCOROSO					
20. RANCOROSO					

ANEXO E- Escala de avaliação de otimismo – LOT-R

Abaixo você encontrará 10 frases. Assinale na escala o quanto você concorda ou discorda com cada uma delas. A escala varia de 1 (discordo plenamente) a 5 (Concordo plenamente). Não há respostas certas ou erradas. O importante é você responder com sinceridade como de sente com relação a cada uma das frases.

1	Diante das dificuldades, eu acho que tudo vai dar certo. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
2	Para mim é fácil relaxar. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
3	Se alguma coisa pode dar errado comigo, com certeza vai dar errado. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
4	Eu sou sempre otimista com relação ao meu futuro. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
5	Eu gosto muito dos meus amigos. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
6	Eu considero importante me manter ocupado. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
7	Em geral, eu não espero que as coisas vão dar certo pra mim. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
8	Eu não me incomodo com facilidade. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
9	Eu não espero que coisas boas aconteçam comigo. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.
10	Em geral, eu espero que aconteçam mais coisas boas do que coisas ruins para mim. Discordo plenamente |_1_|_2_|_3_|_4_|_5_| Concordo plenamente.

ANEXO F - Escala de Esperança Disposicional:

Leia com atenção e circule a opção que você acha a mais adequada:
1. Eu posso pensar em várias formas de lidar com situações difíceis.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira
2. Eu me esforço para atingir os meus objetivos.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira
3. Eu me sinto cansado a maior parte do tempo.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
4. Existem sempre muitas formas de resolver os problemas.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
5. Eu sou facilmente derrotado em discussões.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
6. Eu posso pensar em muitas formas de conseguir as coisas que são muito importantes para a minha vida.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
7. Eu me preocupo com a minha saúde.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
8. Mesmo quando os outros desistem, eu sei que posso encontrar alguma forma de resolver os problemas.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
9. Minhas experiências no passado me prepararam bem para enfrentar o futuro.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
10. Eu tenho tido muito sucesso na vida.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
11. Frequentemente eu fico me preocupando com alguma coisa.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.
12. Eu atinjo os objetivos que estabeleço pra mim.
Totalmente falsa |__1_|_2_|_3_|_4_|_5__|Totalmente verdadeira.

ANEXO G - Escala de Depressão Geriátrica – GDS

1	Está satisfeito (a) com sua vida? (não =1) (sim = 0)
2	Diminuiu a maior parte de suas atividades e interesses? (sim = 1) (não = 0)
3	Sente que a vida está vazia? (sim=1) (não = 0)
4	Aborrece-se com freqüência? (sim=1) (não = 0)
5	Sente-se de bem com a vida na maior parte do tempo? (não=1) (sim = 0)
6	Teme que algo ruim possa lhe acontecer? (sim=1) (não = 0)
7	Sente-se feliz a maior parte do tempo? (não=1) (sim = 0)
8	Sente-se freqüentemente desamparado (a)? (sim=1) (não = 0)
9	Prefere ficar em casa a sair e fazer coisas novas? (sim=1) (não = 0)
10	Acha que tem mais problemas de memória que a maioria? (sim=1) (não = 0)
11	Acha que é maravilhoso estar vivo agora? (não=1) (sim = 0)
12	Vale a pena viver como vive agora? (não=1) (sim = 0)
13	Sente-se cheio(a) de energia? (não=1) (sim = 0)
14	Acha que sua situação tem solução? (não=1) (sim = 0)
15	Acha que tem muita gente em situação melhor? (sim=1) (não = 0)

Total > 5 = suspeita de depressão

ANEXO H - Mini-Exame do Estado Mental – MEEM

	TESTE	Pontos
1	Orientação temporal (0-5): ANO – ESTAÇÃO – MÊS – DIA – DIA DA SEMANA	
2	Orientação espacial (0-5): ESTADO – RUA – CIDADE – LOCAL – ANDAR	
3	Registro (0-3): nomear: PENTE – RUA – CANETA	
4	Cálculo- tirar 7 (0-5): 100-93-86-79-65. Alternativamente soletre a palavra "MUNDO" de trás para frente.	
5	Evocação (0-3): três palavras anteriores: PENTE – RUA – CANETA	
6	Linguagem 1 (0-2): nomear um RELÓGIO e uma CANETA	
7	Linguagem 2 (0-1): repetir: NEM AQUI, NEM ALI, NEM LÁ	
8	Linguagem 3 (0-3): siga o comando: Pegue o papel com a mão direita, dobre-o ao meio, coloque-o em cima da mesa.	
9	Linguagem 4 (0-1): ler e obedecer: FECHE OS OLHOS	
10	Linguagem 5 (0-1): escreva uma frase completa	
11	Linguagem 6 (0-1): copiar o desenho. 	
TOTAL		

ANEXO I – Parecer de aprovação CEP UFCSPA:

UNIVERSIDADE FEDERAL DE CIÊNCIAS DA SAÚDE DE PORTO ALEGRE

PARECER CONSUBSTANCIADO DO CEP

Elaborado pela Instituição Coparticipante

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: Avaliação de construtos da Psicologia Positiva em diferentes situações geriátricas

Pesquisador: Caroline Reppold
Área Temática:
Versão: 1
CAAE: 40224314.8.3002.5345
Instituição Proponente: Irmandade da Santa Casa de Misericordia de Porto Alegre - ISCMPA
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 1.115.412
Data da Relatoria: 18/06/2015

Apresentação do Projeto:
Trata-se de estudo transversal, caracterizado como Caso-controle, e tem por objetivo caracterizar e comparar através dos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida os indivíduos de quatro grupos distintos: indivíduos saudáveis praticantes de atividades físicas da Faculdade de Educação Física e Ciência do Desporto da PUCRS (FEFID), indivíduos com demência do ambulatório de Demência e Distúrbios do Movimento da Irmandade Santa Casa de Misericórdia de Porto Alegre, indivíduos com depressão do Ambulatório de Psicogeriatria do Hospital Presidente Vargas e indivíduos institucionalizados residentes na Sociedade Porto-alegrense de Auxilio aos Necessitados SPAAN. Para este objetivo, serão avaliados tais construtos por meio dos instrumentos Spirituality Self Rating Scale (SSRS), Escala de Apoio Social utilizada no Medical Outcomes Study

Endereço: Rua Sarmento Leite ,245
Bairro: **CEP:** 90.050-170
UF: RS **Município:** PORTO ALEGRE
Telefone: (513)303 -8804 **E-mail:** cep@ufcspa.edu.br

(MOS),
Escala de Autoestima de Rosenberg – EAR, “Escala de Satisfação de Vida” – ESV, Positive and Negative Affect Schedule – PANAS, Revised Life Orientation Test (LOT-R), Adult Dispositional Hope Scale – ADHS.
O cálculo amostral total para este objetivo de estudo é de 244 indivíduos, sendo 60 a 62 por grupo.

Objetivo da Pesquisa:

a) Caracterizar e comparar os indivíduos de quatro grupos distintos: idosos saudáveis, idoso com declínio cognitivo ou demenciados, idosos depressivos e idosos institucionalizados com relação aos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida.

- OBJETIVOS ESPECÍFICOS:

a) Caracterizar o indivíduo participante da pesquisa em questões demográficas e clínicas.
b) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos com declínio cognitivo.
c) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos depressivos.
d) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos institucionalizados.
e) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida com o escore clínico da demência (CDR) do paciente com declínio

cognitivo ou demenciado.
f) Verificar quais dos construtos investigados estão associados à satisfação de vida nos diferentes grupos do estudo.
g) Verificar quais dos construtos investigados estão associados ao maior grau de declínio cognitivo na CDR em indivíduos com declínio cognitivo ou demência.
h) Verificar quais dos construtos investigados estão associados ao maior escore na Escala de Depressão Geriátrica Abreviada (EDG) ou no Inventário de Depressão de Beck – BDI em indivíduos saudáveis, depressivos e institucionalizados.

Avaliação dos Riscos e Benefícios:
os riscos em participar desta pesquisa são mínimos.
Poderá ocorrer um desconforto em responder algumas das perguntas previstas no questionário.

Comentários e Considerações sobre a Pesquisa:
As sugestões feitas pelo CEP da Santa Casa foram acatadas, havendo esclarecimento sobre o tipo de atendimento prestado ao indivíduo participante caso seja necessário em caso de dano comprovadamente associado à pesquisa

Considerações sobre os Termos de apresentação obrigatória:
Adequados

Recomendações:
Aprovar

Conclusões ou Pendências e Lista de Inadequações:
Não há pendências ou inadequações

Situação do Parecer:
Aprovado

Necessita Apreciação da CONEP:
Não

Considerações Finais a critério do CEP:
De acordo com o parecer do Relator.

UNIVERSIDADE FEDERAL DE CIÊNCIAS DA SAÚDE DE PORTO ALEGRE

Continuação do Parecer: 1.115.412

PORTO ALEGRE, 19 de Junho de 2015

Assinado por:
Julia Fernanda Semmelmann Pereira Lima
(Coordenador)

Endereço: Rua Sarmento Leite ,245
Bairro: **CEP:** 90.050-170
UF: RS **Município:** PORTO ALEGRE
Telefone: (513)303 -8804 **E-mail:** cep@ufcspa.edu.br

ANEXO J - Parecer de aprovação CEP ISCMPA:

IRMANDADE DA SANTA CASA DE MISERICORDIA DE PORTO ALEGRE - ISCMPA

PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: Avaliação de construtos da Psicologia Positiva em diferentes situações geriátricas

Pesquisador: Caroline Reppold
Área Temática:
Versão: 2
CAAE: 40224314.8.0000.5335
Instituição Proponente: Irmandade da Santa Casa de Misericordia de Porto Alegre - ISCMPA
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 1.046.803
Data da Relatoria: 10/04/2015

Apresentação do Projeto:
Trata-se de estudo transversal, caracterizado como Caso-controle, e tem por objetivo caracterizar e comparar através dos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida os indivíduos de quatro grupos distintos: indivíduos saudáveis praticantes de atividades físicas da Faculdade de Educação Física e Ciência do Desporto da PUCRS (FEFID), indivíduos com demência do ambulatório de Demência e Distúrbios do Movimento da Irmandade Santa Casa de Misericórdia de Porto Alegre, indivíduos com depressão do Ambulatório de Psicogeriatria do Hospital Presidente Vargas e indivíduos institucionalizados residentes na Sociedade Porto-alegrense de Auxilio aos Necessitados SPAAN. Para este objetivo, serão avaliados tais construtos por meio dos instrumentos Spirituality Self Rating Scale (SSRS), Escala de Apoio Social utilizada no Medical Outcomes Study (MOS), Escala de Autoestima de Rosenberg – EAR, “Escala de Satisfação de Vida” – ESV, Positive and Negative Affect Schedule – PANAS, Revised Life Orientation Test (LOT-R), Adult Dispositional Hope Scale – ADHS. O cálculo amostral total para este objetivo de estudo é de 244 indivíduos, sendo 60 a 62 por grupo.

Objetivo da Pesquisa:
- OBJETIVO GERAL:

Endereço: R. Profº Annes Dias,285 Hosp.Dom Vicente Scherer
Bairro: 6º andar - Centro **CEP:** 90.020-090
UF: RS **Município:** PORTO ALEGRE
Telefone: (51)3214-8571 **Fax:** (51)3214-8571 **E-mail:** cep@santacasa.tche.br

a) Caracterizar e comparar os indivíduos de quatro grupos distintos: idosos saudáveis, idoso com declínio cognitivo ou demenciados, idosos depressivos e idosos institucionalizados com relação aos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida.

- OBJETIVOS ESPECÍFICOS:

a) Caracterizar o indivíduo participante da pesquisa em questões demográficas e clínicas.

b) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos com declínio cognitivo.

c) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos depressivos.

d) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos institucionalizados.

e) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida com o escore clínico da demência (CDR) do paciente com declínio cognitivo ou demenciado.

f) Verificar quais dos construtos investigados estão associados à satisfação de vida nos diferentes grupos do estudo.

g) Verificar quais dos construtos investigados estão associados ao maior grau de declínio cognitivo na CDR em indivíduos com declínio cognitivo ou demência.

h) Verificar quais dos construtos investigados estão associados ao maior escore na Escala de Depressão Geriátrica Abreviada (EDG) ou no Inventário de Depressão de Beck – BDI em indivíduos saudáveis, depressivos e institucionalizados.

Avaliação dos Riscos e Benefícios:

- Segundo a pesquisadora, "os riscos em participar desta pesquisa são mínimos. Poderá ocorrer um desconforto em responder algumas das perguntas previstas no questionário. Porém, caso ocorra necessidade, será oferecido ao participante encaminhamento para atendimento especializado, na rede SUS." Por outro lado, não há garantia de benefício direto para o participante, ou seja, os benefícios estão ligados a geração de conhecimento para comunidade científica, "podendo gerar resultados positivos em

prevenção e promoção da saúde."

Comentários e Considerações sobre a Pesquisa:

- Considerando a Resolução Nº 466, de 12 de dezembro 2012:

V.6 - O pesquisador, o patrocinador e as instituições e/ou organizações envolvidas nas diferentes fases da pesquisa devem proporcionar assistência imediata, nos termos do item II.3, bem como responsabilizarem-se pela assistência integral aos participantes da pesquisa no que se refere às complicações e danos decorrentes da pesquisa.

V.7 - Os participantes da pesquisa que vierem a sofrer qualquer tipo de dano resultante de sua participação na pesquisa, previsto ou não no Termo de Consentimento Livre e Esclarecido, têm direito à indenização, por parte do pesquisador, do patrocinador e das instituições envolvidas nas diferentes fases da pesquisa.

No que diz respeito à assistência imediata, constatamos que no estudo em questão os deveres do pesquisador foi transferido para o Sistema Único de Saúde, sem anuência do gestor.

Considerações sobre os Termos de apresentação obrigatória:

Apresentados e adequados.

Recomendações:

Conclusões ou Pendências e Lista de Inadequações:

O estudo "Avaliação de construtos da Psicologia Positiva em diferentes situações geriátricas" está aprovado, uma vez que as recomendações contidas no parecer Nº 982563 foram devidamente observadas pelo pesquisador.

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

Considerações Finais a critério do CEP:

Após reavaliação do protocolo acima descrito, o presente comitê não encontrou óbices quanto ao desenvolvimento do estudo em nossa Instituição e poderá ser iniciado a partir da data deste parecer.

Obs.: 1 - O pesquisador responsável deve encaminhar à este CEP, Relatórios de Andamento dos

IRMANDADE DA SANTA CASA DE MISERICORDIA DE PORTO ALEGRE - ISCMPA

Continuação do Parecer: 1.046.803

Projetos desenvolvidos na ISCMPA. Relatórios Parciais (pesquisas com duração superior à 6 meses), Relatórios Finais (ao término da pesquisa) e os Resultados Obtidos (cópia da publicação).

2 - Para o início do projeto de pesquisa, o investigador deverá apresentar a chefia do serviço (onde será realizada a pesquisa), o Parecer Consubstanciado de aprovação do protocolo pelo Comitê de Ética.

PORTO ALEGRE, 04 de Maio de 2015

Assinado por:
Claudio Teloken
(Coordenador)

Endereço: R. Profº Annes Dias,285 Hosp.Dom Vicente Scherer
Bairro: 6º andar - Centro **CEP:** 90.020-090
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Telefone: (51)3214-8571 **Fax:** (51)3214-8571 **E-mail:** cep@santacasa.tche.br

ANEXO K - Parecer de aprovação CEP HMIPV:

HOSPITAL MATERNO INFANTIL PRESIDENTE VARGAS - HMIPV - RS

PARECER CONSUBSTANCIADO DO CEP

Elaborado pela Instituição Coparticipante

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: Avaliação de construtos da Psicologia Positiva em diferentes situações geriátricas

Pesquisador: Caroline Reppold
Área Temática:
Versão: 1
CAAE: 40224314.8.3001.5329
Instituição Proponente: Irmandade da Santa Casa de Misericordia de Porto Alegre - ISCMPA
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 1.118.052
Data da Relatoria: 10/06/2015

Apresentação do Projeto:
Trata-se de estudo multicêntrico do doutorado da UFCSPA. Este estudo tem por objetivo caracterizar e comparar através dos construtos de autoestima, bem-estar subjetivo, espiritualidade,esperança, otimismo e rede de apoio percebida os indivíduos de quatro grupos distintos: indivíduos saudáveis praticantes de atividades físicas da Faculdade de Educação Física e Ciência do Desporto da PUCRS (FEFID), indivíduos com demência do ambulatório de Demência e Distúrbios do Movimento da Irmandade Santa Casa de Misericórdia de Porto Alegre, indivíduos com depressão do Ambulatório de Psicogeriatria do Hospital Presidente Vargas e indivíduos institucionalizados residentes na Sociedade Porto-alegrense de Auxilio aos Necessitados SPAAN.
Segundo o autor, este estudo será delineado de modo transversal, sendo um estudo caracterizado como Caso-controle. Serão considerados casos os grupos nos quais os indivíduos possuam quaisquer alterações de saúde física ou mental ou estejam institucionalizados e controles os indivíduos saudáveis em processo normal de envelhecimento. Serão incluídos no estudo os indivíduos alfabetizados cujas características sejam compatíveis aos grupos abaixo descritos e nomeados em G1, G2, G3 e G4 para melhor organização do estudo.

Endereço: Av.Independência 661- Bl. C 7º andar
Bairro: Independência **CEP:** 90.035-076
UF: RS **Município:** PORTO ALEGRE
Telefone: (51)3289-3377 **Fax:** (51)3226-9075 **E-mail:** hmipv.cep@hmipv.prefpoa.com.br

Objetivo da Pesquisa:

Os objetivos descritos na pesquisa são:

Objetivo Primário:

a) Caracterizar e comparar os indivíduos de quatro grupos distintos: idosos saudáveis, idoso com declínio cognitivo ou demenciados, idosos depressivos e idosos institucionalizados com relação aos construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida.

Objetivo Secundário:

a)Caracterizar o indivíduo participante da pesquisa em questões demográficas e clínicas; b) Comparar os escores de construtos de autoestima, bem estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos com declínio cognitivo; c) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos depressivos; d) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida de idosos saudáveis com os escores de indivíduos institucionalizados; e) Comparar os escores de construtos de autoestima, bem-estar subjetivo, espiritualidade, esperança, otimismo e rede de apoio percebida com o escore clínico da demência (CDR) do paciente com declínio cognitivo ou demenciado; f) Verificar quais dos construtos investigados estão associados à satisfação de vida nos diferentes grupos do estudo; g) Verificar quais dos construtos investigados estão associados ao maior grau de declínio cognitivo na CDR em indivíduos com declínio cognitivo ou demência; h) Verificar quais dos construtos investigados estão associados ao maior escore na Escala de Depressão Geriátrica Abreviada (EDG) ou no Inventário de Depressão de Beck – BDI em indivíduos saudáveis, depressivos e institucionalizados.

Avaliação dos Riscos e Benefícios:

Segundo os autores os riscos oferecidos são mínimos, podendo ser sentimentos de desconforto diante das questões investigadas. Os pesquisadores responsabilizam-se, no entanto, para encaminhamento dos pacientes na própria clínica da universidade, caso haja alguma necessidade. Quanto aos possíveis benefícios os autores descrevem o aumento do conhecimento para a área científica, podendo futuramente gerar resultados positivos em prevenção e promoção da saúde.

Comentários e Considerações sobre a Pesquisa:

Pesquisa relevante, muito bem estruturada e de ampla investigação na área da Psicologia Positiva. Trata-se de um estudo multicêntrico, já tendo sido avaliado por outros Comitês de Ética em

pesquisa.

Considerações sobre os Termos de apresentação obrigatória:

Foram incluídos na Plataforma Brasil, em 19 de junho de 2015, todos os termos exigidos pelo HMIPV, bem como as alterações solicitadas no TCLE.

Conclusões ou Pendências e Lista de Inadequações:

O projeto mostra-se adequado para aplicação no HMIPV, conforme arquivos inseridos na Plataforma Brasil em 19 de junho de 2015.

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

Considerações Finais a critério do CEP:

1. Informamos que toda e qualquer alteração do projeto deverá ser comunicada imediatamente ao CEP HMIPV.
2. O pesquisador deverá apresentar relatórios semestrais de acompanhamento do projeto, bem como relatório final quando do término do mesmo.
3. Para o ingresso nas dependências do hospital o pesquisador responsável deverá solicitar ao CEP HMIPV a confecção de crachá para toda a equipe de pesquisa.
4. Para o início da pesquisa, o investigador deverá apresentar à chefia do serviço onde será realizada a pesquisa o Parecer Consubstanciado de aprovação do protocolo pelo CEP.

PORTO ALEGRE, 22 de Junho de 2015

Assinado por:
Maria da Graça Alexandre
(Coordenador)

ANEXO L – Normas de Submissão à Revista.

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