

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Sociodemographic and Medical Characteristics of the Intention-to-Treat Sample at Baseline: STICA vs. WLC

Demographics	STICA (n=72)	WLC (n=71)	TOTAL (n=143)
Age; M (SD)	26.2 (8.66)	26.2 (6.94)	26.2 (7.82)
Age; range	17-52	17-46	17-52
education; n (%)			
at school	7 (9.7)	3 (4.2)	10 (7.0)
9th grade	9 (12.5)	4 (5.6)	13 (9.1)
10 th grade	10 (13.9)	21 (29.6)	31 (21.7)
>10th grade	44 (61.1)	42 (59.2)	66 (60.1)
no graduation	1 (1.4)	0 (0.0)	1 (0.7)
Occupational status; n (%)			
full / part time	22 (30.6)	27 (36.0)	49 (34.3)
unemployed	14 (19.4)	13 (18.3)	27 (18.9)
traineeship	18 (25.0)	14 (19.7)	32 (22.4)
School/university	17 (23.6)	17 (23.9)	34 (23.8)
Retired	1 (1.4)	0 (0.0)	1 (0.7)
Living situation; n (%)			
Own household	26 (36.1)	36 (50.7)	62 (43.4)
Living with parents	30 (41.7)	18 (25.4)	42 (33.6)
Flat sharing community	15 (20.8)	16 (22.5)	31 (21.7)
marital status; n (%)			
Single	65 (90.3)	63 (88.7)	128 (89.5)
married	5 (6.9)	7 (9.9)	12 (8.4)
divorced/separated	2 (2.8)	1 (1.4)	3 (2.1)
hours spent online (M, SD)			
Weekday	6.5 (3.1)	5.8 (3.1)	6.2 (3.1)
Weekend	8.4 (3.9)	7.6 (3.7)	8.0 (3.8)
any comorbid disorder			
Yes	37 (51.4)	38 (53.5)	75 (52.4)
current psychotropic medication			
Yes	8 (8.3)	15 (21.1)	21 (14.7)

Note: M=mean; SD=standard deviation; STICA=treatment; WLC=wait list control group;

eTable 2. Treatment Phases and Intervention Strategies of STICA

Treatment phases	Examples of intervention strategies
Early phase (sessions 1 – 3)	<p>Establishing motivation for behavioral change and development of realistic treatment goals (e.g. abstinence not from the internet per se but rather from the problematic activity)</p> <p>Psycho-education (general models of development and maintenance of addiction)</p> <p>Building a trustful alliance to the therapist and the group</p>
Behavior modification (sessions 4 – 12)	<p>Elaboration of individual models for each patient to explain development and maintenance of the addictive behavior:</p> <p>Identification and modification of triggers (internal and external states acting as specific cues to craving or consumption) of internet use;</p> <p>behavioral analyses (according to SORKC-schemes) and cognitive restructuring</p> <p>Discrimination of emotional states, stress management, social skills and reestablishment of alternative behaviors and interests</p> <p>Enhancement of self-efficacy and re-establishing a positive self-concept</p> <p>Initiating a temporary complete abstinence from any online behavior (lasting six weeks) in order to facilitate exploring alternative activities.</p> <p>Exposure training with reaction prevention under therapeutic guidance</p>
Stabilization and relapse prevention (sessions 13 - 15)	<p>Reestablishment of alternative behavioral strategies and interests</p> <p>Individual relapse prevention, stopping techniques, emergency plans</p> <p>Treatment tools are transferred to daily life, facilitation of functional internet use</p> <p>Identification of problematic conditions bearing a heightened risk for relapse, individualized strategies to cope with such conditions and to react functionally towards a relapse (creation of an individual “emergency plan” as part of the group and individual sessions)</p> <p>Consolidating alternative behaviors and interests</p>

eTable 3. Comorbid Diagnoses of the Intention-to-Treat Population According to the Structured Clinical Interview for DSM-IV

ICD-10 code	Intention to Treat Population after randomization			tests of significance
	STICA (n=72) n (%)	WLC (n=71) n (%)	TOTAL (n=143) n (%)	
F00-F09	0 (0.0)	0 (0.0)	0 (0.0)	n.a.
F10-F19	4 (5.6)	4 (5.6)	8 (5.6)	ns
F20-F29	0 (0.0)	0 (0.0)	0 (0.0)	n.a.
F30-F39	18 (25.0)	22 (31.0)	40 (28.0)	ns
F40-F49	7 (9.7)	18 (25.4)	25 (17.5)	$\chi^2=6.05, p=.012$
F50-F59	3 (4.2)	1 (1.4)	4 (2.8)	ns
F60-F69	14 (19.4)	19 (26.8)	33 (23.1)	ns
F70-F79	0 (0.0)	0 (0.0)	0 (0.0)	n.a.
F80-F89	0 (0.0)	0 (0.0)	0 (0.0)	n.a.
F90-F99	1 (1.4)	6 (8.5)	7 (4.9)	ns

Note: diagnosis categories (first column) according to the classification taxonomy of the ICD-10 (International Classification of Diseases, chapter F); STICA=patients of STICA treatment condition; WLC=wait list control; please note that some comorbid disorders were defined as exclusion criteria before randomization; χ^2 =chi-square; p =p-value (level of significance); ns=not significant ($p>.05$); n.a.=not applicable

eTable 4. Post-hoc tests for the Symptom Changes in STICA (N=72) and WLC (N=71)

treatment-group	measure point (time)			difference of effects t0 - t2 (STICA vs. WLC) <i>d</i> _{DIFF}
	t0 vs. t1 <i>t</i> (<i>df</i>), <i>p</i> , <i>dz</i>	t0 vs. t2 <i>t</i> (<i>df</i>), <i>p</i> , <i>dz</i>	t1 vs. t2 <i>t</i> (<i>df</i>), <i>p</i> , <i>dz</i>	
AICA-S				
STICA	<i>t</i> (56)=10.85, <i>p</i> ≤0.001, <i>dz</i> =1.835	<i>t</i> (56)=14.19, <i>p</i> =0.001, <i>dz</i> =2.270	<i>t</i> (56)=2.75, <i>p</i> =0.008, <i>dz</i> =0.280	1.628
WLC	<i>t</i> (59)=3.37, <i>p</i> =0.001, <i>dz</i> =0.412	<i>t</i> (59)=5.01, <i>p</i> =0.001, <i>dz</i> =0.642	<i>t</i> (59)=2.07, <i>p</i> =0.043, <i>dz</i> =0.193	
AICA-C				
STICA	<i>t</i> (56)=13.50, <i>p</i> ≤0.001, <i>dz</i> =1.962	<i>t</i> (56)=14.18, <i>p</i> ≤0.001, <i>dz</i> =2.163	<i>t</i> (56)=3.20, <i>p</i> =0.002, <i>dz</i> =0.335	1.374
WLC	<i>t</i> (59)=2.99, <i>p</i> =0.004, <i>dz</i> =0.414	<i>t</i> (59)=4.87, <i>p</i> ≤0.001, <i>dz</i> =0.794	<i>t</i> (59)=3.16, <i>p</i> =0.002, <i>dz</i> =0.380	
time spent online (weekday)				
STICA	<i>t</i> (57)=8.59, <i>p</i> <0.001, <i>dz</i> =1.050	<i>t</i> (57)=7.47, <i>p</i> <0.001, <i>dz</i> =1.185	ns	1.132
WLC	ns	ns; (<i>dz</i> =0.053)	ns	
time spent online (weekend)				
STICA	<i>t</i> (56)=7.83, <i>p</i> <0.001, <i>dz</i> =1.190	<i>t</i> (57)=8.89, <i>p</i> <0.001, <i>dz</i> =1.338	ns	0.959
WLC	<i>t</i> (59)=2.50, <i>p</i> =0.015, <i>dz</i> =0.253	<i>t</i> (59)=3.37, <i>p</i> =0.001, <i>dz</i> =0.379	ns	
GAF				
STICA	<i>t</i> (55)=4.93, <i>p</i> ≤0.001, <i>dz</i> =0.637	<i>t</i> (55)=4.79, <i>p</i> =0.001, <i>dz</i> =0.633	ns	0.606
WLC	ns	ns; (<i>dz</i> =0.027)	ns	
BDI-II				
STICA	<i>t</i> (56)=4.90, <i>p</i> ≤0.001, <i>dz</i> =0.545	<i>t</i> (57)=9.77, <i>p</i> =0.001, <i>dz</i> =0.904	<i>t</i> (56)=3.46, <i>p</i> =0.001, <i>dz</i> =0.295	0.378
WLC	<i>t</i> (59)=2.03, <i>p</i> =0.047, <i>dz</i> =0.212	<i>t</i> (60)=4.89, <i>p</i> =0.001, <i>dz</i> =0.526	<i>t</i> (59)=2.55, <i>p</i> =0.013, <i>dz</i> =0.280	

Notes: n=143 (last observation carried forward); ANOVA with factors time (t0, t1, t2) and treatment (STICA, WLC); t0=pre-treatment; t1=mid-treatment; t2=treatment termination; STICA=short-term treatment for internet and computer game addiction (treatment group); WLC=wait list control; AICA-C=Checklist for the Assessment of Internet and Computer game Addiction; GAF=Global Assessment of Functioning; BDI-II=Beck Depression Inventory II; *t*=*t*-value; *df*=degrees of freedom; *p*=*p*-value (level of significance); *dz*=effect size for paired samples; *F*=*F*-value (ANOVA); ns=not significant; *d*_{DIFF}=Difference of the effect sizes

eMethods. Additional Detailed Inclusion and Exclusion Criteria

Patients with comorbid disorders were included provided that IA was the primary diagnosis²³. The decision, if IA was primary diagnosis, was based on the main concern of the patient, resp. the reason of referral and severity of the addictive behavior. Patients with current psychotropic medication were eligible if there was no change in medication during the past two months and during treatment. Patients had to be off psychotherapeutic treatment for at least four weeks and abstained from further psychotherapy during the trial. Exclusion criteria were a decreased Global Assessment of Functioning (GAF < 40) score, major depression (Beck Depression Inventory BDI-II score \geq 26, resp. Structured Clinical Interview for DSM-IV, SCID-I), current alcohol or drug addictions (drug tests, SCID), Gambling Disorder, borderline, antisocial, schizoid and schizotypal personality disorders, lifetime diagnoses of schizophrenia, schizoaffective, bipolar or organic mental disorder and unstable medical illness.

eResults. Details on Safety, Adverse Events, and Serious Adverse Events

In n=11 patients (STICA: n=5 with 7 events; WLC: n=6 with 7 events) 14 AEs were documented. Of the 14 events 13 were mental disorders, new depressive episode was the most frequent AE with 8 cases. SAEs were defined as an AE that resulted in death, was life-threatening, required patient hospitalization or prolonged an existing hospitalization, resulted in persistent or significant disability/incapacity.²³ Two SAEs (somatic symptom disorder, psoriasis) occurred in WLC and six (acute stress disorder, depression, social anxiety disorder, impulse-control disorder) in STICA. A causal relationship with treatment was considered likely in two AEs, one in each group.