Development & Validation of Interpersonal Psychotherapy (IPT) Competency Tool for Student Nurses

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Abstract

Background: Interpersonal Psychotherapy (IPT) is well-recognized for the treatment of various mental disorderswith many efficacy trials supporting its use; however, there is little discussion of its use in mental health nursing practices. In fact, there is no validated tool to measure the competency of student nurses in administering Interpersonal psychotherapy.

Objective: This study was aimed at developing a validated tool to measure the competency of student nurses to administer Interpersonal Psychotherapy.

Methods: The competency tool comprised of 30 items which were developed under three phases of IPT i.e. Initial, Middle and Termination Phase. A sample size of 100 nursing students from four different nursing colleges of Punjab were enrolled for the study. General and specific competencies of the participants while delivering interpersonal psychotherapy was assessed on a five-point rating scale after giving one-week training on Interpersonal psychotherapy. KMO measure, Bartlett test, Multiple correlation analysis and exploratory factor analysis were employed for data analysis using SPSS 20 version.

Results: The IPT competency tool for student nurses wasdeveloped after thorough literature review and IPT trainings. The tool was validated by six experts with a content validity ratio 0.91. Based on the factor analysis results, the attributesof tool did not meaningfully merge into factors in initial, middle and termination phase of Interpersonal psychotherapy competency rating scale. The total variance among the factors came between 70 to 80%.It was concluded that the list of attributes under each phase are independent and valid to include in the IPT competency tool for student nurses.

Conclusion: IPT competency tool for nurses is a valid tool to measure student nurses' competency to administer IPT.

Key words: *Interpersonal psychotherapy, Nurses, IPT tool, IPT training, Competency*

Introduction

Mental health treatment has been grossly ignored in India and worldwide. Plethora of mental health reports and research studies indicate the poor competency of nurses while taking care of patients suffering from mental health conditions[1–3] The Mental Health Gap Action Program Intervention Guide (mhGAP-IG) includes guidance on evidence-based interventions such as IPT to manage number of mental disorders[4] but there is insufficient detail on how to implement them[5]. The workforce is neither enough to meet the increasing population mental health needs[6–9] nor enough awareness regarding the efficacy of IPT[3,10]. Recently, WHO has released a Manual on Group-IPT for depression and has strongly recommended evidence based psychological intervention such as IPT as first line treatment for pregnant or breastfeeding mothers with depression and for adults with mild depressive disorder[11]. As the number of specialized psychologists is not enough to cater whole population, so WHO has also suggested involving non-specialized workers such as nurses in implementing IPT[11] Training nurses in IPT can help in dealing with the scarcity of manpower for dealing clients with mental health issues[4,12,13] Secondly, the wider approachability

of nurses from hospital to community makes it more accessible to the population. However, there is no tool designed to check the competency of nurses to deliver IPT.

Interpersonal psychotherapy structure the treatment under four problem areas i.e. Grief, Role disputes, Role transition and Interpersonal deficits. The client who requires IPT may generally undergo 12-16 sessions which are divided into three phases- initial, middle and Termination phase. Initial phase usually last 1-3 session, then middle phase which is of 8-10 sessions and the termination phase of 2-3 sessions come under termination phase[10,14,15].

This study was conducted in a view to develop and validate the IPT competency tool for student nurses.

Materials and Methods

The methodology applied in this study is discussed as follows:

I. Generation of the Item pool: Researcher underwent first training in October,2017 on 'Group-IPT for PTSD (Post-traumatic stress disorder)' which was given by Dr Lena Verdelli, Founder & Director, Global Mental Health Lab, Columbia University, USA and Dr Kathleen Clougherty, Columbia University, USA. The second training was 'IPSRT (Interpersonal Psychotherapy & Social Rhythm Therapy) for Mood disorders' by 3C institute for Social development (approved by American Psychological Association) in November 2017. The third training was 'IPT for depression' given by International Society of Interpersonal psychotherapy in 2018. A workshop on 'IPT for adolescents' was attended at 8th Biennial Conference of International Society of Interpersonal Psychotherapy held at Budapest, Hungary in November 2019. Various measures related to competency assessment were also reviewed. Knowledge gained in these trainings and workshops along with the extensive literature review led the researcher to develop the pool of items. All the items were placed under three phases of IPT namely initial phase, middle phase and termination Phase. Further, items in each phase were categorized under general(G) and specific(S) competency wherein general competencies are the skills to be used by the therapist in all psychological therapies or communication, specific competencies are the skills exclusively used for delivering interpersonal psychotherapy. Initial phase of the scale has 11 items (4 items- general competency, 7 items- specific competency) middle phase has 9 items (3 items- general competency, 6 items- specific competency) and termination has 10 items (3 items- general competency, 7 items- specific competency). All the items were designed to assess the competency of student nurses on a five-point rating scale where score 5 means- Excellent competence (Excellent skill with no improvement needed), 4- Good competence (Minimal improvement needed), 3- Average competence (Some improvement needed), 2-Low competence (Fair amount of improvement needed) and 1-Poor competence (Unskilled, a great degree of improvement needed). Thirty attributes articulated by the primary investigator were reviewed by other Co-investigators before sending the tool for content validity. The list of attributes used for developing the tool is provided in Appendix 1.

II. Content Validity: The tool was reviewed by six mental health experts including psychiatrist, psychologist and nursing professional working in renowned government mental health settings. The scale was evaluated for the appropriateness and relevance of each item on the scale of 3 where 1 means-Not useful, 2- Useful but not essential and 3- Essential. The content validity ratio was found to be 0.91 for 30 item scale.

III. Multiple Correlation Analysis: The internal correlations among the initial phase, middle and termination phase attributes were found to be weak (not more than 0.60) in many cases and they were not strong which means that the framed attributes for each phase were independent of each other. Hence, the list of attributes can be considered independently appropriate for measuring competency level of nurses for administering IPT.

IV. Factor Analysis: Exploratory factor analysis was applied to examine underlying patterns or relationships for large number of variables (inter-dependent in nature) aiming to determine whether the attributes can be grouped into smaller set of factors.

V. Ethical approval: Ethical approval for the study was obtained from Institution Ethics Committee Approval No. ECR/296/Indt/PB/2019/ISFCP/44. Written permission from authorities of the nursing

colleges was obtained. All the participants provided written consent to participate in the study.

VI. Data Collection: The data for establishing the validity of tool was collected from August 2019 to February 2020 on 100 student nurses doing Bachelor's in nursing in selected four colleges of Punjab. Participants were selected through two-stage cluster sampling. Twenty-five students from each college were then randomly selectedfor the study. Selected participants underwent one-week training on Interpersonal psychotherapy. Researcher divided the training into five modules. First Module was on 'Background and Introduction of IPT', Second Module on 'IPT problem area- Grief', Third Module on 'IPT problem area- Role disputes', Fourth Module on 'IPT problem area- Role transition' and the Fifth Module on 'IPT problem area- Interpersonal deficits. Under each problem area, students were trained how to give interpersonal psychotherapy in initial, middle and termination phase of each problem area. Numerous case studies, video presentations and role plays were done to equip the participants with necessary general and specific competencies.

After one week of training given by the researcher, they all were given case scenarios to demonstrate their competency in each phase of IPT administration to the clients. Their competency was rated on a five point scale, where score 5 meant Excellent competence (Excellent skill with no improvement needed), 4- Good competence (Minimal improvement needed), 3- Average competence (Some improvement needed), 2-Low competence (Fair amount of improvement needed) and 1-Poor competence (Unskilled, a great degree of improvement needed)

Statistical Analysis: SPSS version 20 was used to analyze the data. Descriptive statistics, Exploratory factor analysis (EFA), correlation matrix, KMO (Kaiser-Meyer-Olkin) measure, Bartlett's test, variance explained by each factor, loading scores, rotated components matrix etc. were used for analysis of data.

Results: Table 1 shows the socio-demographic characteristics of the participants. Majority (93%) of the participants were females studying in 3rd and 4th yr. of B.Sc. Nursing program. None of the participants had received any IPT training earlier. Only four participants reported family history of psychiatric illness. All participants underwent psychiatric training but only half of them feel comfortable talking to psychiatric patients.

Table 1: Socio-Demographic Profile of the participants (n=100)

Variable	Category	Frequency (n)	Percent (%)
Gender	Female	93	93.0
	Male	7	7.0
Year of study	Third year	50	50.0
	Fourth year	50	50.0
Previous training in IPT	No	100	100.0
Family history of psychiatric illness	No	96	96.0
	Yes	4	4.0
Previous training in psychiatric hospital	Yes	100	100.0
Feel comfortable talking to a psychiatric client	No	49	49.0
	Yes	51	51.0

Table 2. KMO and Bartlett's Test

KMO and Bartlett's Test				
		Initial Phase	**Middle Phase**	**Termination Phase**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.582	0.546	0.499
Bartlett's Test of Sphericity	Approx. Chi-Square	206.16	130.12	293.67
	Degrees of freedom	55	36	45
	Sig. (p-value)	0.001	0.001	0.001

In Table 2, KMO value represents that sample selected for the analysis was adequate for applying factor analysis and can be used for statistical inferences. Bartlett's test of sphericity was used to test if there exists any significant relationship among the attributes. From the Bartlett's test, it is clear that there exists some level of correlation and the correlation matrix is not diagonal.

Principal Component method, Varimax rotation and criteria Eigen value more than 0.8 were used to arrive factors, each phase separately. In the initial phase, from eleven attributes, five factors were achieved. The first factor explains around 25% variance, second factor explains 15% varianceand so on. It is observed that the total variance explained by these five factors is around 70%. In the middle phase, five factors were achieved from nine attributes. The first factor explains around 25% variance, second factor explains 16% varianceand so on, and total variance explained by these five factors is around 75%. In the termination phase, from the ten attributes, five factors were achieved. The first factor explains around 24% variance, second factor explains 18% varianceand so on and total variance explained by these five factors is around 80%. Even though no strong correlations among these attributes were observed, the factor analyses were carried to examine if any meaningful merging of attributes exist.

Table 3. Pattern Matrix (Factor): Initial Phase

Attributes	**Factor**				
	1	**2**	**3**	**4**	**5**
S1. Explain IPT to the client	0.825	0.148	0.128	-0.103	0.052
S2. Label mental illness and provides psycho-education	0.721	-0.093	0.003	0.067	0.118
S3. Assigns sick role	0.472	0.336	-0.002	0.435	0.040
S5. Select IPT problem area	0.161	0.801	0.091	0.135	-0.101
G4. No advice giving or passing judgments	-0.060	0.742	-0.002	0.001	0.279
G1. Conducts Symptom and Mood Check with PHQ-9	0.103	-0.116	0.878	0.192	0.039
G2. Build rapport with the client	0.022	0.286	0.770	-0.243	0.172

Cont... **Table 3. Pattern Matrix (Factor): Initial Phase**

S7. Discuss patient-therapist relationship and client' role in therapy	0.211	0.206	0.202	0.782	0.091
S6. Associate problem area with depression or distress	0.366	0.100	0.259	-0.701	0.038
S4. Conducts interpersonal inventory	0.430	-0.090	0.142	-0.022	0.766
G3. Maintains focus of the session	-0.086	0.477	0.099	0.118	0.704

From the above matrix given in Table No. 3, it is observed that, the attributes are not meaningfully merged into factors. Due to rating scale nature, this might occur. The correlation matrix indicated that there is no strong relationship among these attributes. Hence it is concluded that the list of attributes under initial phase are valid to include in the competency tool.

Table 4. Pattern Matrix (Factor): Middle Phase

Attributes	Factor				
	1	2	3	4	5
G1. Conducts Symptom and Mood Check with PHQ-9	0.856	-0.166	0.045	0.094	-0.088
G3. No advice giving or passing judgments	0.681	0.351	0.020	-0.048	0.247
S5. Helps the patient to make decisions	0.494	0.473	-0.330	0.081	-0.380
S6. Conduct role play	0.083	0.772	0.253	-0.150	-0.103
S1. Use therapeutic communication techniques	-0.032	0.669	-0.059	0.515	0.011
S3. Link the mood and the interpersonal problem area	-0.043	0.049	0.903	0.134	0.031
G2. Maintains focus of the session	0.463	0.360	0.538	-0.007	0.105
S2. Conduct communication analysis	0.070	-0.029	0.136	0.912	-0.026
S4. Conveys optimism to the client	0.054	-0.068	0.044	-0.013	0.935

The given matrix in Table No. 4 shows that the attributes are not meaningfully merged into factors. Due to rating scale nature, this might occur. The correlation matrix for middle phase showed that there is no strong relationship among these attributes. Hence it is concluded that the list of attributes under middle phase are valid to include in the competency tool.

Table 5. Pattern Matrix (Factor): Termination Phase

Attributes	Factor				
	1	2	3	4	5
G3. No advice giving or passing judgments	0.731	0.395	-0.019	-0.273	-0.093
S4. Review the efforts taken by the client	0.693	0.069	0.114	-0.318	0.442
S6. Discuss future challenges which may trigger the problem again	0.693	-0.426	-0.355	-0.015	0.111
S1. Explore client's feelings due to end of the sessions	-0.052	0.715	0.397	0.024	0.287
G1. Conducts Symptom and Mood Check with PHQ-9	-0.336	0.600	-0.407	0.392	0.248
S5. Give credit of symptom change to client	0.271	-0.564	0.494	0.303	0.060
G2. Maintains focus of the session	0.476	0.238	-0.759	0.072	-0.014
S2. Reviews the progress of the patient since the beginning	0.394	0.449	0.623	-0.007	-0.198
S7. Discuss strategies to use in future (More IPT or other therapies or medicine)	0.382	-0.087	0.130	0.673	0.413
S3. Discusses Warning Signs of Depression	0.456	0.205	-0.006	0.422	-0.673

From the above matrix in Table No. 5, it is observed that, the attributes are not meaningfully merged into factors. Due to rating scale nature, this might occur. The correlation matrix for termination phase showed that there is no strong relationship among these attributes. Hence it is concluded that the list of attributes under termination phase are valid to include in the competency tool.

Conclusion

It is found that the attributes are not meaningfully merged into respective factors. These factors could have been emerged due to five point rating scale pattern and the attributes statements are direct and positive nature. Hence, it is concluded that the attributes in each phase are independent of each other. They can be retained in the tool without removing them to measure the IPT competency. Hence this tool is valid to assess the competency of student nurses in implementing Interpersonal psychotherapy.

Discussion

IPT is an efficacious psychotherapy for which effective and adequate therapist training is needed. There is a need to develop competency measures for nurses[16–18]. Mental health services can be integrated into general health care which require training of nurses and reallocation of health workers from hospital to community settings, modification of new role and new competencies. In many countries, IPT is being delivered by nurses[13,19,20], now it is time when LMICs like India should also explore and utilize the biggest health workforce of nurses in giving IPT. It is recommended to include IPT training as a part of nursing curriculum so that when student nurses complete their Bachelors program, they are ready to implement IPT in community and hospital health settings. In India, where mental health services are very scarce[8,21,22], implementation of IPT by nurses can make the mental health treatment more affordable and accessible to everyone.

Limitation:

1. The study was limited to student nurses.

Recommendations:

1. The study can be conducted on large sample.

2. Future studies can be conducted on nurses already working in general health, mental health or other community health settings.

3. Furthermore, studies can be done on participants with multiple cultural backgrounds and on the students of other health streams

Conflict of Interest: None

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