

## Introduction to *SDQplus*

*SDQplus* is a web-based application (<https://SDQplus.org/login>) to permit longitudinal mental health assessment and diagnosis of individual young people. The main features of *SDQplus* are:

- Introduction of a persistent individual identification (*PlusIID*) for the person who is the subject of multiple assessments.
- Employment of the established, paper-based *SDQscore* (<https://SDQscore.org>) for longitudinal assessment around the *PlusIID*. Assessments for *SDQplus* are actually done and saved on the *SDQscore* application itself<sup>1</sup>.
- Introduction of a specific *SDQplus* application for self-entry of SDQ assessments on PCs, laptops, iPads, mobile phones or any device with an HTML5 compatible web browser. Interview URLs may be copied and sent via email for the person, parents and teachers to complete. This application is identified by the *PlusIID* of the person being assessed; there is also a wider range of reports available.
- Access to in-depth DAWBA psychiatric diagnostic instruments (<http://dawba.info/>) via the *PlusIID*. DAWBA assessments may be done longitudinally. The DAWBA is intended for use by appropriately qualified mental health professionals.
- Integration of the data from all assessments and diagnoses under a *PlusIID* into a single summary “visualisation”, ordered chronologically.
- A full range of computer APIs to allow organisational EHRs to control *SDQplus*, link EHR IDs to *PlusIIDs* and collect data from *SDQplus*.
- Integration with the “helper application” *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) which allows the organisation of groups of individual patients, students, clients, etc into “cohorts” or groupings such as patient lists, classes, client list and therapeutic groups.

Because of the large body of research based on the SDQ and the DAWBA, *SDQplus* does not alter the instruments used nor change the nature of their use. Those familiar with these instruments will not find their use to be different.

### Who is *SDQplus* for?

*SDQplus* is somewhat more complex than *SDQscore*. *SDQplus* is intended for existing *SDQscore* users; a good understanding of the administration application, *SDQadmin* (<https://admin.SDQscore.org/Login>), is essential, since only existing *SDQscore* users can be “upgraded” to login to *SDQplus*. Other functions such as payment, activity monitoring and account management are done in *SDQadmin*. Because *SDQplus* is intended to assess individuals over time and possibly to diagnose suspected conditions, it requires more organisation and commitment than *SDQscore* which is amenable to casual use. Although *SDQplus*, when used exclusively with the paper-based *SDQscore* application, is much like employing the *SDQscore* system and is charged at the same rate, users must also understand how to generate, preserve and link the *PlusIID* with the identity of the person being assessed over time.

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1 <https://SDQscore.org>; *SDQscore* assessments can now be accessed in *SDQplus*.

Our view is that *SDQplus* is a system that will give more benefits when fully “embedded” within the organisations using it. Full integration of the *PlusIID* into organisational “patient”<sup>2</sup> management systems is highly beneficial, if not essential<sup>3</sup>. For education and care organisations, persons typically may be assessed over a decade or longer; this requires stable and secure management and budgeting. A longer, and hopefully, wider horizon of operation means that those who introduce *SDQplus* should plan for new users to be trained and even for their own succession. In short, *SDQplus*, unlike *SDQscore*, is not a system amenable to casual introduction without reference to management; it should be introduced with full support from both management and caring staff.

Although this sounds as though *SDQplus* is only suitable for large organisations, this is not the case. Small organisations, even single-handed practices, benefit from the extended capabilities of *SDQplus*. It is just that issues such as integration, budgeting, training and succession are perhaps not as far removed from day-to-day consideration of those introducing and using *SDQplus* in smaller organisations, as they may be in organisations with necessarily more formal divisions of responsibility and funding.

It must be agreed that at least some of the attraction of *SDQscore* before 2017 was that it was free and required little or no involvement of management. The charges introduced in March 2017, although modest, have been uncomfortable for some users; much of the discomfort now arises from the need for explicit management support. Although *SDQplus* can be used for much the same cost as *SDQscore*, it should be expected that longitudinal assessment will encourage more frequent assessment, even if the population assessed is no larger. We sincerely hope, however, that *SDQplus* **will** encourage organisation to assess all persons coming into their care since, while persons with behavioural problems generally are easily identified for assessment, there are at least as many “quietly suffering” who are not assessed soon enough. Only regular, full-population assessment can give assurance that caring organisations have made systematic endeavours in this respect. This necessarily involves more cost and therefore even greater organisational commitment.

Self-entry of assessments becomes possible and straightforward with *SDQplus*. Although these assessments are more expensive, they may save up to 90% of the effort of paper-based assessment<sup>4</sup> and also provide more informative and elaborate reports. Additionally, it is hoped that self-entry will expand the breadth and volume of assessment. Finally, for organisations qualified to deploy the DAWBA psychiatric diagnostic instrument, there is an implication of both increased cost and management commitment. The upside of DAWBA is the ability to add full-spectrum ICD10 and DSM-5 psychiatric diagnosis for interaction with secondary care and funding.

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2 It is difficult to find a term that covers adequately, yet neutrally, the range of persons coming into the range of *SDQplus*: patient, client, student, subject, case.

3 The introduction of *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) has made *SDQplus* more usable in standalone operation while ensuring conformance with data protection principles.

4 This figure comes from an unpublished Norwegian study.

## Registration for *SDQplus*

*SDQplus* users must first be *SDQscore* users within an existing *SDQadmin* account (see the *SDQadmin* registration documentation<sup>5</sup>). The *SDQscore* administrator must explicitly give *SDQplus* status to existing UserIDs. It must be understood that *SDQplus* users can incur substantial fees (e.g., US\$40 for a DAWBA instrument) and should have authorisation to do so.

Below are the steps taken by an administrator who is granting *SDQplus* status to an existing UserID. From the starfish menu, the “Users” button is clicked. In this particular account, there are two UserIDs, **junkjunk** and **scrapscrap**, but only one can currently access *SDQplus*. Note that the field under the “SDQ+” label for **scrapscrap** is blank while junkjunk’s says YES.

UserID	Password	Created	Comments	SDQ+	DAWBA	
junkjunk	blue3tangerine	2017-02-12 07:54:58.638883		YES		Update
scrapscrap	ultimate4orange	2020-01-27 14:36:10.225501				Update

1. The administrator clicks the “Update” button to be able to alter *scrapscrap*’s details.
2. They click the “SDQplus User” field and type “YES” (all capitals) into the field.
3. They click the “Submit Updated Details” button. If they decide not to give this permission, they can press the Cancel button instead.

ID	jojop78blue@gmail.com	The s
User ID	scrapscrap	Man
User Password	ultimate4orange	Man
SDQplus User	YES	SDQ
Remove User	<input type="checkbox"/>	Type
Comments		Opti
Created	2020-01-27 14:36:10.225501	The t
<input type="button" value="Submit Updated Details"/> <input type="button" value="Cancel"/>		

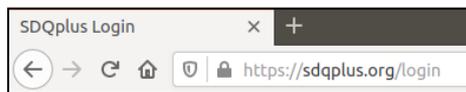
Once updated with “YES”, UserID *scrapscrap* now has permission to log into *SDQplus*<sup>6</sup>.

<sup>5</sup> <https://sdqscore.org/Downloads/SDQadminIntroduction.pdf>

<sup>6</sup> This also enables login to *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) where *SDQplus* can be accessed via cohort generation.

## Logging into *SDQplus*

UserID *scrapsrap* with the password *ultimate4orange* now has permission to login to *SDQplus*. Open the web browser<sup>7</sup> and type <https://SDQplus.org/login> into the domain address bar:



This is the *SDQplus* login page:

<b>SDQplus</b>		See <a href="#">Introduction</a> to SDQ <sup>plus</sup>	
<b>Login</b>			
System time: 2020-01-27 14:45:57.150341 UTC/GMT/Z ... IP: 127.0.0.1			
PlusIID	<input type="text"/>	Mandatory PlusIID	
UserID	<input type="text"/>	Mandatory UserID password - you must create and authorise this at <a href="https://admin.sdqscore.org">https://admin.sdqscore.org</a>	
UserID password	<input type="password"/>	Mandatory password for this UserID; you must create this at <a href="https://admin.sdqscore.org/Login">https://admin.sdqscore.org/Login</a>	
<input type="button" value="Login"/>	<input type="button" value="Click to generate one new PlusIID. Give a valid UserID and password"/>	<input type="checkbox"/> Numerical PlusIID	<input type="button" value="PlusIID List"/>

This is a good time to discuss some key technical details of *SDQplus*:

- **System time** – *SDQscore* and *SDQplus* both use universal (UTC) or Greenwich (GMT) time because they are global systems, operating 24 hours a day. UTC/GMT do not have daylight savings time changes which cause problems with date-time stamps.
- **PlusIID** - this is the persistent individual identification value that links the various, multiple assessments within *SDQplus*. Once created, it can only be accessed by UserIDs within the *SDQadmin* account under which the UserID was created.
- **UserID / UserID password** – these are created and maintained on the *SDQscore* system.
- **Login** – this is the usual button clicked on this form. If a valid UserID and UserID password is given for an existing *PlusIID*, there is successful login to the *SDQplus* system. If details are incorrect or the UserID and *PlusIID* do not belong to the same administration account, login is not permitted and various security mechanisms are triggered.
- **Click to generate one new PlusIID. Give a valid UserID and password** – this button is only clicked to create a new *PlusIID*.
- **Numerical PlusIID** – this box is ticked to create a new *PlusIID* in numerical format instead of the default “petname” format (discussed later).
- **PlusIID list** – this button can be clicked to show all PlusIIDs generated by a particular user at the *SDQplus* login page<sup>8</sup>.

<sup>7</sup> Do not use old Internet Explorer (IE) web browsers! If you are still running Windows XP, it is possible that you may still have one of these. Get your IT team to install a modern web browser for you; Firefox, Chrome, Opera, Safari and recent Windows IE browser are all fine. The web browser used in this example is Opera but we normally use Firefox or Chrome in our development.

<sup>8</sup> *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) is now the recommended application due to its ability to generate, organise and link PlusIIDs in cohorts.

## Creating a new *PlusIID*

When a person is first assessed by *SDQplus*, it is necessary first to create a *PlusIID* for them.

★It is the responsibility of the user or user’s organisation to maintain the link between the *PlusIID* and the identity of the person. Do not put personally identifying details on *SDQplus*<sup>9</sup>.★

There is no way for *SDQplus* to maintain the link between the *PlusIID* and the person’s identity. If the link is lost, it is not possible for us to re-establish it<sup>10</sup>.

To create a new *PlusIID*, leave the *PlusIID* field blank and enter a valid *UserID* and password pair. If numerical format for the *PlusIID* is desired, tick the Numerical *PlusIID* box. When ready, click the “**Click to generate ...**” button.

PlusIID	<input type="text"/>	Mandatory PlusIID
UserID	scrapscrap	Mandatory UserID password - you must create a
UserID password	ultimate4orange	Mandatory password for this UserID; you must c
<input type="button" value="Login"/> <input type="button" value="Click to generate one new PlusIID. Give a valid UserID and password"/> <input type="checkbox"/> Numerical PlusIID		

Confirmation is required. Click the “OK” button if sure.

If login is successful, this page will appear:



PlusIID = wise.anchovy.3481  
 UserID = scrapscrap  
 Balance = n/a

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**Your new PlusIID is *wise.anchovy.3481***

This PlusIID must be linked with your identity for the young person.

Do not lose this PlusIID, *wise.anchovy.3481*, or your link to it! We cannot recover this information for you!

A new *PlusIID* has been created. Make sure you copy it securely and associate it with your person’s identity information. Login to *SDQplus* (<https://SDQplus.org/login>) to use it.

★Do not forget to record the *PlusIID*! It is vital that the *PlusIID* is reliably associated with the person’s identification. *SDQplus* has no way of saving this association!★

9 Although *SDQplus* is highly secure against intrusion and unauthorised access, Youthinmind’s terms and conditions are that no personally identifying information should ever be placed on the system.

10 *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) provides mechanisms to help document the linkage between your IDs and the *SDQ*’s *PlusIIDs*.

## PlusIID formats

The *PlusIID* has two formats:

1. **Numerical**, typically a 16 digit number with hyphenation such as 2897-1664-5762-4056
2. **“Petname”**, which is a synthesis of randomly chosen nouns, adverbs and numbers, such as *intensive.helium.57* or *famous.lemon.3565* - petnames are easy to communicate and transcribe.

## Logging in

Use one of your *PlusIIDs* to login. Any UserID within your AdminID group can use a *PlusIID* generated by a UserID in that group (e.g., scrapsrap in this case). Go to <https://sdqplus.org/login>, fill in the form and click the Login button:

SDQplus See [Introduction](#) to SDQplus

### Login

System time: 2022-06-10 15:05:25.748183 UTC/GMT/Z ... IP: 127.0.0.1

PlusIID	wise.anchovy.3481	Mandatory PlusIID
UserID	scrapsrap	Mandatory UserID password - you must create
UserID password	ultimate4orange	Mandatory password for this UserID; you must

Numerical

Login should take no more than a second on a typical internet connection. This screen should appear if your login is accepted:

SDQplus PlusIID = wise.anchovy.3481  
UserID = scrapsrap  
Balance = 152.00

**wise.anchovy.3481**

PlusIID details

SDQscore 0 assessments

SDQ (0) Visualise

SDQplus 0 informants

SDQplus time is now 2022-06-10 15:16:53.927496 UTC/GMT/Z

At the very top are *PlusIID* and UserID. Your account balance is shown, it is negative in this case. Above the bird, the *PlusIID* is repeated. Logout will clear the Login screen and kill your session.

## Adding *SDQscore* assessments

When starting to use *SDQplus* with a new PlusIID, it would be normal for the assessment buttons to have zero (0) assessments.



To start an *SDQscore* assessment, just click the “+PTS” button left of the bird’s beak and confirm that costs are acceptable. This form appears:

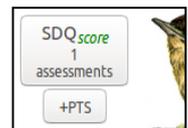
PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 152.00

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**Add New SDQ**

System time: 2022-06-10 15:21:37.413599 UTC/GMT Z ... IP: 127.0.0.1

Click the “Add new SDQ assessment” button. The bird menu is redisplayed but the *SDQscore* count has now changed to one.



Click that button and a list of SDQs for this *PlusIID* is shown (only one in this case):

PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 152.00

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N#	Created (UTC/GMTZ)	Created by	SDQ interview	Data	When					
1	2022-06-10 15:22	scrapsrap	SDQ	0		Export	JSON	A.I. Parent	A.I. Teacher	A.I. Self

Click the “SDQ” button and the SDQ assessment is started<sup>11</sup> in a new tab or window on <https://SDQscore.org>. When the assessment is complete, exit (close) the tab or window and return to the page above. Click “Return” to go back to the bird menu.

Another SDQ assessment would not normally be done again for some time although it is possible to create and visualise multiple SDQs in the same timeframe and in the near to far future. The next time the page is shown, note that two fields (“Data”, “When”) are updated:

PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 152.00

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N#	Created (UTC/GMTZ)	Created by	SDQ interview	Data	When					
1	2022-06-10 15:22	scrapsrap	SDQ	62	2022-06-10 15:27:33	Export	JSON	A.I. Parent	A.I. Teacher	A.I. Self

11 It is run on <https://SDQscore.org> and is identical to scoring done on that site without using *SDQplus*.

“When” is the most typical update date because it is possible to return to the interview and complete parts of it later so that “Created” (the instant the + button was pressed) and “When” should rarely match. *SDQs* can be recalled, re-scored and altered by clicking their “SDQ” buttons but remember that posted *SDQscore* fees will apply for re-scoring. Alterations should only be carried out under carefully considered circumstances and ensuring that there is a proper reason for doing so and that a paper trail is preserved. *SDQplus* does not maintain an audit trail of edits and there are no means to undo changes. Further discussion is outside the scope of this document. If, however, late-arriving teacher or parent questionnaires become available, then it is perfectly correct add those and re-score.

## Adding a new *SDQscore* assessment

Let’s say that almost a year has passed, it is a new school year and *wise.anchovy.3481* has another *SDQ* assessment. A new informant has provided information retrospectively for the Year 12, second semester assessment of May 2022. There is now more data but it is very difficult to forge the dates so that, even in this example, we cannot show this as being months ahead.

PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 152.00

N#	Created (UTC/GMT/Z)	Created by	SDQ interview	Data	When					
1	2022-06-10 15:22	scrapsrap	SDQ	62	2022-06-10 15:27:33	Export	JSON	A.I. Parent	A.I. Teacher	A.I. Self

Return

There is a new questionnaire so a new *SDQ* is added for Year 2, first semester, now with teacher information and the “+PTS” button is clicked on the bird menu, and once set up the bigger “2 assessments” button is clicked and then the top row (N# 2) “SDQ” button. The new informants’ questionnaire is entered and an interim score is produced (self information is missing). The assessments then show as follows, remembering that we cannot forge the dates easily:



PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 152.00

N#	Created (UTC/GMT/Z)	Created by	SDQ interview	Data	When					
2	2022-06-10 15:32	scrapsrap	SDQ	55	2022-06-10 15:41:04	Export	JSON	A.I. Parent	A.I. Teacher	A.I. Self
1	2022-06-10 15:22	scrapsrap	SDQ	62	2022-06-10 15:27:33	Export	JSON	A.I. Parent	A.I. Teacher	A.I. Self

Return

Finally, the two assessments can be visualised. On return to the bird menu, click the SDQ (2) Visualise button to the bottom left of the birds feet. The number in this button relates to the number of SDQscore (and SDQplus) assessments conducted in this PlusIID.



The assessment scores can then be viewed side-by-side.

When (who)	pebdtot	sebdtot	tebdtot	pimpact	simpact	timpact	pemotion	semotion	temotion	pconduct	sconduct	tconduct	phyper	shyper	thyper	ppeer	speer	tpeer	pprosoc	sprosoc	tprosoc
2022-06-10 (Sc)A-PAL-TAI-S	12			0			4			2			5			1			6		
2022-06-10 (Sc)A-PAL-TAI-S			6			0			0			0			5			1			10

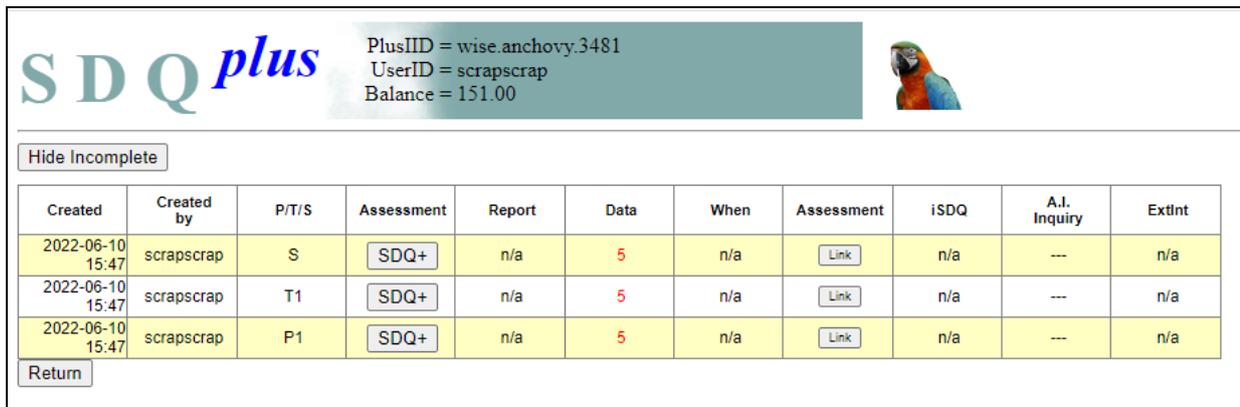
Our interpretation of this particular visualisation is that the parent informant (top row) has more concerns over the young person than the teacher informant (bottom row). For instance, scores from the parent assessment include raised emotion (“pemotion”) at 4, lowered pro-social (“pprosoc”) at 6, leading to an overall score (pebdtot) of 12, compared to the teacher informants respective scores of 0, 10 and 6. It may be significant, however, that there is quite a lot of dissonance between the parent and teacher informant, with behaviour at home being markedly different from that displayed at school. It may also require a further (self) assessment to be made by the young person. The visualisation, of course, is not an answer, it is a stimulus for considered thought and discussion about the child’s psychological well-being.

### Adding *SDQplus* assessments

SDQplus introduces self-entry SDQ assessments linked to the PlusIID. Unlike SDQscore assessments in which there are inherently three informants (PTS, parent-teacher-self), SDQplus assessments are added one informant at a time. For this assessment, three SDQplus assessments are added (\$1.00 each) by clicking the “+P”, “+T” and “+S” buttons.



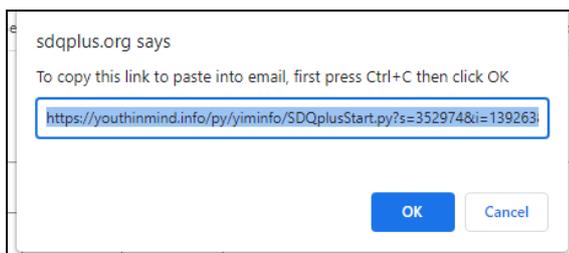
When the “SDQplus (3) informants” button is clicked, this screen is shown:



The screenshot shows the SDQplus interface. At the top left is the logo "SDQplus". To the right, user information is displayed: PlusIID = wise.anchovy.3481, UserID = scrapsrap, and Balance = 151.00. A small image of a parrot is visible on the right. Below the header is a "Hide Incomplete" button. The main content is a table with the following columns: Created, Created by, P/T/S, Assessment, Report, Data, When, Assessment, iSDQ, A.I. Inquiry, and ExtInt. The table contains three rows of data, all with a "Data" value of 5 and "Report" value of n/a. Each row has an "SDQ+" button in the Assessment column and a "Link" button in the Assessment column. Below the table is a "Return" button.

Created	Created by	P/T/S	Assessment	Report	Data	When	Assessment	iSDQ	A.I. Inquiry	ExtInt
2022-06-10 15:47	scrapsrap	S	SDQ+	n/a	5	n/a	Link	n/a	---	n/a
2022-06-10 15:47	scrapsrap	T1	SDQ+	n/a	5	n/a	Link	n/a	---	n/a
2022-06-10 15:47	scrapsrap	P1	SDQ+	n/a	5	n/a	Link	n/a	---	n/a

Again, forging dates is so difficult that the reader will have to imagine different dates. Emails will be sent to the three informants. *SDQplus* does not allow you to record email addresses because this might compromise *wise.anchovy.3481*'s anonymity. *SDQplus* does make it easy to copy the link address using either of the “Link” buttons underneath the Assessment column.



This link (<https://youthinmind.info/py/yiminfo/SDQplusStart.py?s=3xxxxx&i=1xxxxxxxxx=1&r=P1&p=xxxxxxxxx&pid=xxxxxxxxxxxxxx>) is pasted into an email and, when clicked by the recipient, starts an interview. The “SDQ+” button does the same but emailing links should be the normal way of using this type of assessment<sup>12</sup>. It may be useful, however, where the extended reports are desired, but ultimately, it is beyond the scope of this paper to demonstrate how to use the *SDQplus* assessment tool.

12 *SDQcohort* (<https://sdqscore.org/SDQcohort.html>) enables individual and multiple assessment links (iSDQ) to be generated within cohorts.

Once the links (interviews) have been completed, it is possible to see this (“Data” and “When”):



PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 151.00



Created	Created by	P/T/S	Assessment	Report	Data	When	Assessment	iSDQ	A.I. Inquiry	ExtInt
2022-06-10 15:47	scrapsrap	S	<input type="button" value="SDQ+"/>	<input type="button" value="Report"/>	88	2022-06-10	<input type="button" value="Link"/>	n/a	<input type="button" value="A.I. Inquiry"/>	<input type="button" value="ExtInt"/>
2022-06-10 15:47	scrapsrap	T1	<input type="button" value="SDQ+"/>	<input type="button" value="Report"/>	85	2022-06-10	<input type="button" value="Link"/>	n/a	<input type="button" value="A.I. Inquiry"/>	<input type="button" value="ExtInt"/>
2022-06-10 15:47	scrapsrap	P1	<input type="button" value="SDQ+"/>	<input type="button" value="Report"/>	95	2022-06-10	<input type="button" value="Link"/>	n/a	<input type="button" value="A.I. Inquiry"/>	<input type="button" value="ExtInt"/>

The analyst can now review individual interviews or access their reports; unlike *SDQscore*, there is no additional charge for this. Finally, all available assessments can be visualised:



PlusIID = wise.anchovy.3481  
 UserID = scrapsrap  
 Balance = 151.00



When (who)	pebdtot	sebdot	tebdot	pimpact	simpact	timpact	pemotion	semotion	temotion	pconduct	sconduct	tconduct	phyper	shyper	thyper	ppeer	speer	tpeer	pprosoc	sprosoc	tprosoc
2022-06-10 (Sc)ALP-ALT A.I.S	12			0			4			2			5			1			6		
2022-06-10 (Sc)ALP-ALT A.I.S			6			0			0			0			5			1			10
2022-06-10 (Sp/Mom) A.I.	11			1			0			4			5			2			8		
2022-06-10 (Sp/T) A.I.			10			0			3			0			5			2			10
2022-06-10 (Sp/Self) A.I.		15			0			4			2			6			3			9	
	pebdtot Plot	sebdot Plot	tebdot Plot	pimpact Plot	simpact Plot	timpact Plot	pemotion Plot	semotion Plot	temotion Plot	pconduct Plot	sconduct Plot	tconduct Plot	phyper Plot	shyper Plot	thyper Plot	ppeer Plot	speer Plot	tpeer Plot	pprosoc Plot	sprosoc Plot	tprosoc Plot

## Limitations

DAWBA (the full-panel psychiatric diagnostic instrument), although fully operational, is not in the scope of this document. Contact Helena Hamilton via support@youthinmind.com for further details.

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